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(72) Inventor; and

(71) Applicant : BERKOVICH, Zeev [IL/IL]; 9 Barak St.,
3088900 Caesarea (IL).

(74) Agent: TSIVION, Yoram; P. O. Box 3148, 3088900
Caesarea (IL).

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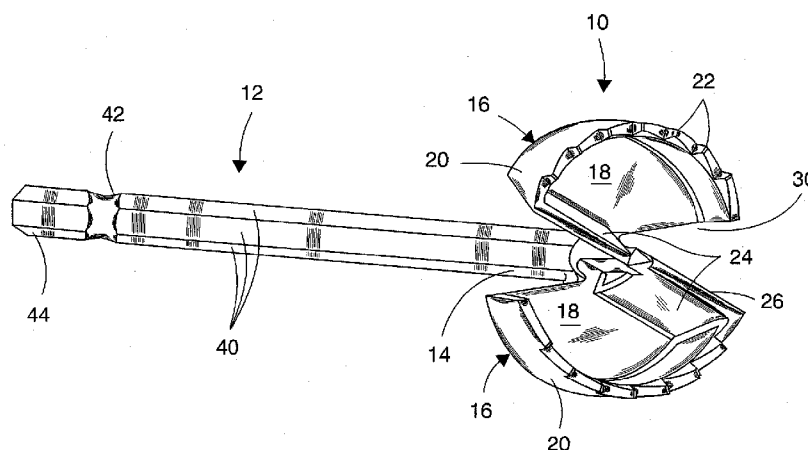


FIG. 1

(57) Abstract: A food borer accessory for cutting food. The accessory includes a cutting portion; and a shaft to which the cutting portion is attached at the distal end of the shaft. The cutting portion has a generally cylindrical shape and a pair of cutting sections. Each of the cutting sections has: a bottom; a curved cutting blade generally perpendicular to the bottom; and a plurality of cutting teeth. The cutting sections define a food receiving recess and a gap where-through, during operation, food that has been cut can pass, thus allowing the borer to bore deep into the food.

FOOD BORER AND ACCESSORY AND KIT THEREFOR

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

5 [001] This application claims priority from provisional patent application US 61/747,377 entitled "Food borer and accessory therefor", filed on December 31, 2012.

FIELD OF THE INVENTION

10 [002] The present invention relates to food preparation devices, in particular, a device for helping remove the inner portion of foods.

BACKGROUND OF THE INVENTION

[003] Stuffed foods, such as stuffed peppers, stuffed cucumbers and the
15 like are popular dishes; however, they can involve a lot of preparation time or be messy. One of the activities required in the preparation involves removing the inner portion of the appropriate food, wherein a stuffing is placed.

SUMMARY OF THE INVENTION

20 [004] The present invention relates to a a food preparation device adapted for use in boring into appropriate food, typically fruits or vegetables, to aid in the removal or at least some of the inner portion of the food.

[005] In accordance with embodiments of one aspect of the present invention there is provided a food borer accessory for cutting food. The accessory includes a cutting portion; and a shaft to which the cutting portion is attached at the distal end of the shaft. The cutting portion has a generally cylindrical shape and a pair of cutting sections. Each of the cutting sections has:
5 a bottom; a curved cutting blade generally perpendicular to the bottom; and a plurality of cutting teeth. The cutting sections define a food receiving recess and a gap where-through, during operation, food that has been cut can pass, thus allowing the borer to bore deep into the food.

10 [006] In accordance with embodiments of another aspect of the present invention there is provided a food borer including a food borer accessory as in any of the aforementioned embodiments; and a gripping handle.

[007] In accordance with embodiments of another aspect of the present invention there is provided a food borer kit including a gripping handle; and a
15 plurality of food borer accessories in accordance with any of the embodiments noted above.

BRIEF DESCRIPTION OF THE DRAWINGS

[008] The present invention will be understood and appreciated more
20 fully from the following detailed description taken in conjunction with the appended drawings in which:

[009] **Figs. 1-3** are perspective views of embodiments of a food borer accessory of the present invention;

[010] **Fig. 4** is an end view of Figs. 1-3;

25 [011] **Fig. 5** is a side view of Figs. 1-3;

[012] **Figs. 6-7** are perspective views an embodiment of a food borer of the present invention; and

[013] **Fig. 8** is a perspective view an embodiment of a food borer kit of the present invention.

5 [014] The following detailed description of embodiments of the invention refers to the accompanying drawings referred to above. Dimensions of components and features shown in the figures are chosen for convenience or clarity of presentation and are not necessarily shown to scale. Wherever possible, the same reference numbers will be used throughout the drawings and
10 the following description to refer to the same and like parts.

DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[015] Illustrative embodiments of the invention are described below. In the interest of clarity, not all features/components of an actual implementation
15 are necessarily described.

[016] With reference to the Figures, various embodiments of a food borer accessory, food borer and food borer kit are shown. The borer accessory (Figs. 1-5) includes a cutting portion 10 and a shaft 12. Cutting portion 10 is attached to a distal end 14 of shaft 12 and has a generally cylindrical shape
20 comprising a pair of cutting sections 16. Each cutting section 16 has a bottom 18; a curved cutting blade 20, generally perpendicular to bottom 18 and typically having a plurality of cutting teeth 22; and a cutting portion reinforcement and shaft connection wall 24.

[017] A first end or edge of wall 24 is attached to an edge of cutting section 16 and a second end or edge of the wall is attached to shaft 12. Wall 24 may be generally perpendicular to bottom 18 or in particular embodiments, slightly angled, as shown. Angled walls 24 can be particularly useful for facilitating the rearward movement of cut food. In addition, in particular embodiments, the top edge 26 of walls 24 are beveled to provide a relatively sharp upward edge to aid in cutting. The connection between cutting portion 10 and shaft 12 may be further reinforced by one or more connection reinforcement members, such as the pair of triangular connection reinforcement members 28 disposed below bottom 18.

[018] Cutting sections 16 define a food receiving recess and a gap 30 where-through food that has been cut can pass during operation, thus allowing the borer to penetrate deep into the food if desired, for example if boring into a food with a large aspect ratio such as a cucumber.

[019] Shaft 12 typically has multiple sides 40, such as six sides with a hexagonal profile; and an annular groove 42 slightly spaced apart from the shaft's proximal or free end 44, whereby the shaft can be conveniently inserted into a drill chuck (not shown) and used in conjunction with a drill (not shown). Shaft 12 also typically has a pointy tip 46 at its distal end 14 which can be inserted into the food to stabilize the borer accessory's position.

[020] The food borer accessory is typically made of a food-grade metal or food grade plastic. In some embodiments, which may be considered to be preferred, the borer accessory is made of a glass-fiber reinforced polypropylene.

[021] Figs. 6-7 show an embodiment of a food borer comprising a food borer accessory, such as illustrated in the embodiments depicted above; and a

gripping handle 60. In some embodiments, gripping handle 60 has a motor 62 powered by a power supply such as one or more batteries (not shown) for rotating the borer accessory. In certain embodiments handle 60 includes a power cord and/or power cord interface (not shown) for connecting to the electrical mains.

[022] Fig. 8 illustrates a food borer kit including accessories of various sizes intended for use in accordance with the size of the food and amount of food removal desired.

[023] It should be understood that the above description is merely exemplary and that there are various embodiments of the present invention that may be devised, *mutatis mutandis*, and that the features described in the above-described embodiments, and those not described herein, may be used separately or in any suitable combination; and the invention can be devised in accordance with embodiments not necessarily described above.

CLAIMS

1. A food borer accessory for cutting food, the food borer accessory comprising:

a cutting portion; and

a shaft to which the cutting portion is attached at the distal end of the shaft,

wherein the cutting portion has a generally cylindrical shape and comprises a pair of cutting sections, each of the cutting sections having: a bottom; a curved cutting blade generally perpendicular to the bottom; and a plurality of cutting teeth, and wherein the cutting sections define a food receiving recess and a gap where-through, during operation, food that has been cut can pass, thus allowing the borer to bore deep into the food.

2. The accessory of claim 1, wherein the cutting portion further comprises a cutting portion reinforcement and shaft connection wall.

3. The accessory of claim 2, wherein the cutting portion reinforcement and shaft connection wall is generally perpendicular to the bottom.

4. The accessory of claim 2, wherein the cutting portion reinforcement and shaft connection wall is angled with respect to the bottom.

5. The accessory of claim 2, wherein the cutting portion reinforcement and shaft connection wall has a first edge thereof attached to an edge of cutting section and has a second thereof attached to the shaft.

6. The accessory of claim 2, wherein the cutting portion reinforcement and shaft connection wall has a beveled top edge.

7. The accessory of claim 2, wherein the connection between cutting portion and shaft is reinforced by one or more connection reinforcement members.
8. The accessory of claim 7, wherein the connection reinforcement members comprise a pair of triangular connection reinforcement members disposed below bottom.
9. The accessory of claim 1, wherein the shaft has multiple sides.
10. The accessory of claim 9, wherein the shaft has six sides with a hexagonal profile.
11. The accessory of claim 1, wherein the shaft has an annular groove slightly spaced apart from a free end of the shaft.
12. The accessory of claim 1, wherein the shaft has a distal end with a pointy tip configured to be inserted into the food.
13. A food borer comprising:
 - a food borer accessory as defined in any of claims 1-12; and
 - a gripping handle.
14. The borer of claim 13, wherein the gripping handle comprises a motor configured to rotate the borer accessory.
15. A food borer kit comprising a gripping handle; and a plurality of food borer accessories as defined in any one of claims 1-12, of various sizes.

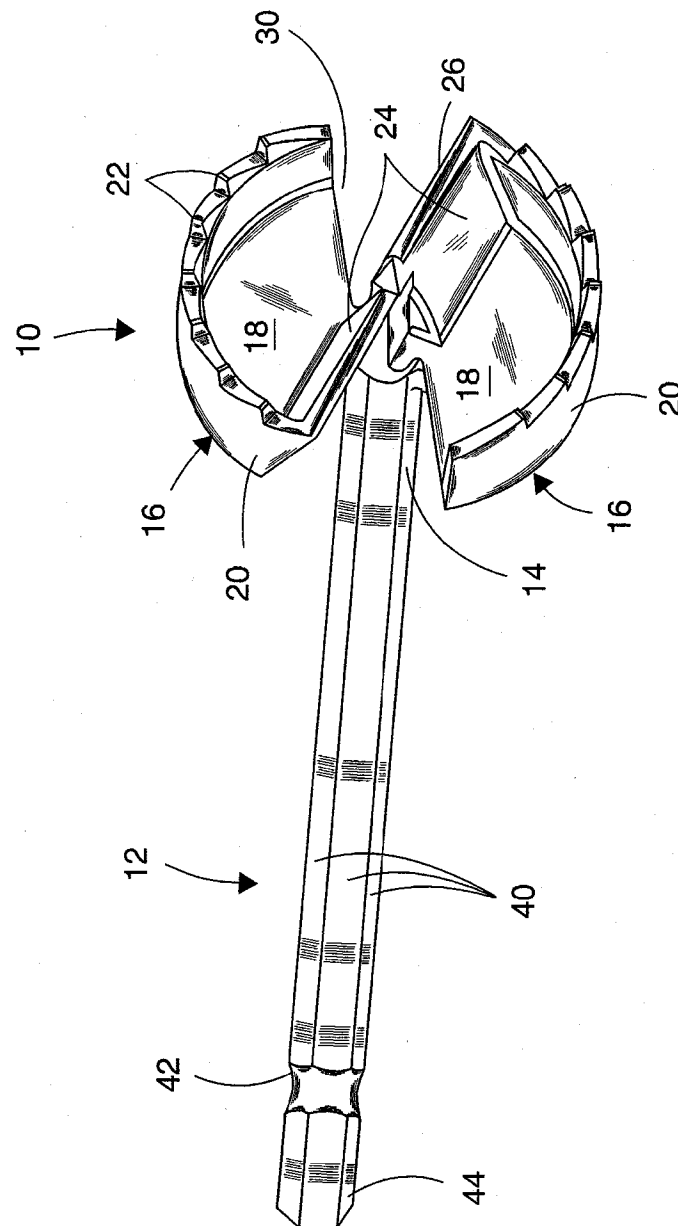


FIG. 1

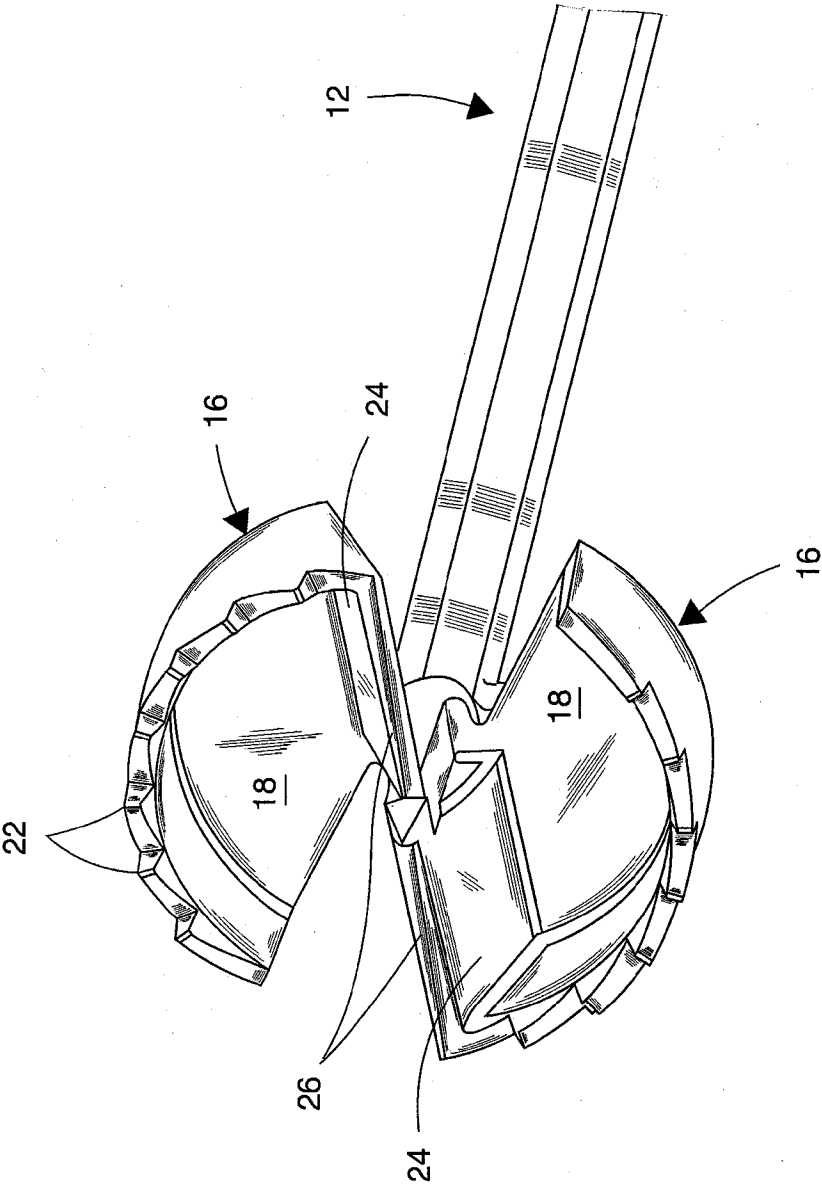


FIG. 2

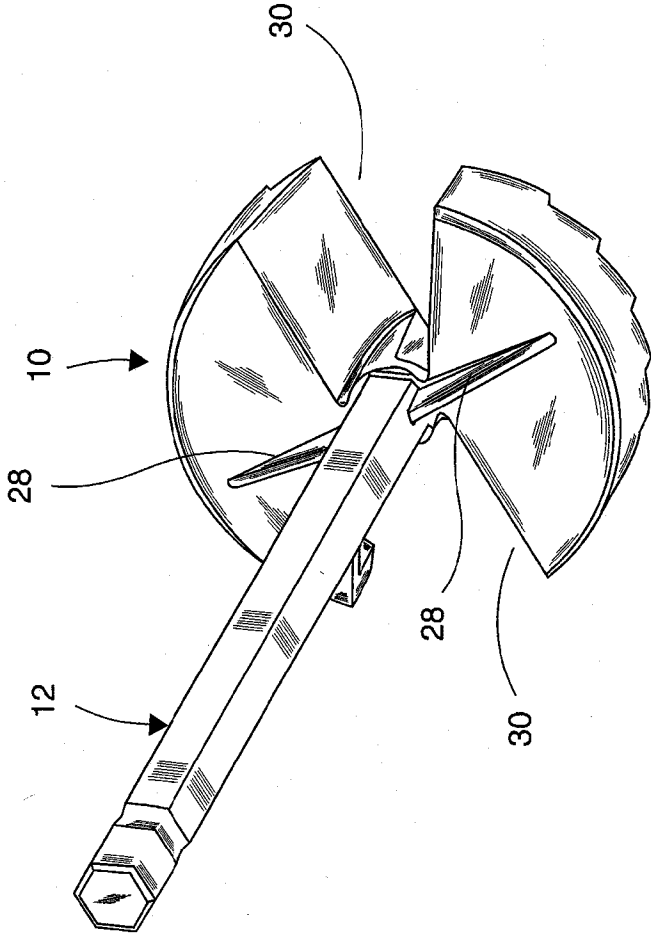


FIG. 3

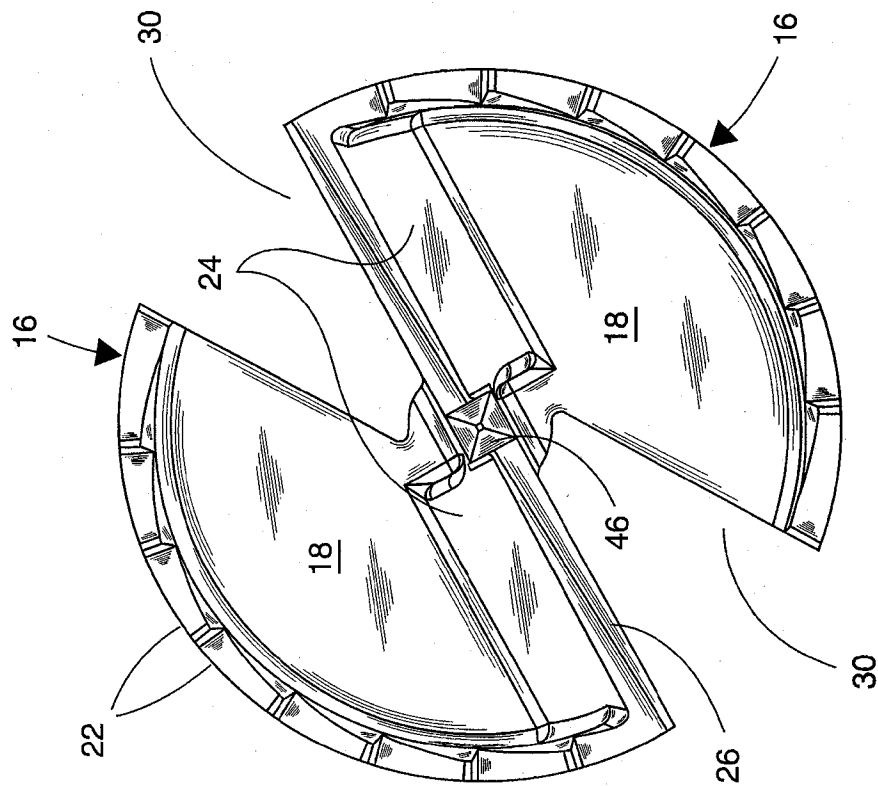


FIG. 4

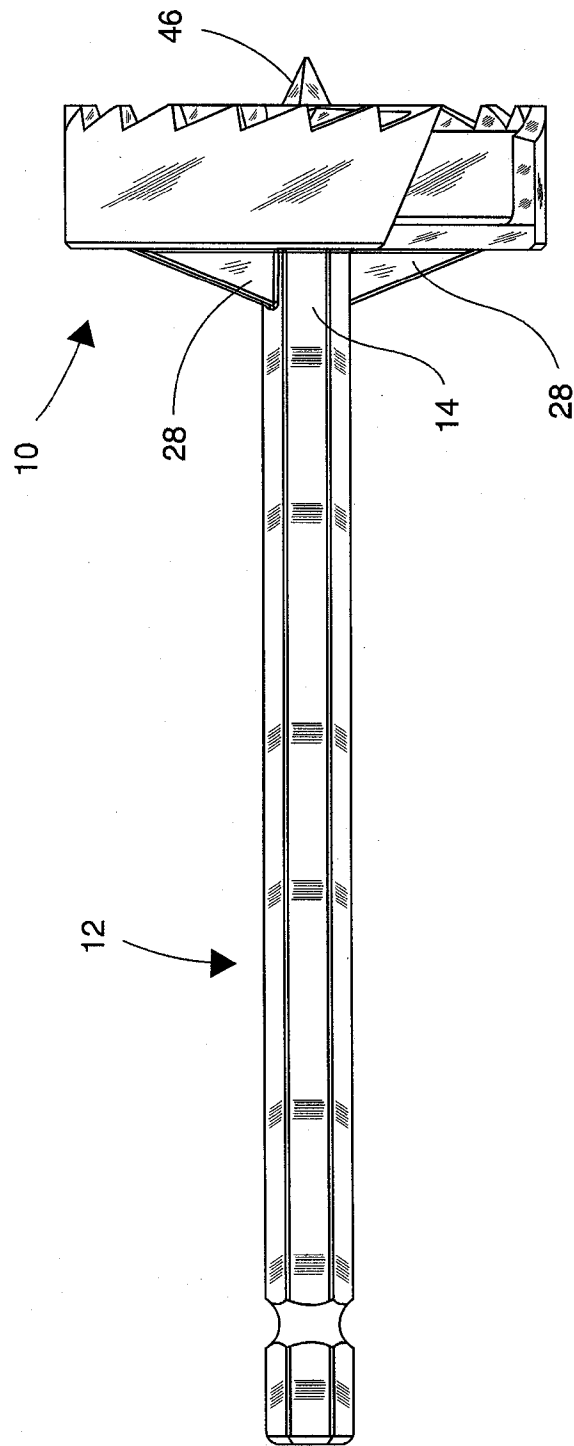


FIG. 5

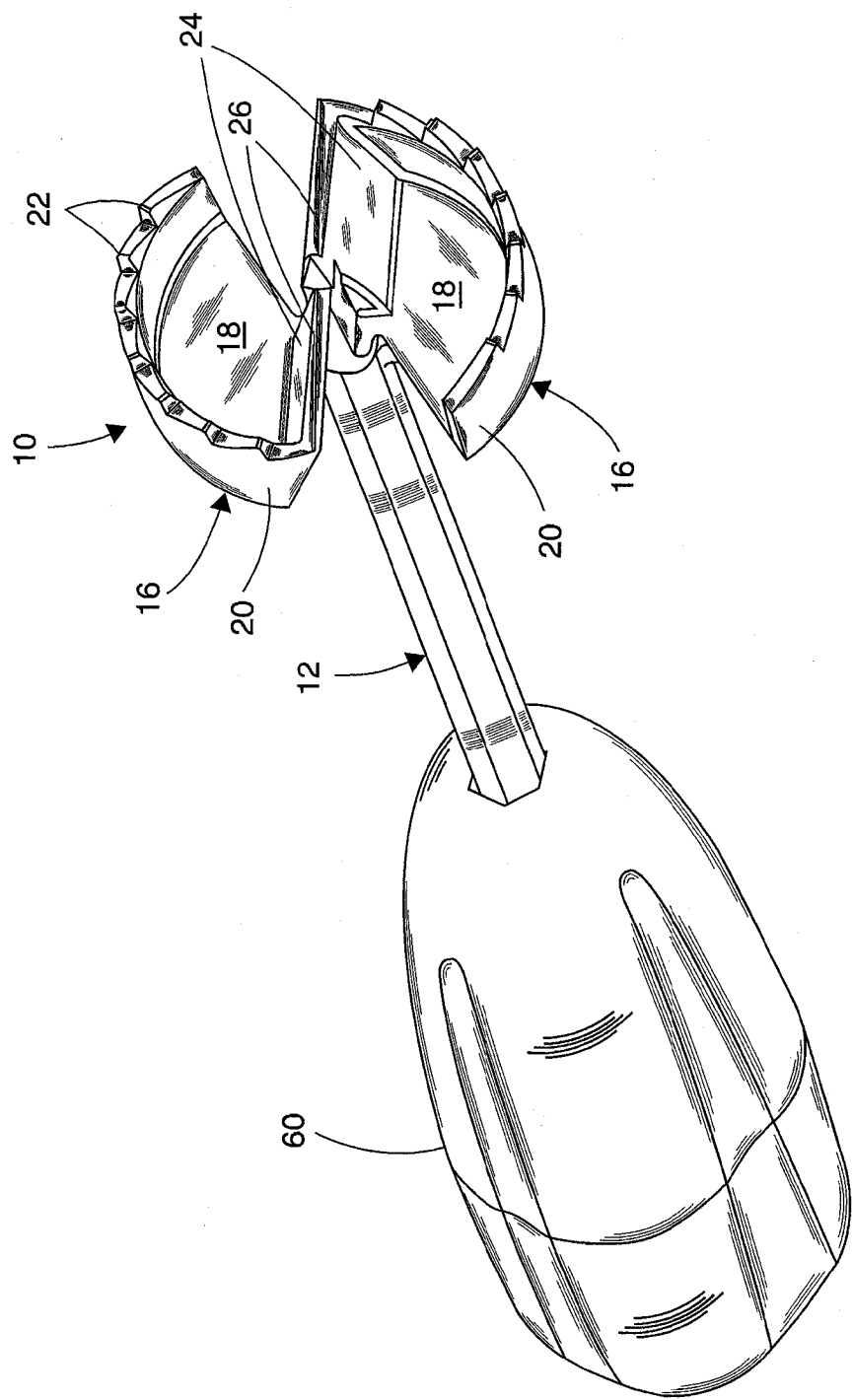


FIG. 6

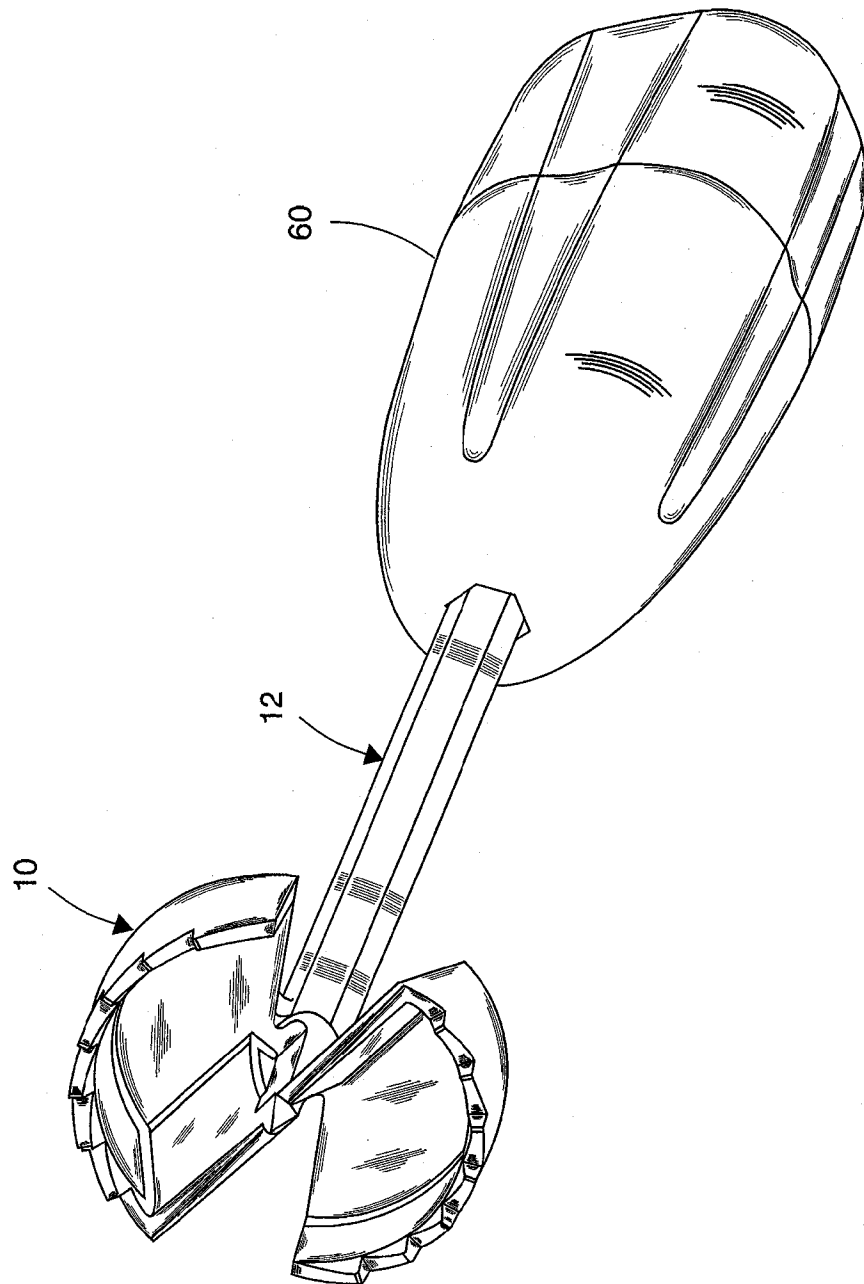


FIG. 7

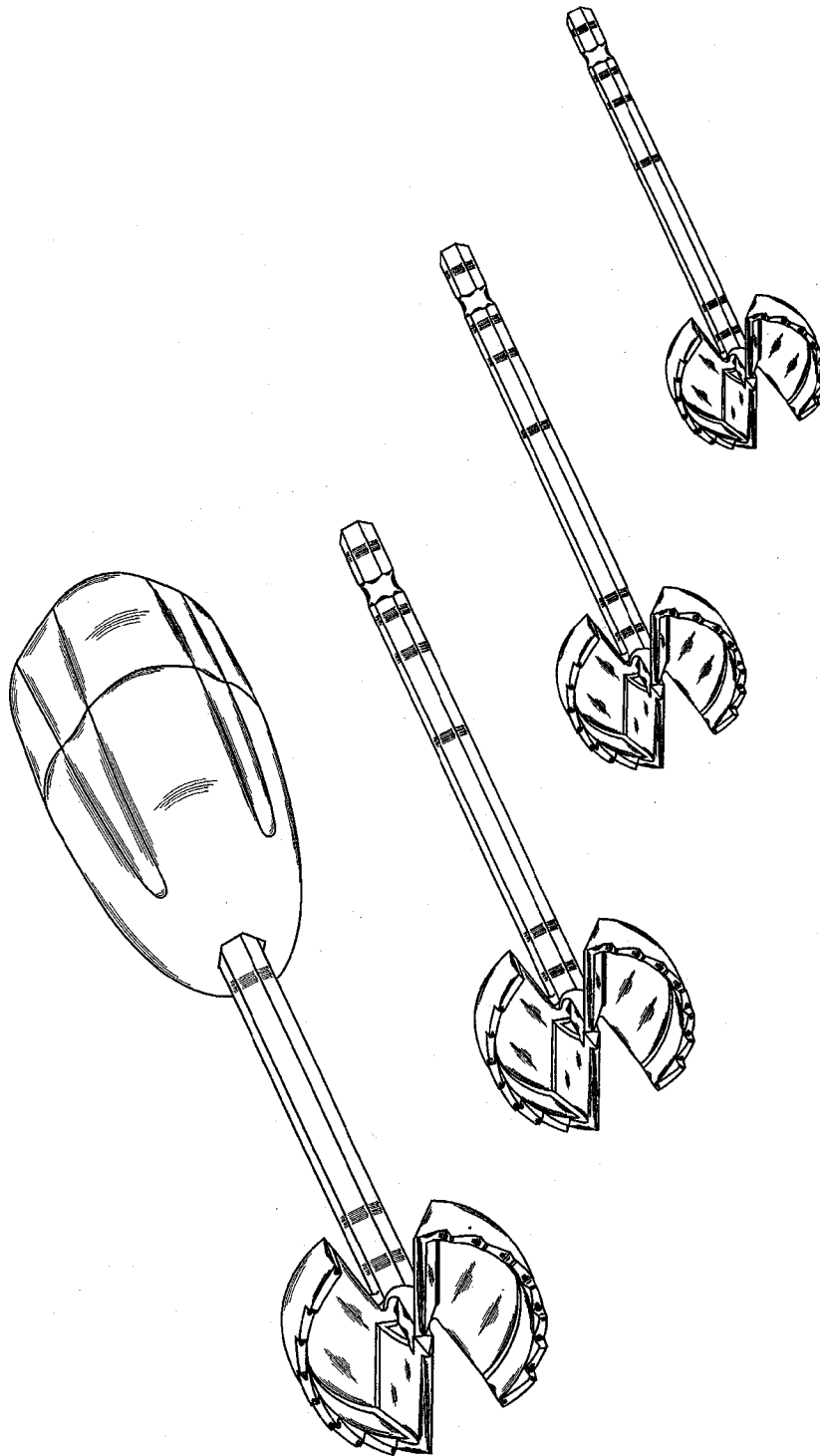


FIG. 8

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC (2014.01) A47J 25/00, B26D 7/00, A23N 4/24

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)

IPC (2014.01) A47J 25/00, B26D 7/00, A23N 4/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Databases consulted: THOMSON INNOVATION, Esp@cenet, Google Patents, FamPat database

Search terms used: (food or vegetable or fruit), cylindricl, blade, coring, base, gap

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003037440 A1 Raz 27 Feb 2003 (2003/02/27) entire document	1-15
A	JP 2003250695 A Hisako 09 Sep 2003 (2003/09/09)	1-15
A	US 7020968 B1 Abdel Dayem 04 Apr 2006 (2006/04/04) entire document	1-15



Further documents are listed in the continuation of Box C.



See patent family annex.

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Authorized officer

ROASH Yoaela

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INTERNATIONAL SEARCH REPORT
Information on patent family members

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Patent document cited search report	Publication date	Patent family member(s)	Publication Date
US 2003037440 A1	27 Feb 2003	US 2003037440 A1	27 Feb 2003
JP 2003250695 A	09 Sep 2003	JP 2003250695 A	09 Sep 2003
		JP 3967672 B2	29 Aug 2007
US 7020968 B1	04 Apr 2006	US 7020968 B1	04 Apr 2006