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(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: COOKWARE ARTICLE HAVING UTENSIL SUPPORTING MEANS

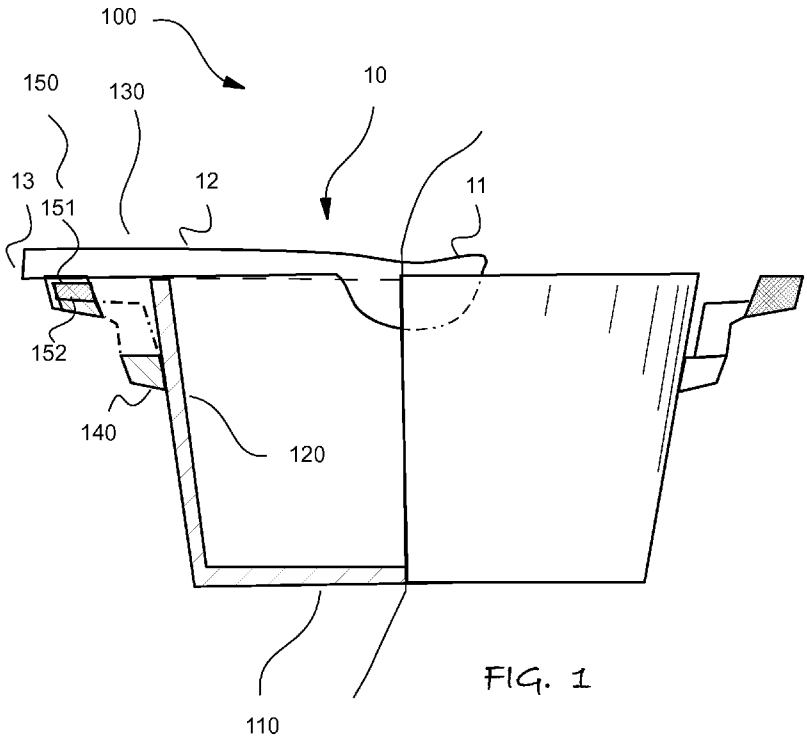


FIG. 1

(57) Abstract: An article of cookware deploys one or more side handles having an embedded magnetic therein. The handle having the magnetic has an upper surface disposed substantially flush with the vessel rim so as to support a utensil thereon when not being used for cooking. The utensil balances on the rim portion of the vessel due to the placement of the magnetic handle. The magnetic attractive force provides a counter turning moment against the weight of the working portion of the handle to prevent it from falling in the vessel.

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Declarations under Rule 4.17:

— *as to the identity of the inventor (Rule 4.17(i))*

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*

Specification for an International (PCT) Patent Application for:

COOKWARE ARTICLE HAVING UTENSIL SUPPORTING MEANS

Cross Reference to Related Applications

[0001] This application claims the benefit of priority to the US Provisional patent application of the same title that was filed on May 22, 2012, having application serial no. 61/650/384, which is incorporated herein by reference.

Background of Invention

[0002] The present invention relates to a cookware article and in particular to pots and pans having a means to support utensils on the rim of the cookware.

[0003] The placement of turning, stirring and related cooking utensils during the food preparation process has always been somewhat problematic, in that when they are not in use they tend to be either left on the counter, potentially contaminating the food or dirty encounter, or require the use of an extra plate or specialty dish for supporting them.

[0004] A solution to this problem has been achieved by providing elongated cookware utensils that have a notch on the some portion between the grip portion and the functional end. The notch is intended to receive the rim and upper sidewall of the vessel by insertion, when the utensil is turned and properly aligned and lowered to rest on the rim. Provided the notch presents steep interior walls that are spaced slightly larger that the sidewall width, the utensil's functional end can be supported over the cookware vessel so that any residual food matter either drains back into the cookware, or least does not

contaminate the counter space, cook top, potentially eliminating the need for a storage plate.

[0005] However, this will require for many cooks purchasing an additional set of cookware utensils, as well as selecting combinations of cookware vessels that have a sufficiently thick rim or otherwise well matched to the notch dimensions to be securely grasped by the specialized utensil handle. However, even with such precautions, such disposition of the utensil at a single position on the cookware rim still remains unstable, and can lead to the utensil falling into the cookware accidentally jarred. Further, the user must take care to align the notch with the rim, requiring both rotation of the utensil and some lateral movement. A harried or distracted cook rushing and multitasking could easily overlook these steps and simply drop the utensil.

[0006] Other solutions have included deploying specially formed elongated cookware handles that have a concavity for receiving and supporting the utensil, such that the working end can be suspended over the open portion of the cookware. Again however, this requires specialized cookware that indeed uses long handles, and limits the shape of the handles to a sufficiently large size to fit a range of utensils.

[0007] Further, although a utensil can be statically stable within a concavity on the grip portion of the handle, it is subject to being dislodged and falling either on the floor or within the utensil when the cookware handle is manipulated, either intentionally to stir the food without using a utensil (by shaking the pan) or unintentionally by making casual contact with it while performing other tasks.

[0008] It is therefore a first object of the present invention to provide to provide an improved means for supporting cooking utensils over cooking vessels when not be used to manipulate the foodstuff within the cooking vessel.

Summary of Invention

[0009] In the present invention, the first object is achieved by providing an article of cookware comprising a substantially horizontal bottom, a substantially upright sidewall extending upward there from and encircling said bottom to form a fluid retaining interior region, the sidewall terminating at a rim portion, at least one handle attached to the sidewall of the cookware having a gripping portion disposed distal from the rim, wherein a magnet is embedded within the gripping portion.

[0010] A second aspect of the invention is characterized in that article of cookware has the rim and gripping portion of the handle is disposed at the same vertical height.

[0011] Another aspect of the invention is a cookware and utensil set comprising the above article of cookware according and a utensil having an elongated handle portion and a working portion attached to and end of the elongated portion, wherein the elongated handle includes a magnetic portion.

[0012] A still further aspect of the invention the above cookware and utensil wherein the utensil is substantially nonmetallic and has a metallic portion embedded within the elongated handle portion.

[0013] The above and other objects, effects, features, and advantages of the present invention will become more apparent from the following description of the embodiments thereof taken in conjunction with the accompanying drawings.

Brief Description of Drawings

[0014] FIG. 1 is a partial cross-sectional elevation of the cooking vessel according to a first embodiment of the invention showing a utensil, in the form of a spoon, being supported by the rim and handle of the cookware vessel.

[0015] FIG. 2 is a plan view of FIG. 1.

[0016] FIG. 3A is a cross-sectional elevation through section line portion A-A in FIG. 2, whereas FIG. 3 B is an orthogonal cross-sectional elevation thereto.

[0017] FIG. 4 is an alternative embodiment of the handle and vessel illustrated in an orthogonal cross-sectional elevation at the same orientation as shown in FIG. 3B.

[0018] FIG. 5A is a perspective view of a single chop stick in a pair adapted for use with an embodiment of the invention, whereas FIG. 5B is a cross-sectional elevation of the pair of chop sticks and FIG. 5C is a perspective view of the single chop stick of FIG. 5A prior to insertion of the metal element. FIG. 5D is a perspective view of a spoon having a metallic outer ring. FIG. 5E is a perspective view of a spoon having a metallic outer sleeve.

Detailed Description

[0019] Referring to FIGS. 1 through 5, wherein like reference numerals refer to like components in the various views, there is illustrated therein a new and improved cookware articles having utensil supporting means, generally denominated 100 herein.

[0020] In accordance with the present invention, FIG. 1 illustrates a cookware vessel 100 which is supporting a utensil 10 (In this non-limiting example the utensil is illustrated as spoon) on the rim 130 thereof so that the functional end 11 of the spoon 10 is suspended over the center of the cooking vessel 100, that is above the bottom 110 of the cooking vessel 100 and between the surrounding sidewalls 120 that extends upward there from to rim 130. The handle or grasping end 12 of the utensil 10 has a portion resting on rim 130 and another portion that is proximal to distal end 13 of handle 12 supported on the cookware handle 150, which is attached to vessel side wall 120 via flanges 140.

[0021] As illustrated more fully in FIG. 2 and 3, cookware handle 150 has a gripping portion 151 with an embedded magnet 152. Hence, when the cookware utensil 10 is or contains a ferro-magnetic material, the portion overlying or in close proximity to magnet 152 is subjected to an attractive retaining force. Further, utensil 10 is also supported in a cantilever orientation at rim 130 as well as being at least somewhat restrained by magnet 152. This permits the placement of the usually heavier working or functional portion 11 of spoon or utensil 10 well inward from the rim 130 of vessel 100, but precludes its falling therein. Hence, the cook need not place the utensil 10 on the counter, and any residue on the function end 11 can drain back into the vessel 100.

[0022] It is currently preferred to construct a handle 150 as further illustrated in FIG. 3A and 3B. Handle 150 can be considered as having a flange portion 140 that is connected to the side walls 120 of the cookware vessel 100, typically either

by rivets or welding. In the case of short handles, such as shown in FIG. 2, such flanges 140 typically have two arms 141 and 141' that extends laterally outward from the cookware vessel wall 120 wherein each of arms 141 and 141' is then connected to the other by opposite ends of a handgrip portion 151. In a preferred embodiment the magnet 152 is embedded by a rubber covering layer 154 within this handgrip portion 151. Disposing the locus of the magnetic coupling of the utensil 10 more distal from rim 130, at handgrip portion 151. achieves a stable support thereof, as the attractive force of magnet 152 provides a greater resistive turning moment on the utensil 10 to counteract the weight of the working end 11. Further, as it least the flange portion 140 of the handle 150 is generally metallic, a preferred construction is to have a core 153 of the grip portion 151 that is also metallic, in which the magnet 152 is placed thereon. Thereafter in the manufacturing of handle 150, the core metal portion 153 and the attached magnet 152 are covered by an over molded rubber grip portion 154. This rubber grip portion 154 is more comfortable for the cook/chef or consumer to grasp, and will be cooler than metal core 153. Further, the rubber grip portion 154 hides and securely protects the magnet, without interfering or diminishing the attractive magnetic field necessary to provide a retaining force upon utensil 10, which has at least a ferromagnetic metallic portion. Hence, FIG. 3A illustrates that utensil 10 has a flat bottom grip portion surface 12a.

[0023] Fig. 4 illustrates another embodiment in which the rim 130 and the top of the handle 150 having embedded magnet 152 are not vertically flush, but have their top surfaces inclined upward away from the center of the vessel in a common reference plane 159 so that a flat portion of the utensil handle 12 will be disposed on both the rim 130 surface and upper handle surface 151a for more stable support.

[0024] In the case of utensil that are preferably not entirely metallic, such as bamboo chopsticks 20 or wooden stirring spoons 30, a metallic strip 25 can be

embedded into the grip portion of the utensil that is distal from the working end.

[0025] As shown in figures 5A and 5B, each of the bamboo chopsticks 20, has a strip 25 of stainless steel, such as magnetic 430 grade stainless steel alloy, inserted in a preformed slot 27 (FIG. 5C).

[0026] Alternatively, rather than inserting a metallic material into the grip portion 12 of utensil 10, a metallic ring 28 (FIG. 5D) or sleeve 29 (FIG. 5E) can be formed over the grip portion 32, as illustrated for the wooden spoon 30 shown in FIG. 4B. Hence, the wooden spoon 30 in FIG. 5D has a metallic ring 28 around the Grip portion 32 thereof. Alternatively, the wooden spoon 30 in FIG. 5E has a metallic sleeve 28 around the grip portion 32 thereof.

[0027] It is further preferable in any of the embodiments disclosed that the top of the vessel handle having an embedded magnet is planar and at the same vertical position as the horizontal surface of rim 130, and that the grip portion of utensil that is intended to rest on the rim and magnetically attractive portion of the handle is also a planar surface, as has been illustrated in FIG. 3A, in which utensil has a curved upper surface but a flat bottom surface 12a.

[0028] In other embodiments the utensils 10, 20 or 30 can have embedded magnets in the handle or grip portions 12 thereof and the cookware handle 150 can be a ferro-magnetic metal or have an oppositely polarized magnetic 153 disposed therein.

[0029] While the invention has been described in connection with a preferred embodiment, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be within the spirit and scope of the invention as defined by the appended claims.

Claims

[c1] An article of cookware, comprising:

a) a substantially horizontal bottom,

b) substantially upright sidewalls connected to and extending upward from and encircling said bottom to form a fluid retaining interior region, the sidewalls terminating at a rim portion,

c) at least one handle attached to the sidewall of the cookware having a gripping portion disposed distal from the rim, wherein a magnet is embedded within the gripping portion.

[c2] An article of cookware according to claim 1 wherein the rim of the cookware article and gripping portion of the handle are disposed at the same vertical height.

[c3] An article of cookware according to claim 1 wherein the embedded magnet is covered by rubber.

[c4] A cookware and utensil set comprising:

a) an article of cookware having;

i) a substantially horizontal bottom,

ii) substantially upright sidewalls connected to and extending upward from and encircling said bottom to form a fluid retaining interior region, the sidewalls terminating at a rim portion,

iii) at least one handle attached to the sidewall of the cookware having a gripping portion disposed distal from the rim, wherein a magnet is embedded within the gripping portion.

b) a utensil having an elongated handle portion and a working portion attached to and end of the elongated portion, wherein the elongated handle includes a metallic portion.

[c5] A cookware and utensil set according to claim 4 wherein the rim of the cookware article and gripping portion of the handle are disposed at the same vertical height.

[c6] A cookware and utensil set according to claim 4 wherein the embedded magnet of the handle is covered by rubber.

[c7] A cookware and utensil set according to claim 4 wherein the utensil is substantially non ferro-metallic and has a ferro-metallic portion embedded within the elongated handle portion.

[c8] A cookware and utensil set according to claim 4 wherein the utensil is substantially non ferro-metallic and has a ferro-metallic containing sleeve covering at least a part of the elongated handle portion.

[c9] A cookware and utensil set according to claim 4 wherein the elongated handle portion of the utensil has a common planer surface that extends over a distance

thereof that is at least as long as the distance between the rim of the cookware vessel and the portion of the handle having the embedded magnet.

[c10] A cookware and utensil set according to claim 9 wherein the rim and gripping portion of the handle are dispose at the same vertical height.

[c11] A cookware and utensil set according to claim 5 wherein cookware article is a wok.

[c12] A cookware and utensil set according to claim 10 wherein utensil is chop sticks.

[c13] A cookware and utensil set according to claim 11 wherein the chop sticks are non-metallic and have a ferrous metal portion embedded therein.

[c14] A cookware and utensil set comprising:

a) an article of cookware having;

i) a substantially horizontal bottom,

ii) substantially upright sidewalls connected to and extending upward from and encircling said bottom to form a fluid retaining interior region, the sidewalls terminating at a rim portion,

iii) at least one handle attached to the sidewall of the cookware having a gripping portion disposed distal from the rim, wherein the gripping portion includes at least one of a ferrous metal and a magnetic material.

b) a utensil having an elongated handle portion and a working portion attached to and end of the elongated portion, wherein the elongated handle includes a metallic portion.

[c15] A cookware and utensil set according to claim 14 wherein the at least one of a ferrous metal and a magnetic material is at least one of embedded in and partially covered by a rubber covering.

[c16] A cookware and utensil set according to claim 14 wherein the elongated handle portion of the utensil has a common planer surface that extends over a distance thereof that is at least as long as the distance between the rim of the cookware vessel and the portion of the handle having the embedded magnet.

[c17] A cookware and utensil set according to claim 16 wherein the rim and gripping portion of the handle are dispose at the same vertical height.

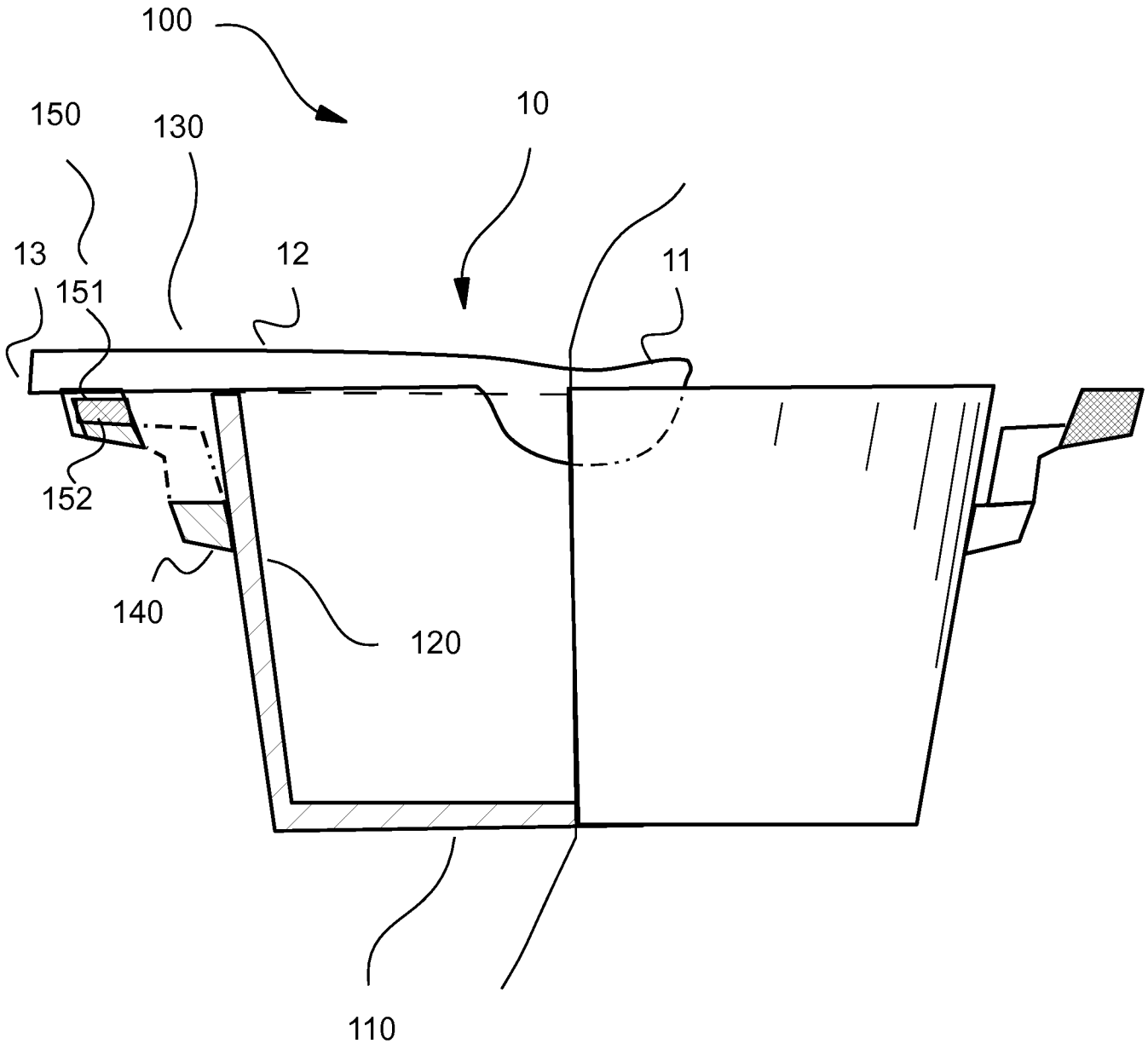


FIG. 1

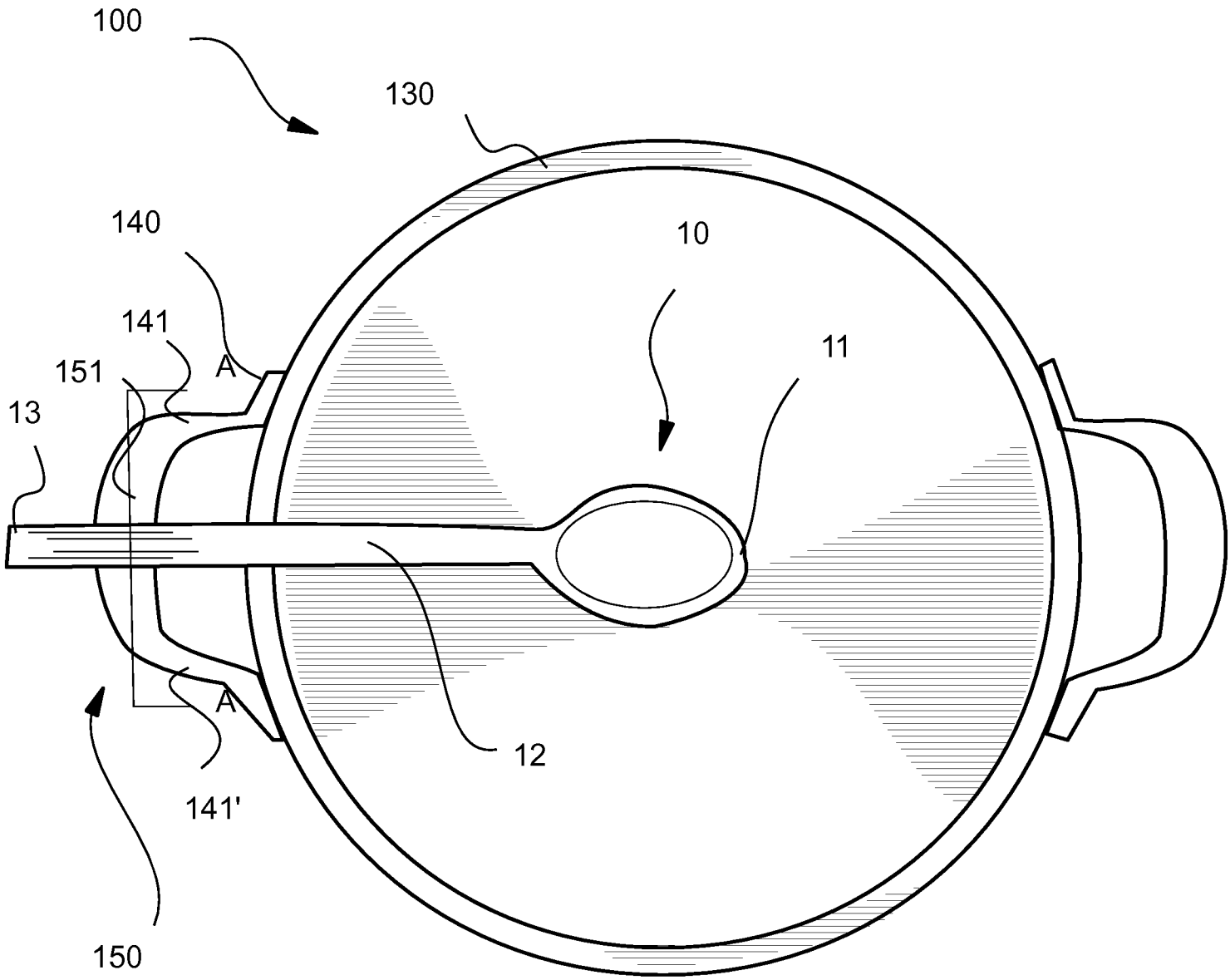


FIG. 2

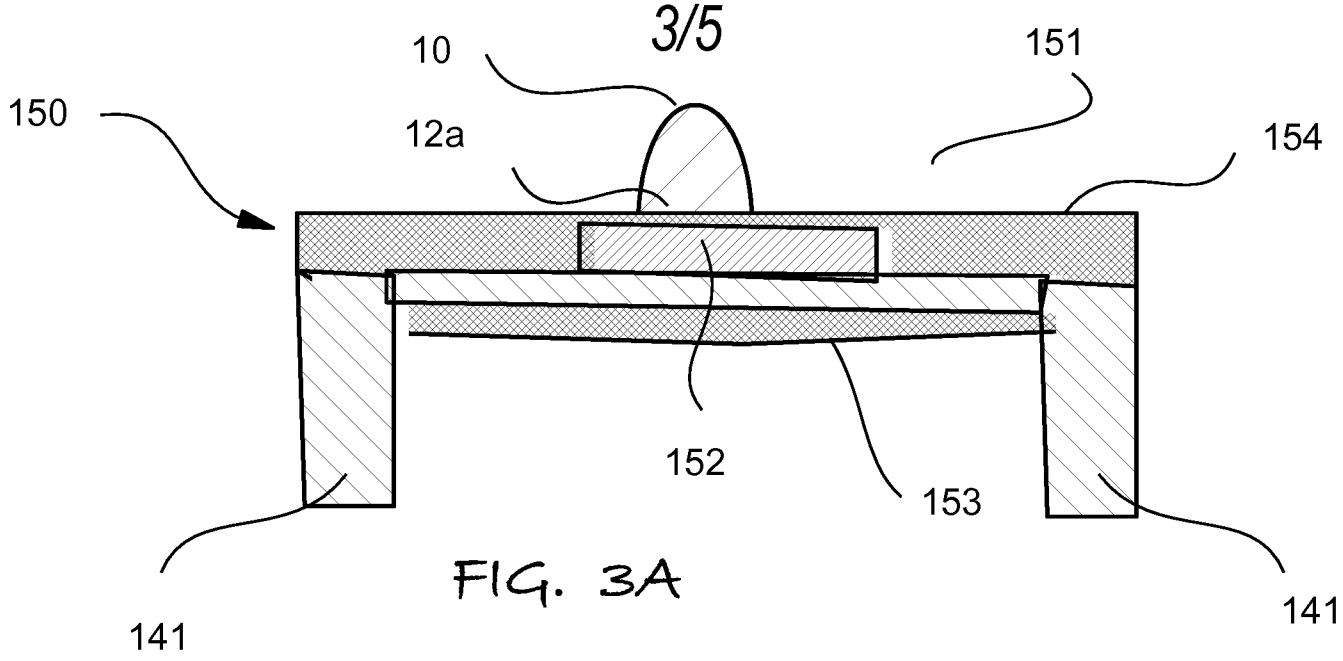

10
151
150
12a
154
152
153
141
141

FIG. 3A

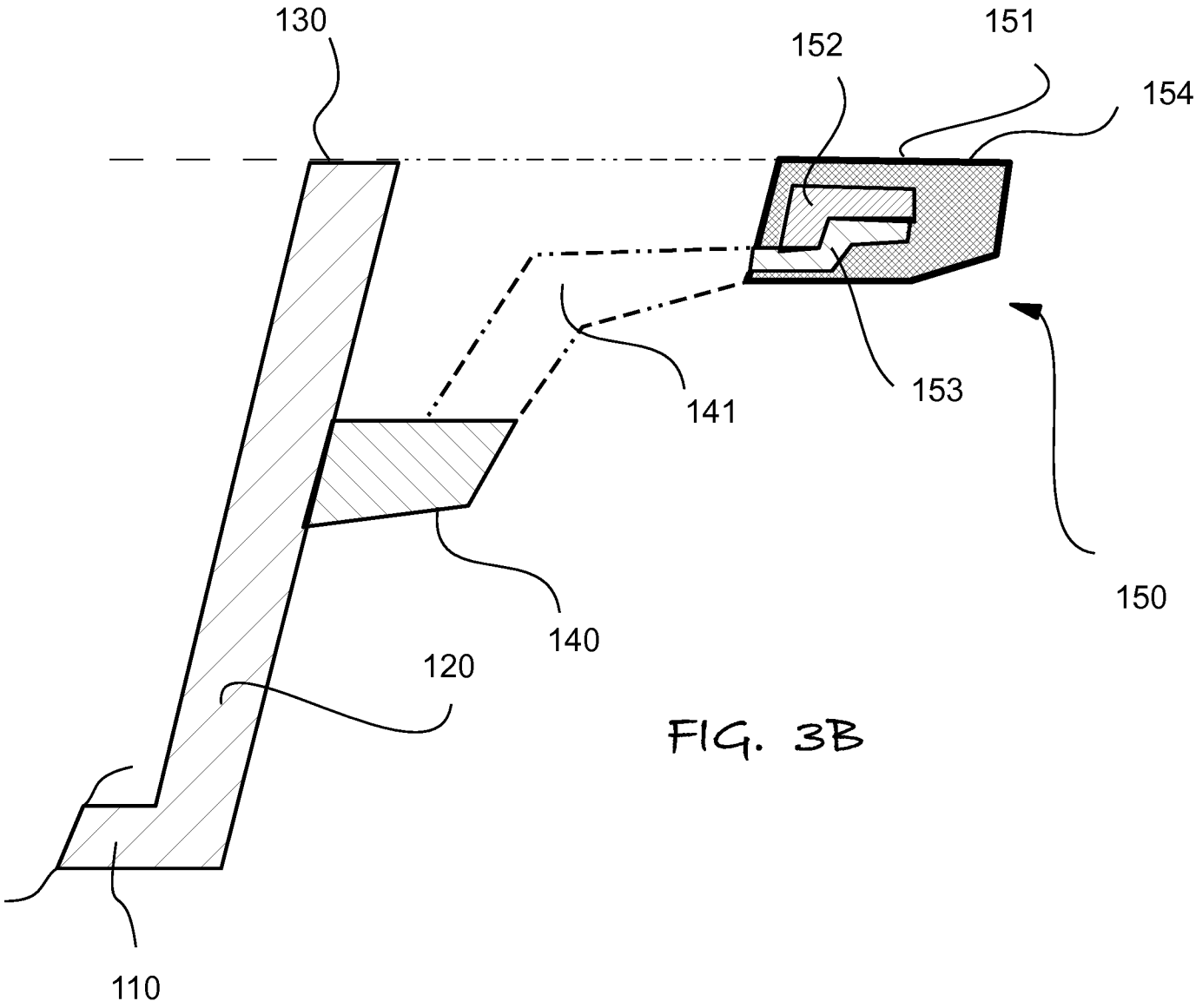

130
152
151
154
153
141
150
140
120
110

FIG. 3B

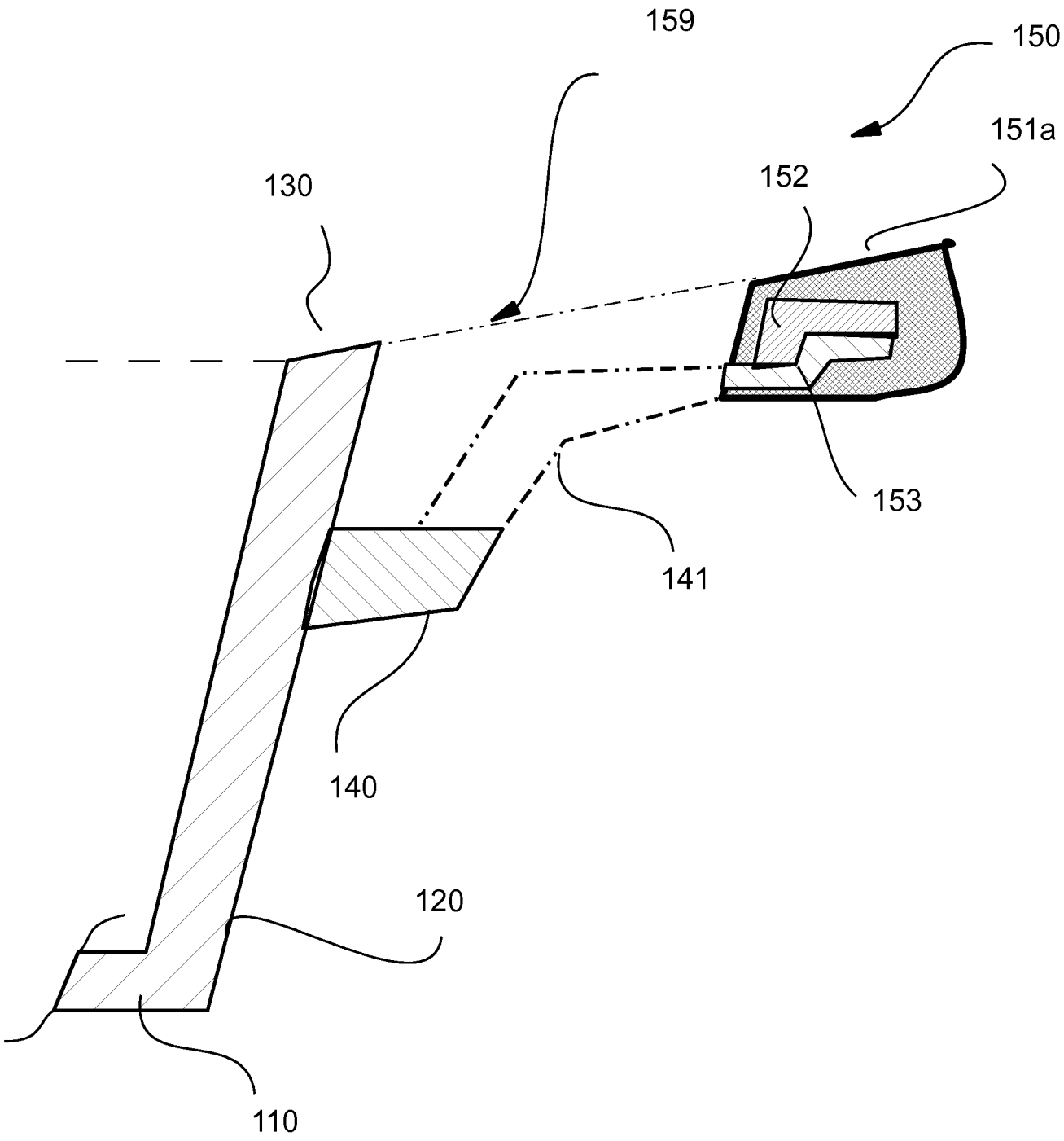


FIG. 4

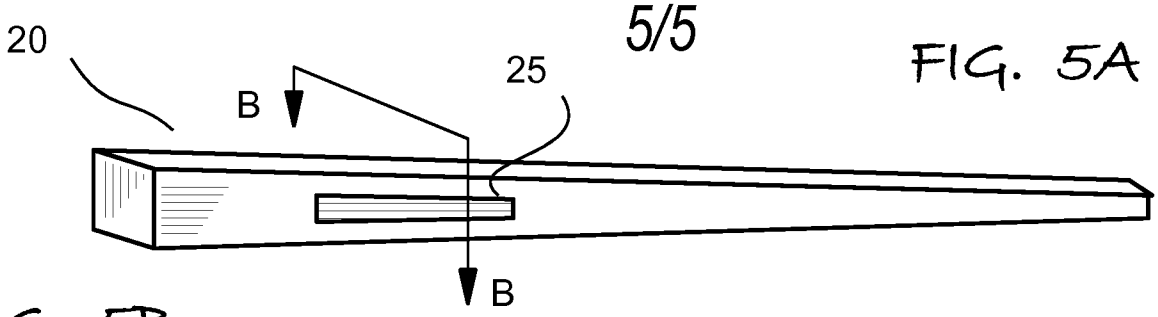


FIG. 5A

FIG. 5B

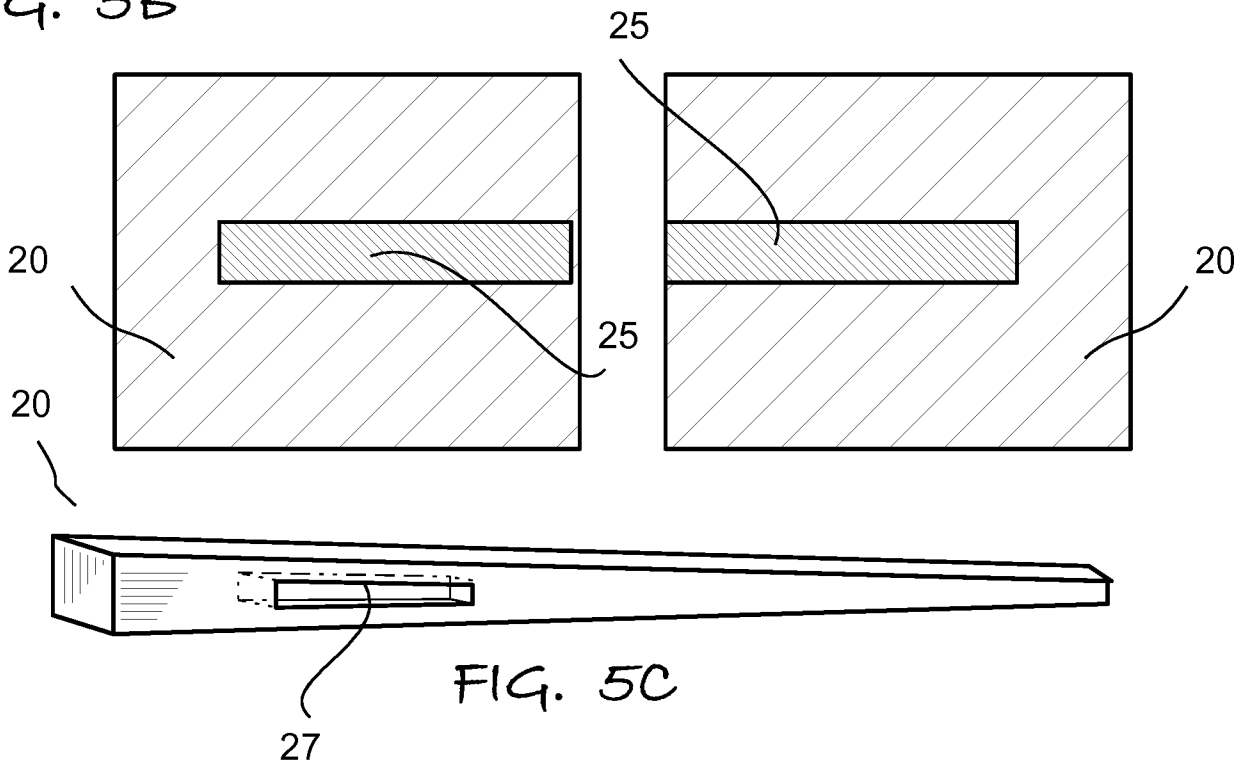


FIG. 5C

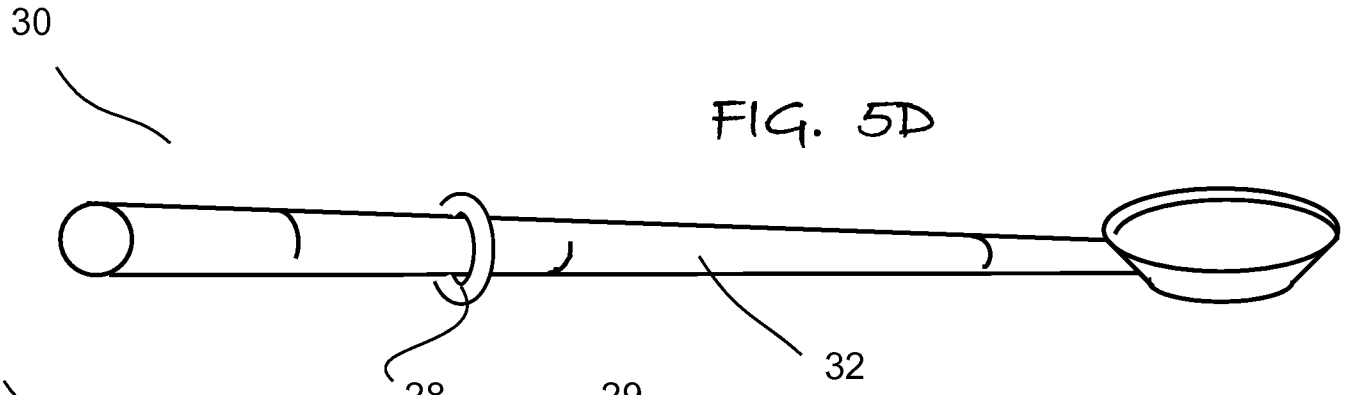


FIG. 5D

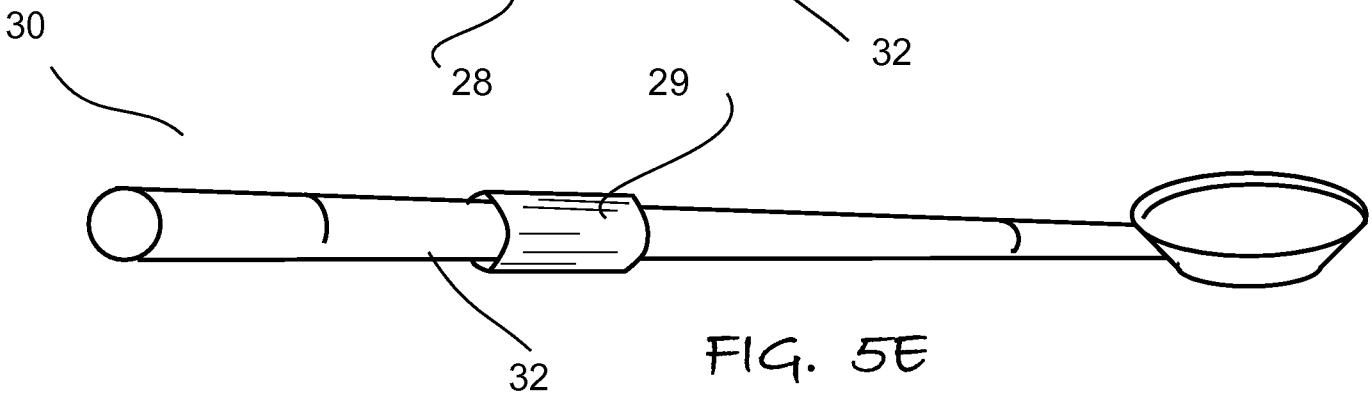


FIG. 5E

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/041872

A. CLASSIFICATION OF SUBJECT MATTER

A47J 45/06(2006.01)i, A47J 36/34(2006.01)i, A47J 36/02(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A47J 45/06; B26B 3/02; A47J 36/34; A47G 21/06; A47G 19/22; A47J 36/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & keywords: cookware, utensil, handle, gripping portion, magnet, rim, ferrous metal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 20-0347606 Y1 (PARK, MIN GYU) 14 April 2004 See abstract; pages 2 and 3; claims 1 and 2; figs. 2 and 3.	1-17
X	KR 20-0309687 Y1 (JANG, MIN WOO) 03 April 2003 See abstract; pages 2 and 3; claim 1; figs. 1-3.	1-17
A	US 2006-0021989 A1 (FRIEDMAN, DAVID) 02 February 2006 See abstract; paragraphs [0001] and [0026]-[0031]; figs. 1-3B.	1-17
A	US 4317284 A (PRINDLE, WILLIAM A.) 02 March 1982 See abstract; column 1 lines 5-22 and column 5-31; fig. 1	1-17

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
03 September 2013 (03.09.2013)	**04 September 2013 (04.09.2013)**

Name and mailing address of the ISA/KR
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/US2013/041872

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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