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(54) Title: FRUIT OR VEGETABLE PEELER OR SHELLER 		
(57) Abstract A peeler or sheller for fruit or vegetable has a handle with a first blade to score the fruit/vegetable, a second blade to form a circular cut around a core or end of the fruit/vegetable, and a third blade to peel or layer of peel or shell from the fruit/vegetable. The peeler or sheller may be provided with a "potato peeler", a "potato eye" remover and/or a retractable paring knife blade.		

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Title: "FRUIT OR VEGETABLE PEELER OR SHELLER"

BACKGROUND OF THE INVENTION

(1) Field of the Invention

THIS INVENTION relates to a fruit or vegetable
5 peeler or sheller. The utensil shall primarily be described as an onion sheller, but is also applicable to a peeler for fruits (eg. citrus fruits such as oranges and limes) and other vegetables.

(2) Prior Art

10 Anyone who has had to peel an onion is aware of the problems of (a) only removing the outer layer or sheller and (b) weeping eyes from the acid fumes released by the onion.

The applicants have established that the
15 problem of the acid fumes can be eliminated (or at least markedly reduced) by cutting around the root end of the onion before the outer layer or shell is removed as the acid is primarily concentrated at the root end.

SUMMARY OF THE INVENTION

20 It is an object of the present invention to provide a simple, yet efficient hand-held utensil to peel or shell fruits or vegetables such as onions.

It is a preferred object to provide a utensil which enables a circular cut or coring cut to be made in
25 the fruit or vegetable.

It is a further preferred object to provide a utensil which enables the peel or outer layer to be scored and then peeled or shelled.

Other preferred objects will become apparent
30 from the following description.

In a broad aspect, the present invention resides in a fruit or vegetable peeler or sheller including:

- 35 a handle having a portion to be gripped;
- a first blade extending laterally from the

handle to score or cut the peel or skin of a fruit or vegetable;

a second blade on the handle to form a circular cut or core around a core or end of the fruit
5 or vegetable; and

a third blade at the distal end of the handle, spaced from the portion to be gripped, engageable under the peel or layer or shell of the fruit or vegetable to lift and remove the peel, layer or shell
10 as the third blade is advanced.

The first blade may be arranged to co-operate with a pin to operate as the second blade.

The peeler or sheller is preferably moulded in a single unit from a suitable plastics material,
15 although one or more of the two blades may be detachable and formed, eg. of stainless steel. Finger grips may be moulded into the handle.

Preferably, the first blade - the scoring blade - extends laterally from the handle, preferably
20 adjacent a "neck" on the handle which connects the third blade to the handle. The blade has a sharpened edge to enable the peel/layer/shell to be scored or cut.

In a simple embodiment, the first blade co-operates with a pin to enable a circular cut to be
25 effected in the peel/layer/shell. Preferably, the second blade includes a cutting blade assembly having four cutting edges arranged in a circle to form a circular cut when the handle is swung through 90°. Preferably, the assembly extends upwardly from the
30 handle and adjacent the neck.

The third blade - the peeling or shelling blade - is preferably downwardly-curved in side view and may be of V-, circular, spoon- or other shape and may have rearwardly-directed, upwardly-inclined wings to
35 lift the peel/layer/shell from the fruit/vegetable.

A conventional "potato peeler" blade may be provided on the handle and may be pivotally mounted in a yoke at the end of the handle spaced from the third blade.

- 5 A paring blade may be provided on the handle and may be extendable to a cutting position and retractable into the handle in a storage position.

BRIEF DESCRIPTION OF THE DRAWINGS

- To enable the invention to be fully
10 understood, a number of preferred embodiments will now be described with reference to the accompanying drawings, in which:

FIG 1 is a perspective view of one embodiment of the utensil;

- 15 FIG 2 is a perspective view showing forming a circular cut around the root end of an onion (the stalk and end still intact);

FIG 3 is a perspective view showing forming a circular cut around the root end of the onion after the
20 stalk end has been cut off;

FIG 4 is a perspective view showing the outer shell being removed from the onion, the peeling blade entering one end of the onion;

- FIG 5A is a similar view showing the outer
25 shell being removed, the peeling blade being advanced around the circumference of the onion;

FIG 6 is a side view of a second embodiment of the utensil;

- FIG 7 is a perspective view of a third
30 embodiment of the utensil;

FIG 8 is a top plan view showing a circular cut being formed by the third embodiment in a fruit or vegetable;

- FIGS 9, 10 and 11 are respective side, plan
35 and perspective views of a fourth embodiment of the

utensil;

FIGS 12 to 14 show the steps of peeling an onion using the fourth embodiment utensil; and

FIGS 15 to 17 show a fifth embodiment of the
5 utensil which incorporates a retractable paring knife blade.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS 1 to 5, the utensil 10 of
10 the first embodiment has a handle 11 with an integral thumb grip 12. From the forward end of the handle 11, a neck 13 extends forwardly and downwardly to the third blade 14 to be hereinafter described.

A first blade 15, ie. the "scoring blade",
15 extends laterally from a raised formation 16 on the neck 13 and has a cutting edge 17.

A circular blade assembly 18, on the top of the formation 16, has four blades 19 arranged in a circle, with cutting edges so that rotation of the
20 handle about an axis centred on the blade assembly 18 will form a circular cut.

As shown, the neck 13 extends forwardly and downwardly and is tapered to engage the rear of the third blade 14, ie. "the peeling or shelling blade",
25 which is substantially V-shaped in plan view, with a curved (blunt) leading edge 20 extending from the tips of side wings 21, 22.

In use, the first blade 15 is used to cut an elongate score 30 in the skin and outer shell of an
30 onion 31 - see FIG 4.

After the stalk end 31A has been cut off, the onion is then held with its root end 32 uppermost and the cutting blade assembly 18 is used to cut a circular cut around the root end 32, the utensil 10 being rotated
35 through 90° to 100° so that each blade 19 cuts a

quarter-circle cut. This circular cut in the root end 32 isolates the acid in that end to limit the acid fumes released when the outer and second shells of the onion is removed, and to replace the shells from the root end 5 as they are lifted by the utensil.

Referring to FIG 5, the third blade 14 is inserted through the score 30 in the skin and outer shell 33 and they are lifted and removed as the blade 14 is advanced around the onion. NB: In FIG 5, the 10 utensil is shown entering the onion 31 from one end- this is permissible but it is preferred to advance the blade 14 around the circumference of the onion as shown in FIG 5A. An inner shell(s) can be peeled or shelled from the onion in the same manner.

15 For citrus fruits, eg. oranges, the peel will be scored by the first blade 15, the peel at the ends cut by the blades 19 of the circular blade assembly 18, and the peel removed from the flesh by the third blade 14.

20 In the modified embodiment 110 of FIG 6, the handle 111, first blade 115 and circular blade assembly 118 are substantially as hereinbefore described. The neck 113 is more tapered and elongated and the third blade 114 is slimmer in plan view (ie. the leading edge 25 120 is more pointed at its forward extremity) and the side wings 122 are longer and are upwardly inclined to lift the peel/layer/shell from the flesh of the fruit/vegetable. A hole 123 through the handle 110 enables the utensil to be hung from a hook.

30 The third embodiment of the utensil 110 - see FIGS 7 and 8 - has a plain handle 211 where the thumb grip 12 and finger grip 24 are omitted. The third blade 214 is substantially of the same shape as third blade 14 of the utensil 10.

35 The first blade 215 extends laterally from the

handle 211 but perpendicular to the axis of the latter and is spaced from a pin 225. The first blade 215 scores the peel/layer/shell as hereinbefore described, but co-operates with the pin 225 (to define a rotational axis) to cut the circular cut in the fruit/vegetable 231. This is much simpler than the circular blade assemblies 18, 218 of the first and second embodiments. As stated above, the third blades 14, 114, 214 may have a number of alternative shapes and may include curved discs or spoon-like shapes. The utensils 10, 110, 210 may be moulded in a single piece from suitable plastics material (which can be washed in hot water or steam) or one or more blades 15, 18, 14; 115, 118, 114; 215, 214 may be made of stainless steel or other suitable material and be attachable/replaceable.

Referring now to FIGS 9 to 11, the utensil 310 has a handle 311 which has a yoke 350 at the end spaced from the third blade 314, the second blade 318 being provided intermediate the yoke 350 and the third blade 314.

The first blade 315 extends laterally from one arm 351 of the yoke 350 and a conventional potato peeler blade 360 is pivotally mounted between the arms 351, 352 of the yoke. This enables the utensil 310 to combine the advantages and features of the present invention with the features of a conventional peeler to provide a "universal" peeler.

To peel an onion (see FIGS 12 to 14), the first blade 315 is used to score the onion 331 down one or two sides, the scores being shown by arrows/lines circular cut around the root end 332 of the onion (FIG 13) before the third blade 314 is used to remove the outer shell 333.

Referring now to FIGS 15 to 17, the utensil 400 is similar to that utensil 10 shown in FIGS 1 to 5A.

It further incorporates a potato peeler blade 460 under the handle 461 and a potato "eye" remover 470 is provided at the end of the handle 411.

5 A paring knife blade 480 is hingedly mounted in a compartment 481 in the lower portion of the handle 411 and can be swung to an extended position, as shown in the drawings, or to a retracted position, within the compartment 481, when not required.

10 It will be noted that the shell can be removed without cutting off the stalk end of the onion.

Various changes and modifications may be made to the embodiments described and illustrated without departing from the present invention.

CLAIMS

1. A fruit or vegetable peeler or sheller including:

a handle having a portion to be gripped;

5 a first blade extending laterally from the handle to score or cut the peel or skin of a fruit or vegetable;

a second blade on the handle to form a circular cut or core around a core or end of the fruit
10 or vegetable; and

a third blade at the distal end of the handle, spaced from the portion to be gripped, engageable under the peel or layer or shell of the fruit or vegetable to lift and remove the peel, layer or shell
15 as the third blade is advanced.

2. A peeler or sheller according to Claim 1 or Claim 2 wherein:

a pin is provided on the handle and the first blade co-operates with the pin to operate as the
20 second blade.

3. A peeler or sheller according to Claim 1 wherein:

the first blade, to score the fruit or vegetable, extends laterally from a neck portion which
25 connects the third blade to the handle.

4. A peeler or sheller according to Claim 1 wherein:

the second blade incorporates a cutting blade assembly having four cutting edges arranged in a
30 circle to form a circular cut when the handle is rotated through at least 90°.

5. A peeler or sheller according to Claim 4 wherein:

the cutting blade assembly extends upwardly
35 from a neck portion connecting the third blade to the

handle.

6. A peeler or sheller according to any one of Claims 1 to 5 wherein:

the third blade, to peel or shell the fruit
5 or vegetable is connected to the handle by a neck
portion, is downwardly curved in side view and is of V-,
circular, or spoon shape in plan view.

7. A peeler or sheller according to Claim 6
wherein:

10 the third blade has rearwardly- directed,
upwardly inclined wings to lift the peel/layer/shell
from the fruit or vegetable.

8. A peeler or sheller according to any one of
Claims 1 to 7 wherein:

15 a "potato peeler" blade is pivotally mounted
on the handle on or adjacent the portion of the handle
to be gripped.

9. A peeler or sheller according to any one of
Claims 1 to 8 wherein:

20 a potato "eye" remover is provided on the
handle.

10. A peeler or sheller according to any one of
Claims 1 to 9 wherein:

a paring knife blade is pivotally mounted on
25 the handle and is movable from a cutting position
extending from the handle to a storage position
retracted into a compartment in the handle.

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Fig.1.

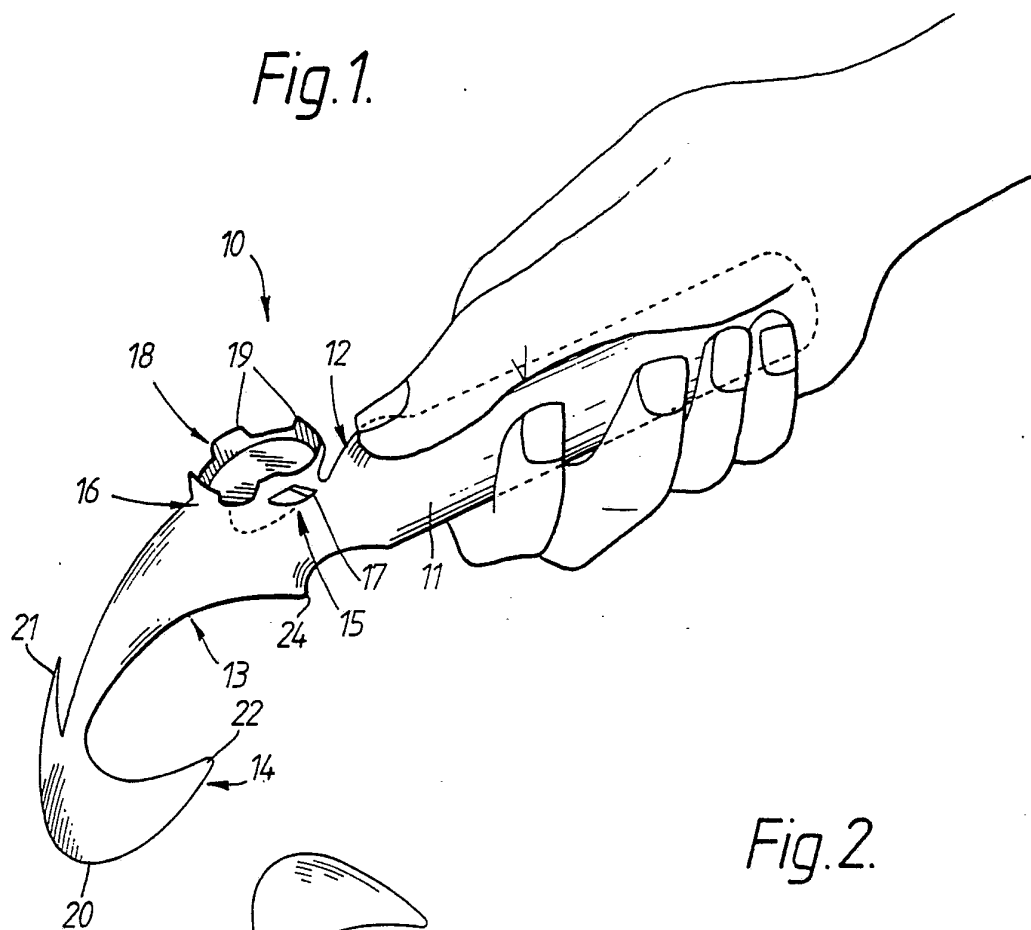
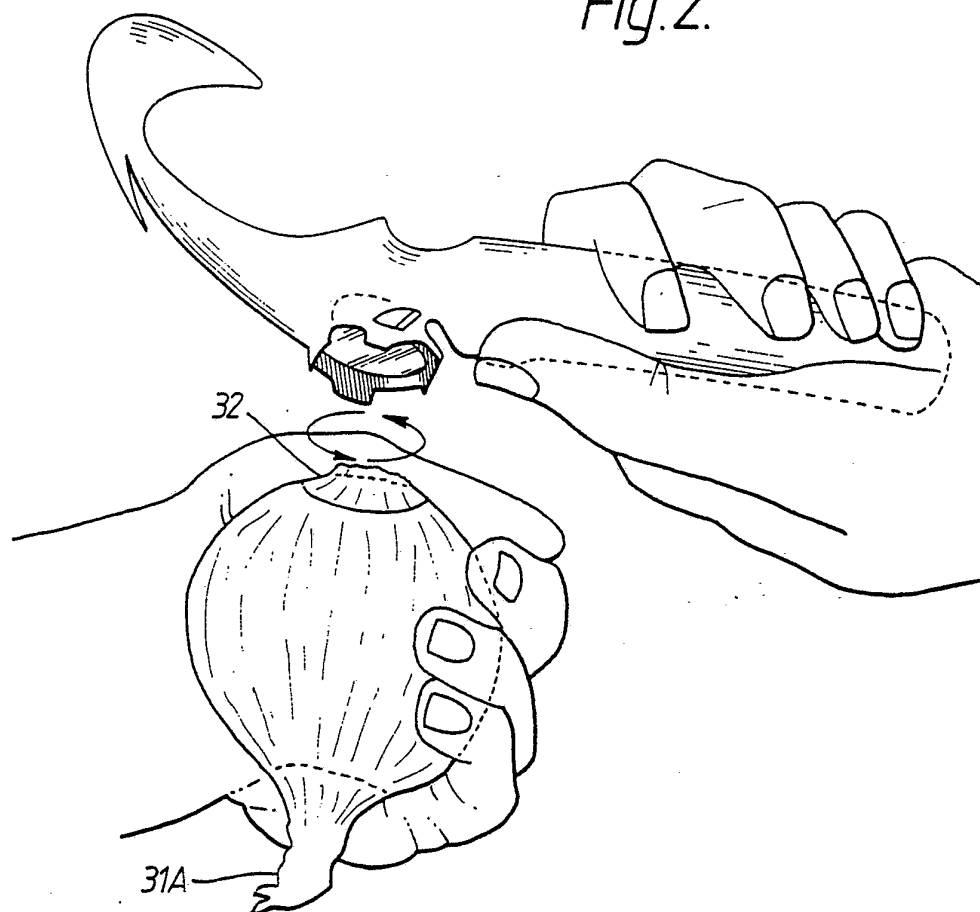


Fig.2.



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Fig.3.

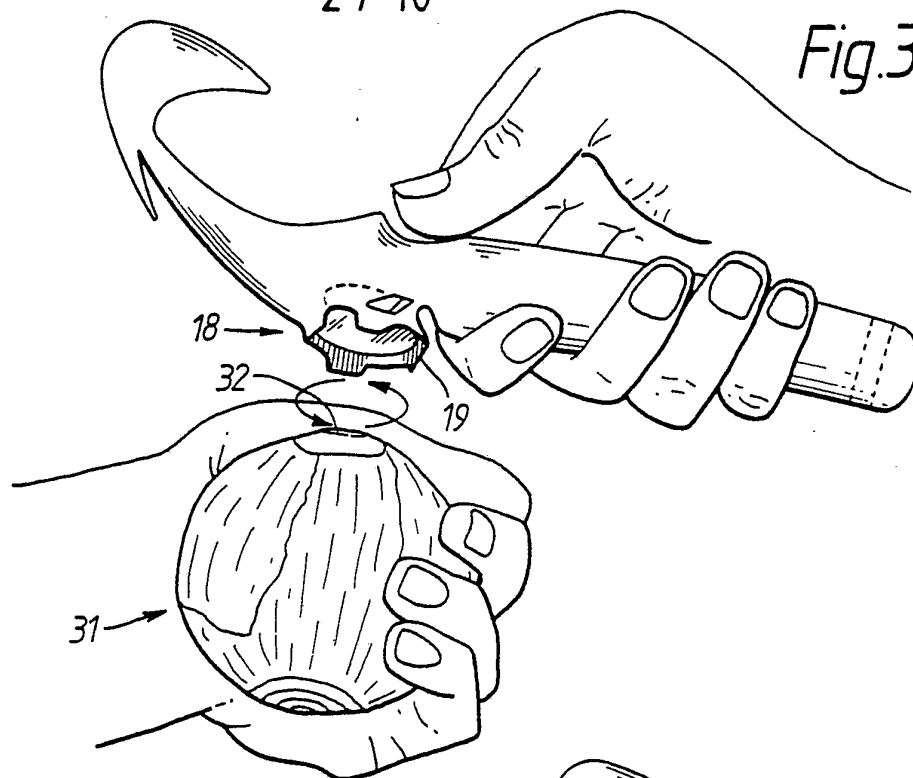
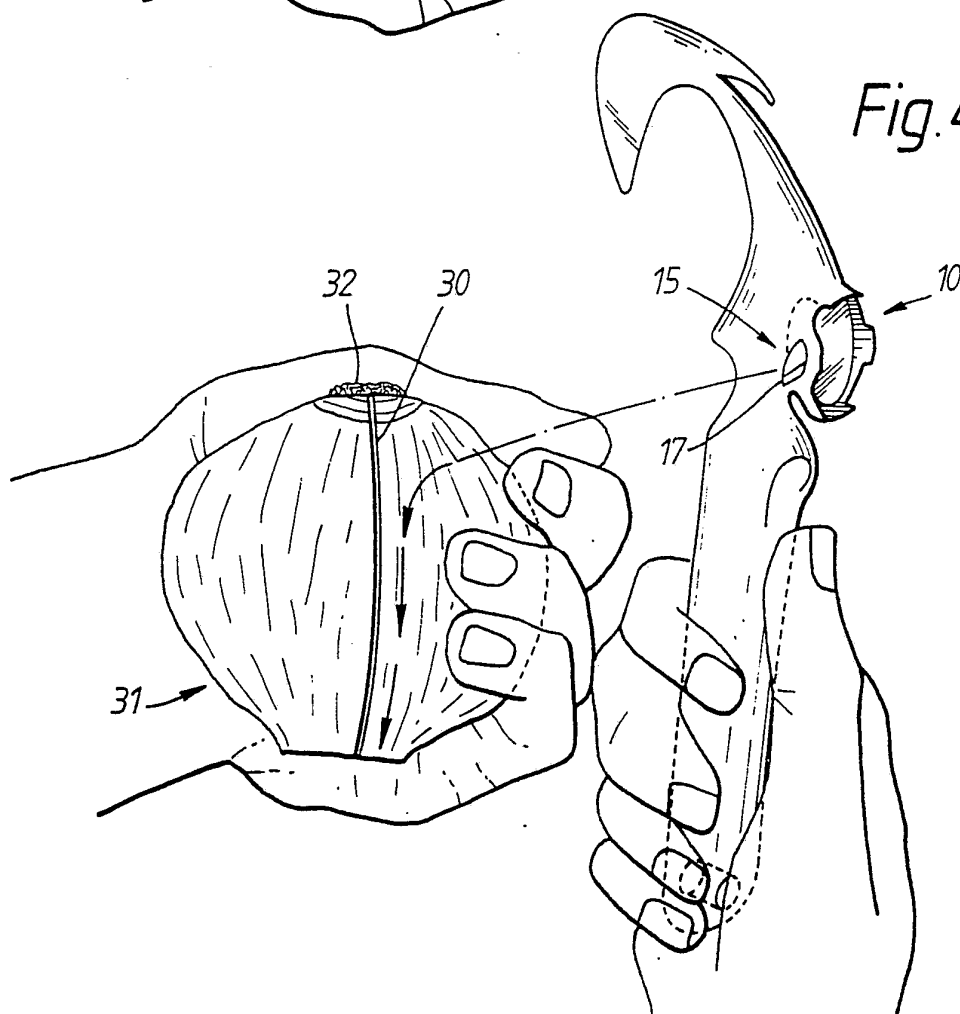
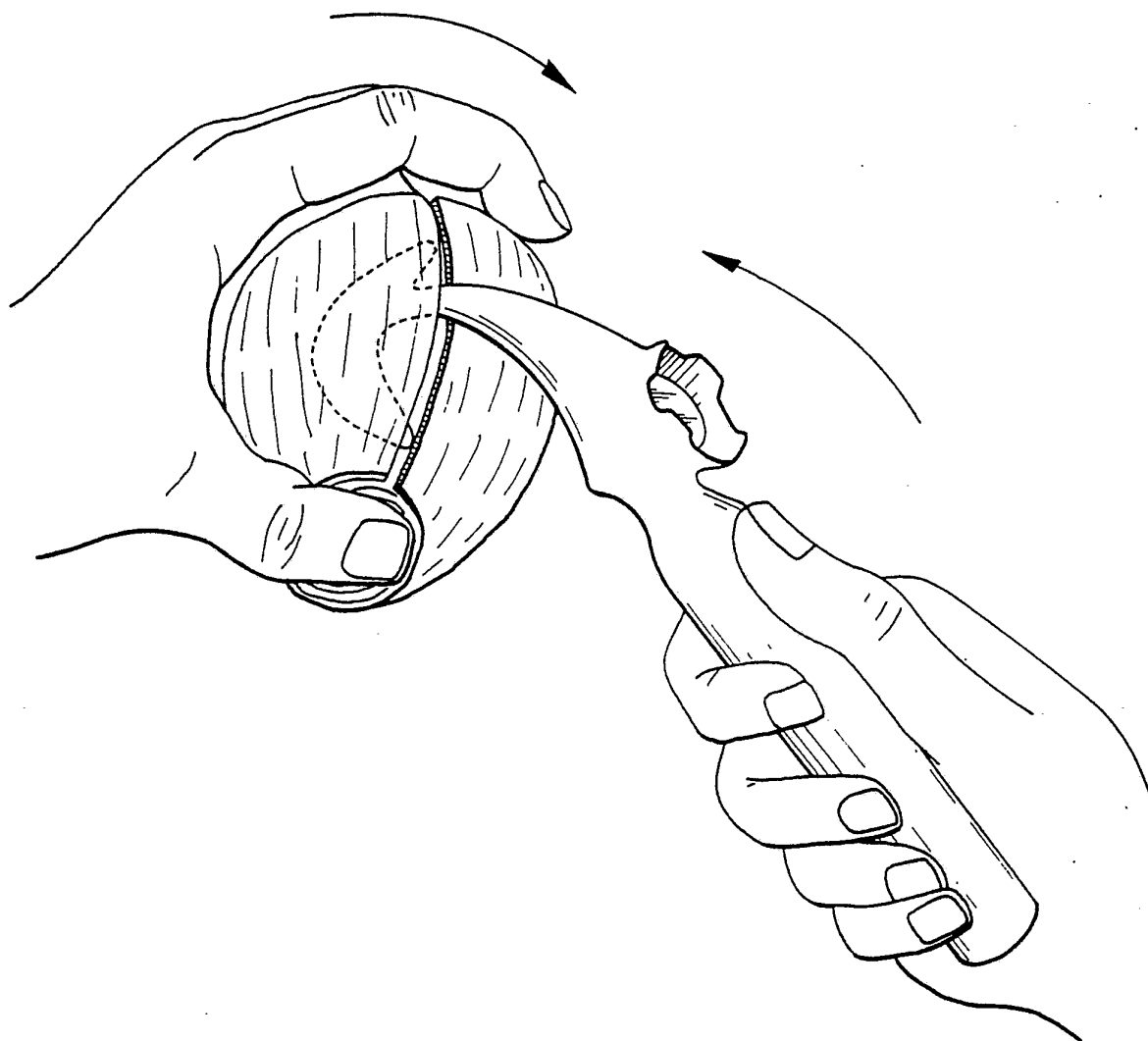


Fig.4.

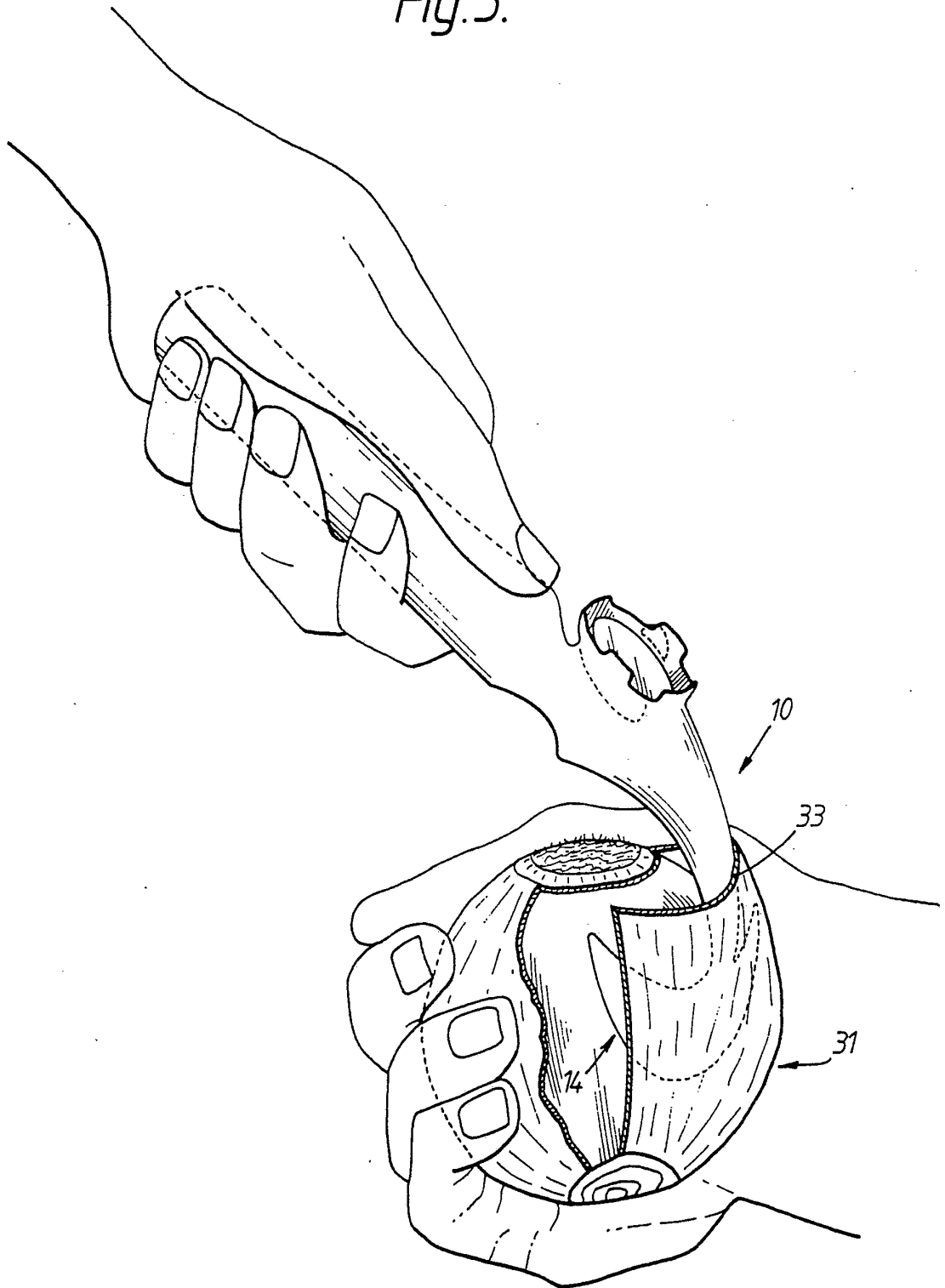


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Fig. 5A



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Fig.5.

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Fig.6.

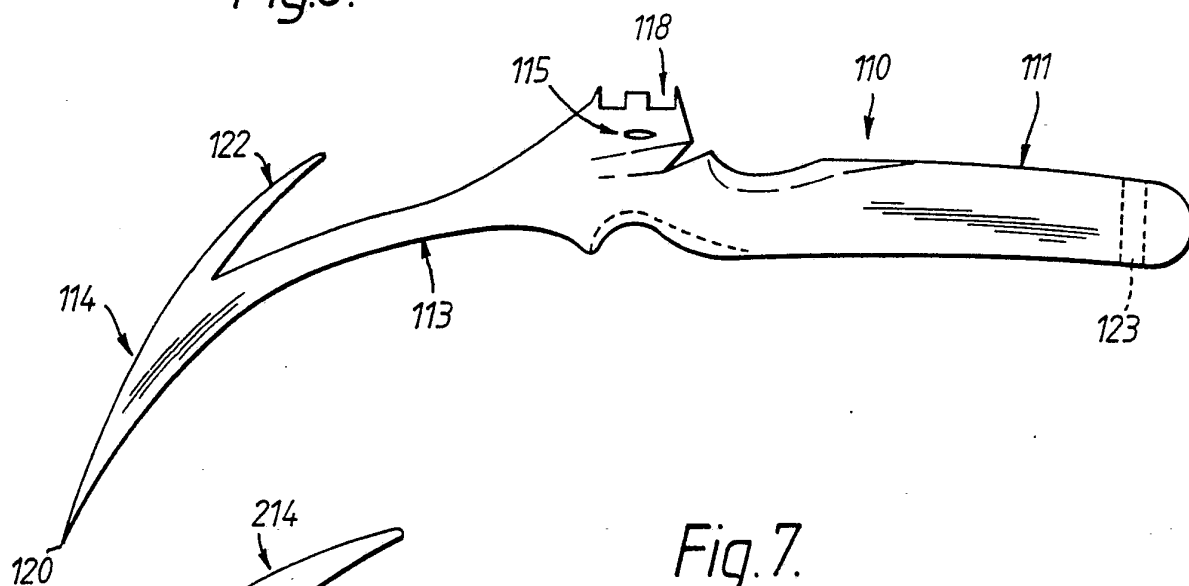


Fig.7.

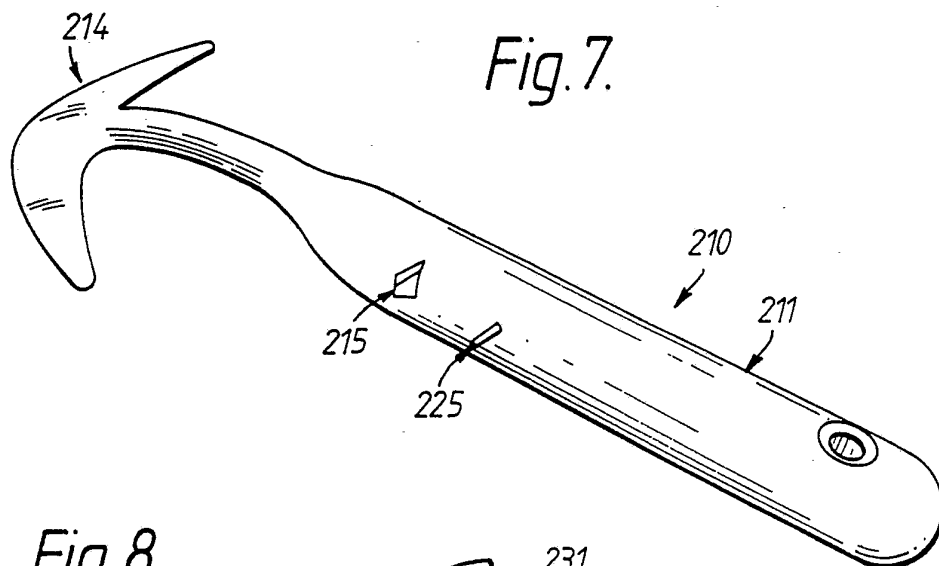
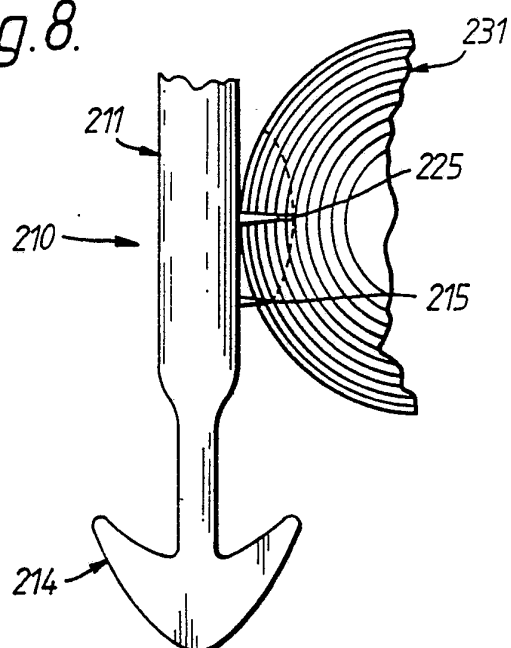
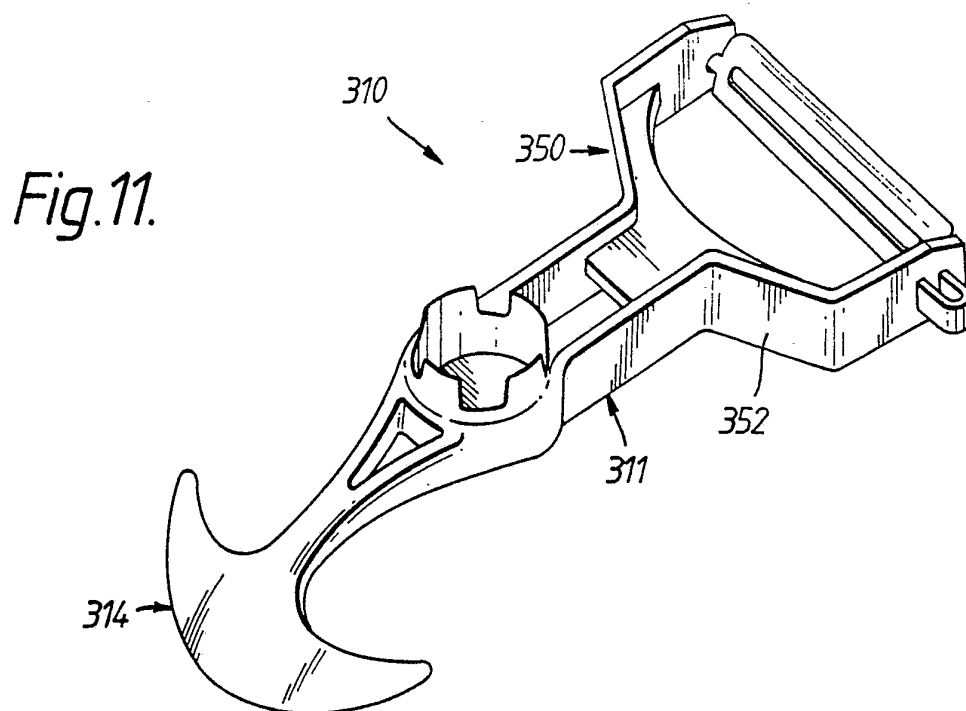
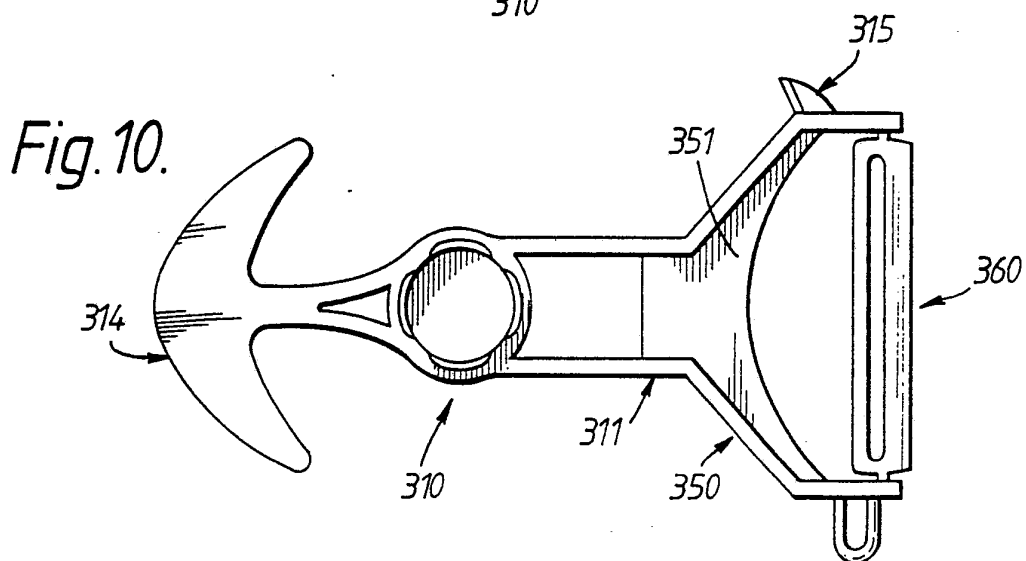
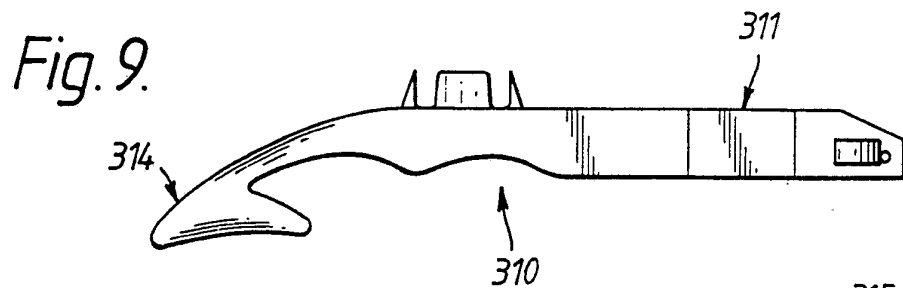


Fig.8.

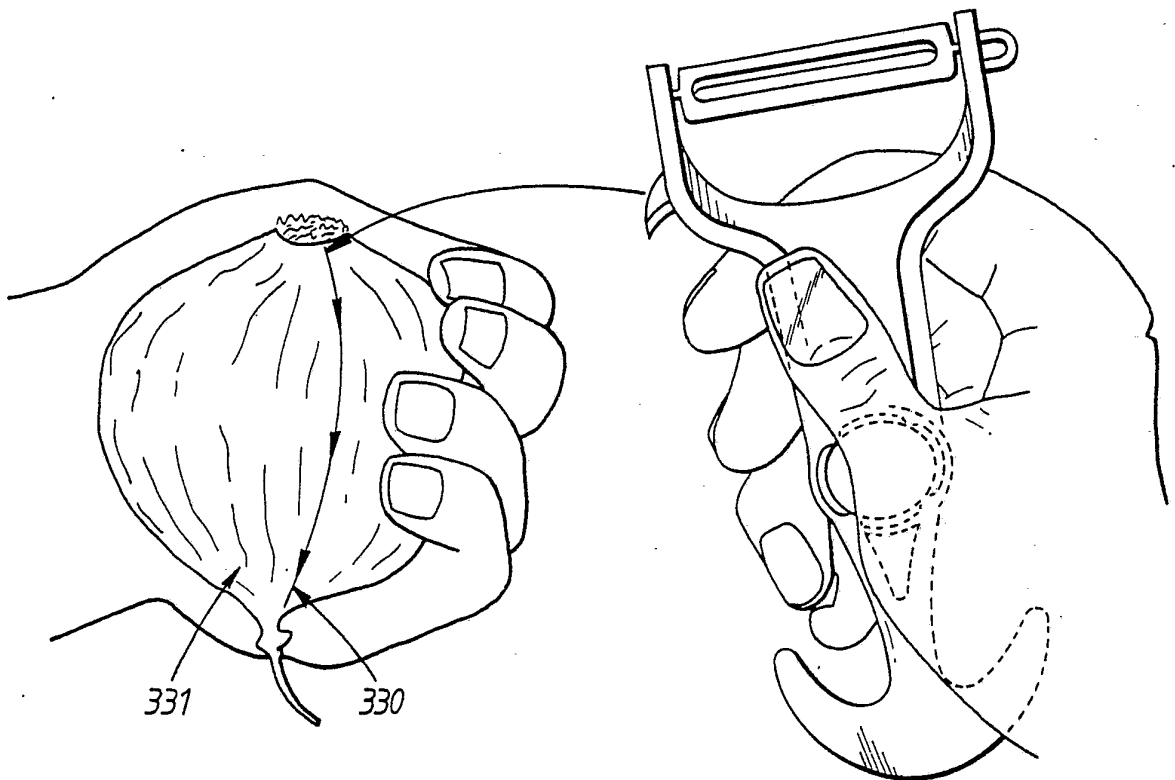


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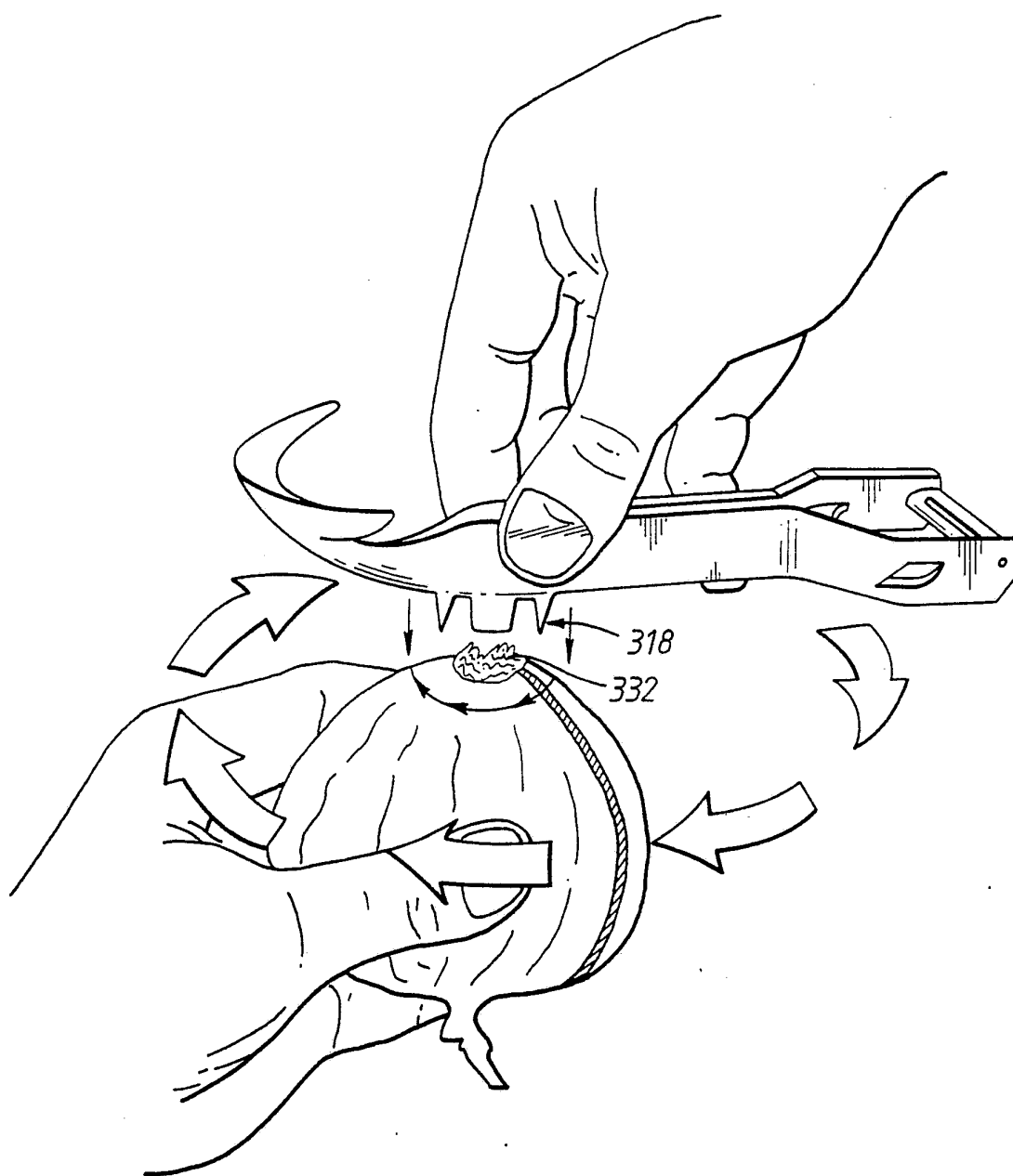
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Fig. 12.



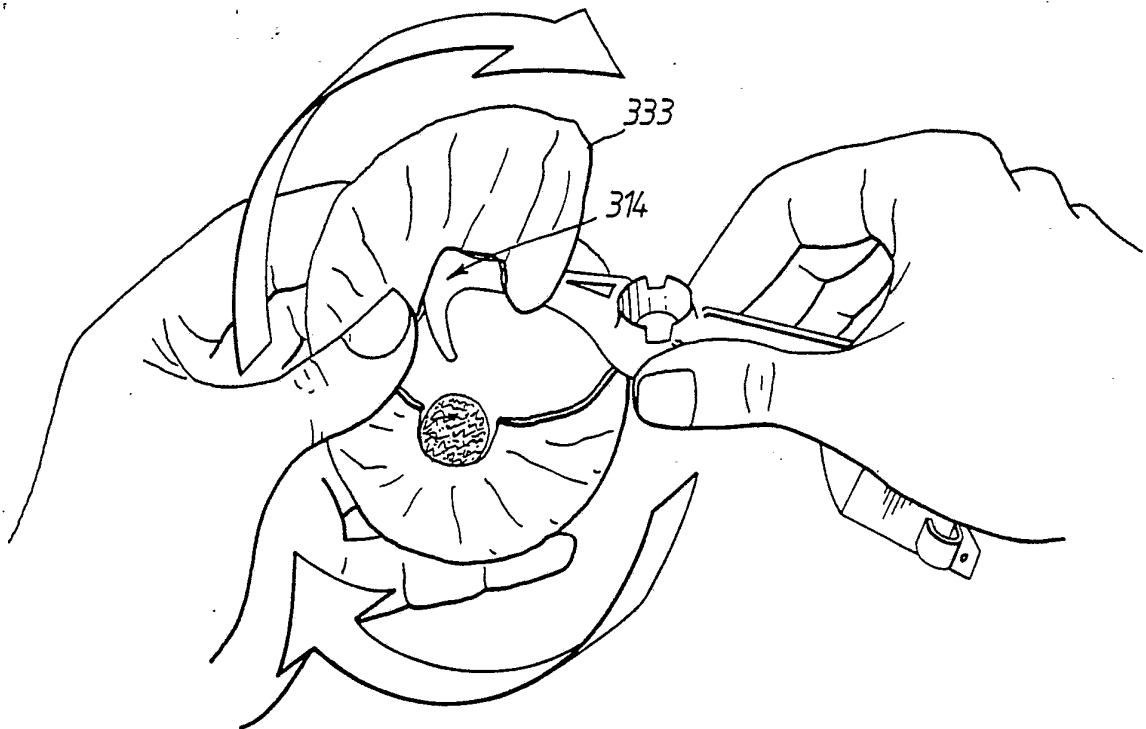
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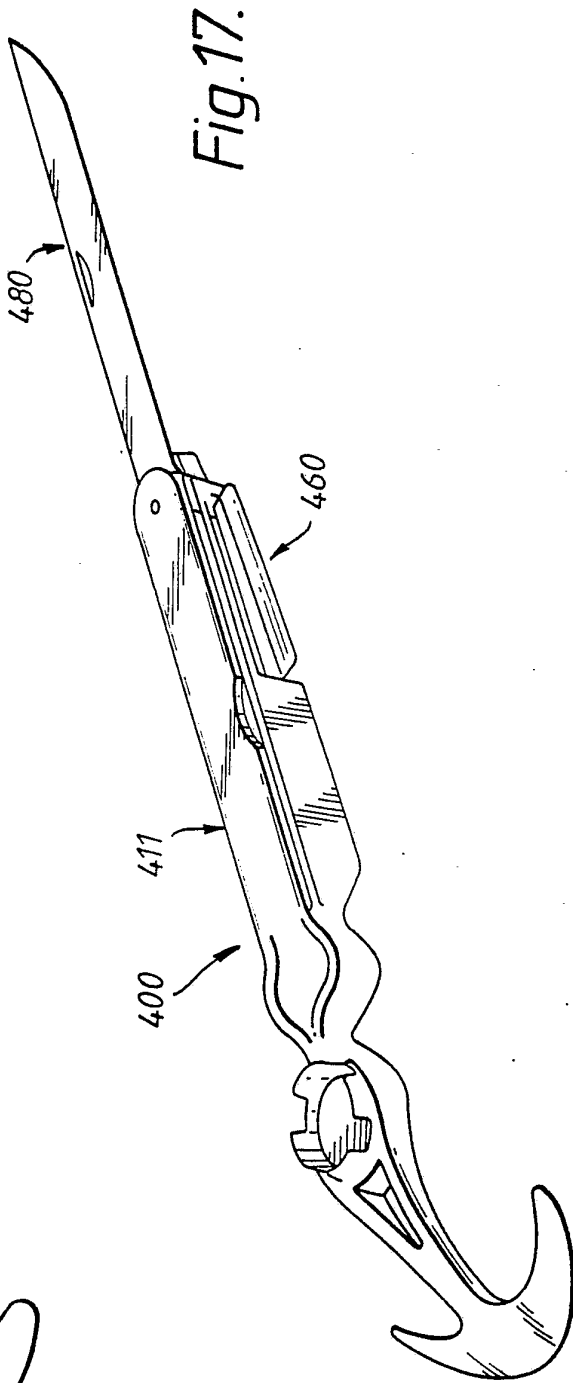
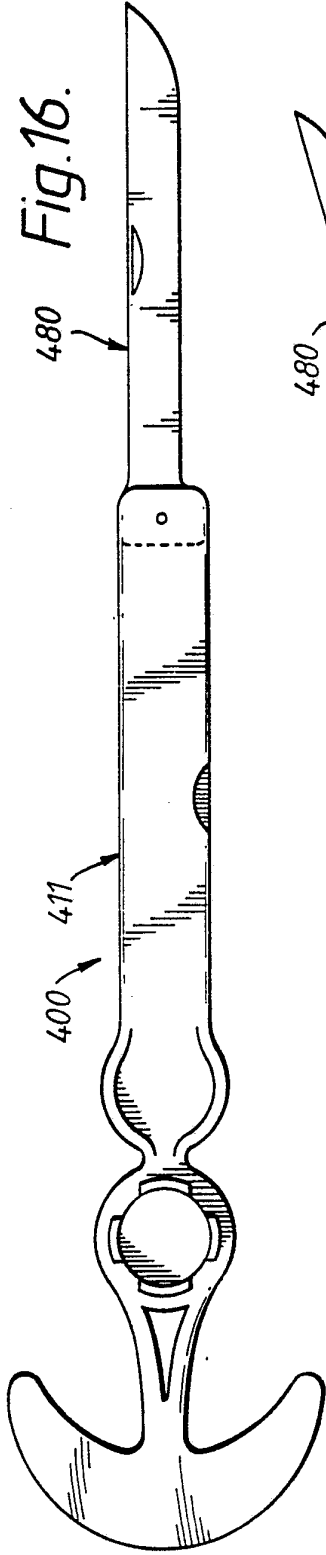
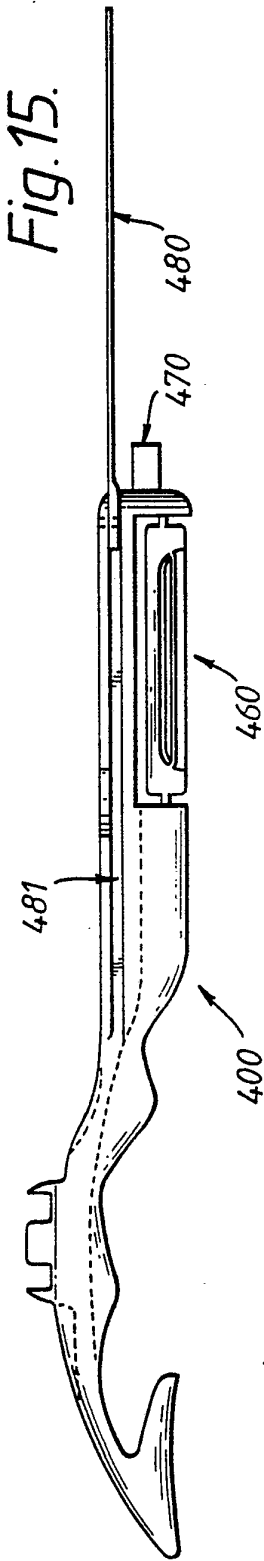
Fig.13.

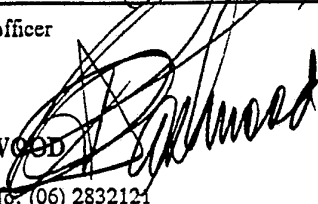


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Fig.14.





A. CLASSIFICATION OF SUBJECT MATTER Int. Cl. ⁵ A47J 17/02, 17/04 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 A47J 17/02, 17/04 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU : IPC as above Electronic data base consulted during the international search (name of data base, and where practicable, search terms used)				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.		
X Y	US,A, 2858605 (ENGSTROM et al) 4 November 1958 (04.11.58) Column 1 line 70 to column 2 line 57, Figure 3 and claims 1-2	1,3,4,6 5,7-10		
X Y	US,A, 2815570 (ENGSTROM et al) 10 December 1957 (10.12.57) Column 1 line 53 to column 2 line 32, Figures 1-3 and claim 1	1,3,4,6 5,7-10		
Y	GB,A, 413139 (LUDOLF) 2 August 1934 (02.08.34) Page 1 lines 48-100 and Figures 1-3	4,5,7,9		
☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.				
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Date of the actual completion of the international search 6 October 1992 (06.10.92)		Date of mailing of the international search report 19 Oct 1992 (19.10.92)		
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200 WODEN ACT 2606 AUSTRALIA Facsimile No. 06 2853929		Authorized officer  B. DASHWOOD Telephone No. (06) 2832121		

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate of the relevant passages	Relevant to Claim No.
Y	US,A, 1674271 (WINQUIST) 19 June 1928 (19.06.28) Page 1 lines 23-46 and line 90 to 108, Figure 2 and claim 2	4,5,7,9
A	GB,A, 1060416 (POPEIL) 1 March 1967 (01.03.67)	
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