

(21) Application No: **2018516.1**

(22) Date of Filing: **25.11.2020**

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(51) INT CL:
A47J 43/25 (2006.01)

(56) Documents Cited:
WO 2005/107544 A1 **CN 209269312 U**
JP 2003061839 A
JP H07236578
US D467136

(58) Field of Search:
INT CL **A47J**
Other: **WPI, EPODOC, INTERNET**

(54) Title of the Invention: **Grater**
Abstract Title: **Grater with a guard to reduce mess and food wastage**

(57) A grater having a main body 110, a base 112, two opposing side walls 113 and two opposing end walls 114, 115 defining substantially an open topped trough 111. A ledge 121 is located on an internal wall between the base and the top of the trough. A grater plate 200 rests upon the ledge 121 separating the trough 111 into upper and lower section, the upper section surrounding and extending above the grater plate such as to reduce the likeliness of cheese / food escaping the confines of the grater. Preferably, the grater has an aperture 134 located in an end wall of the container 110 such that grated cheese or other grated foodstuffs can be dispensed. Preferably, the grater plate 200 is releasable held in place via a snap fit. The grater may be equipped with interchangeable grater plates. The greater plate 200 comprises an aperture 214 through which stray cheese / food fragments caught above the grater plate may pass into the trough 111. The grater seeks to prevent wastage and reduce messiness.

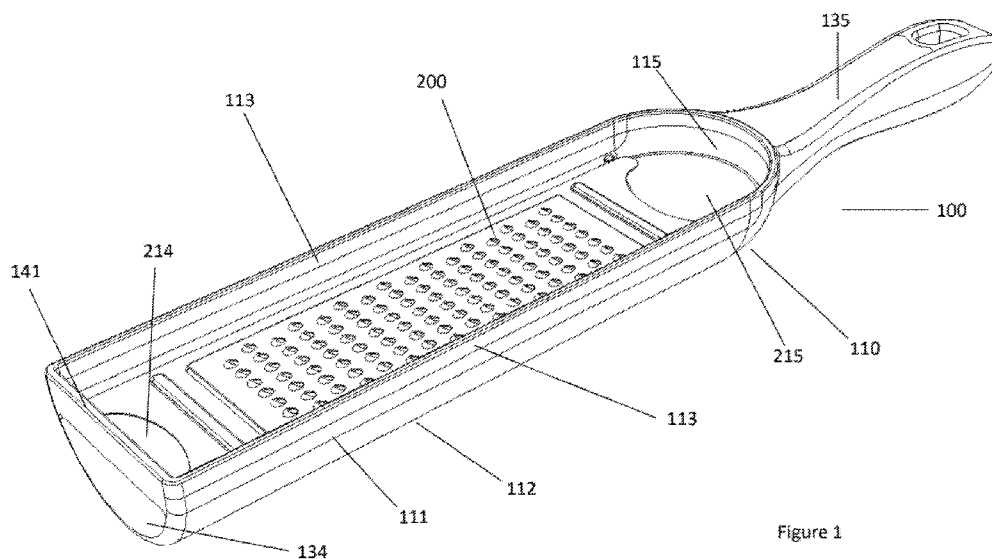


Figure 1

GB 2601316 A

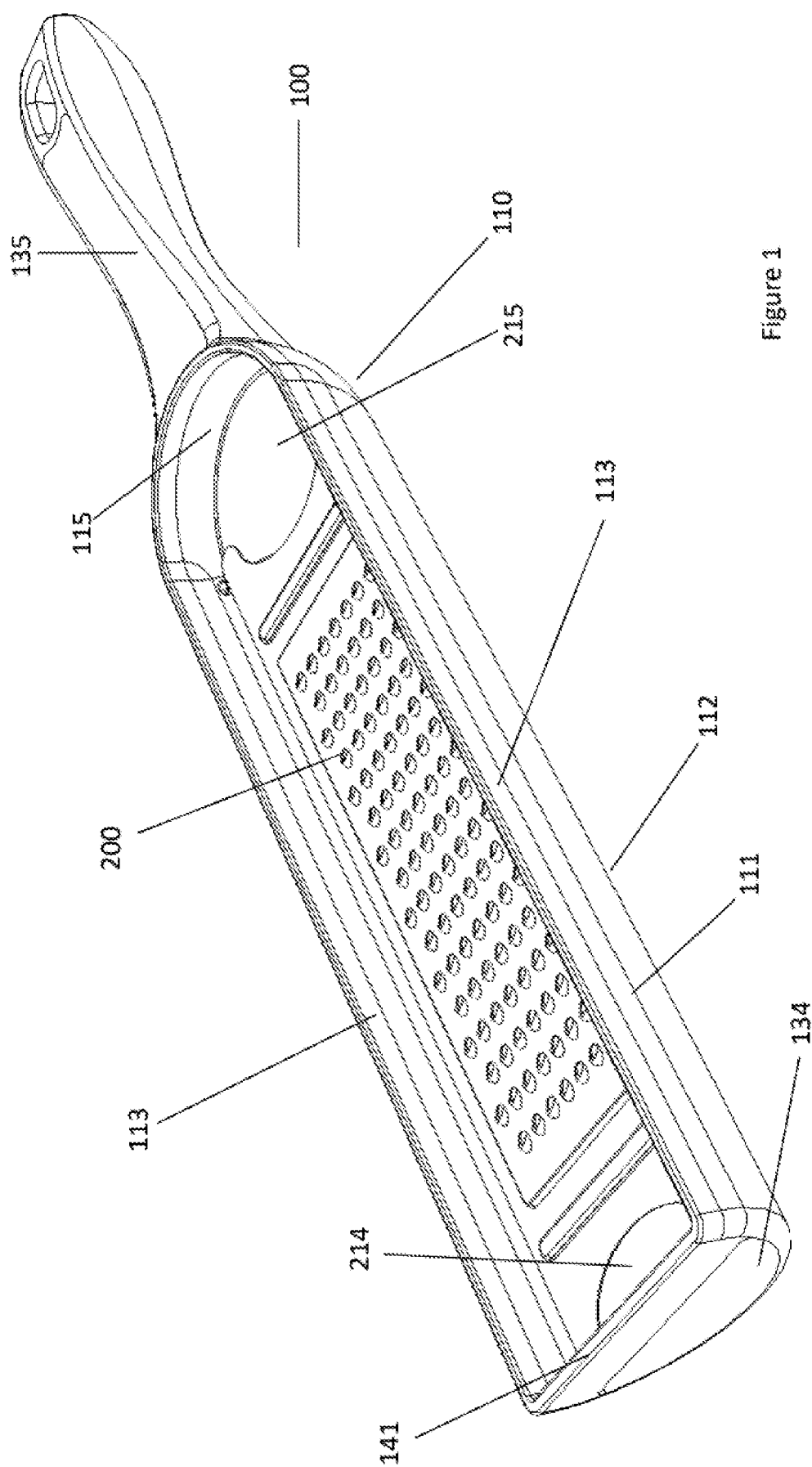


Figure 1

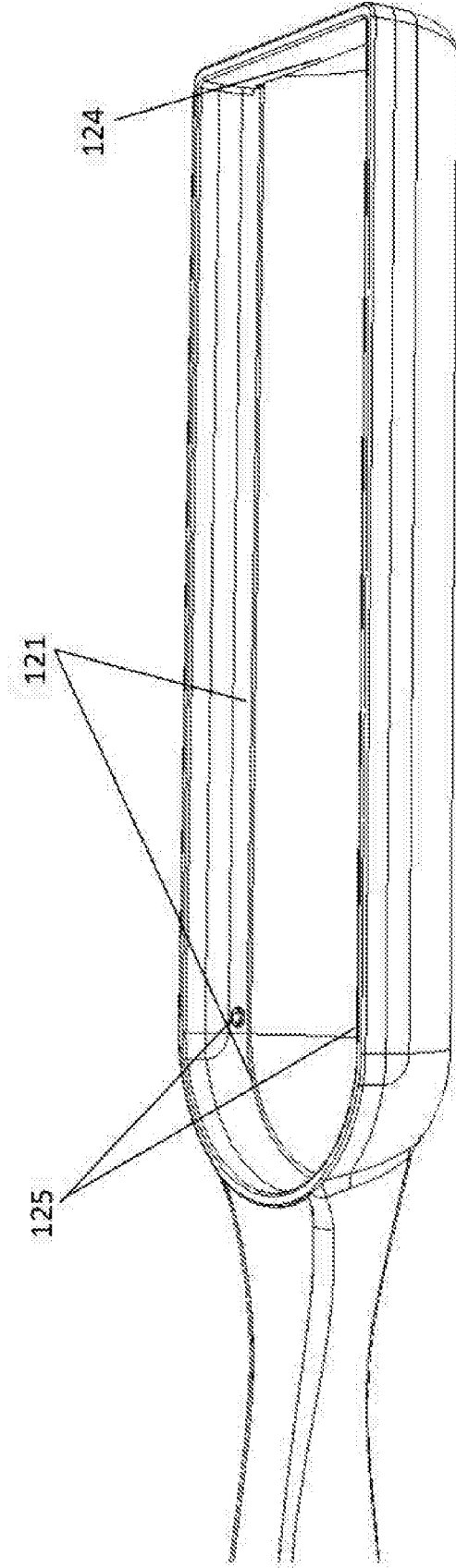


Figure 2

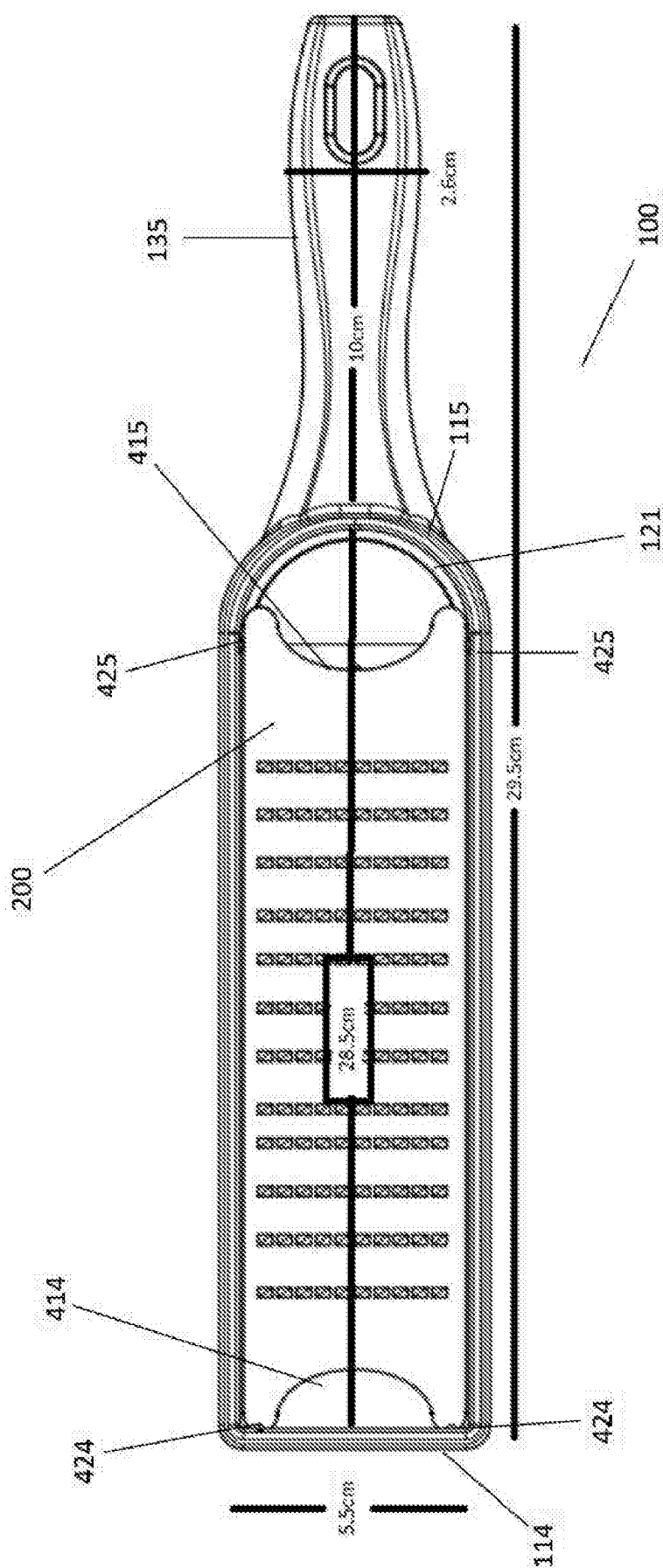


Figure 3

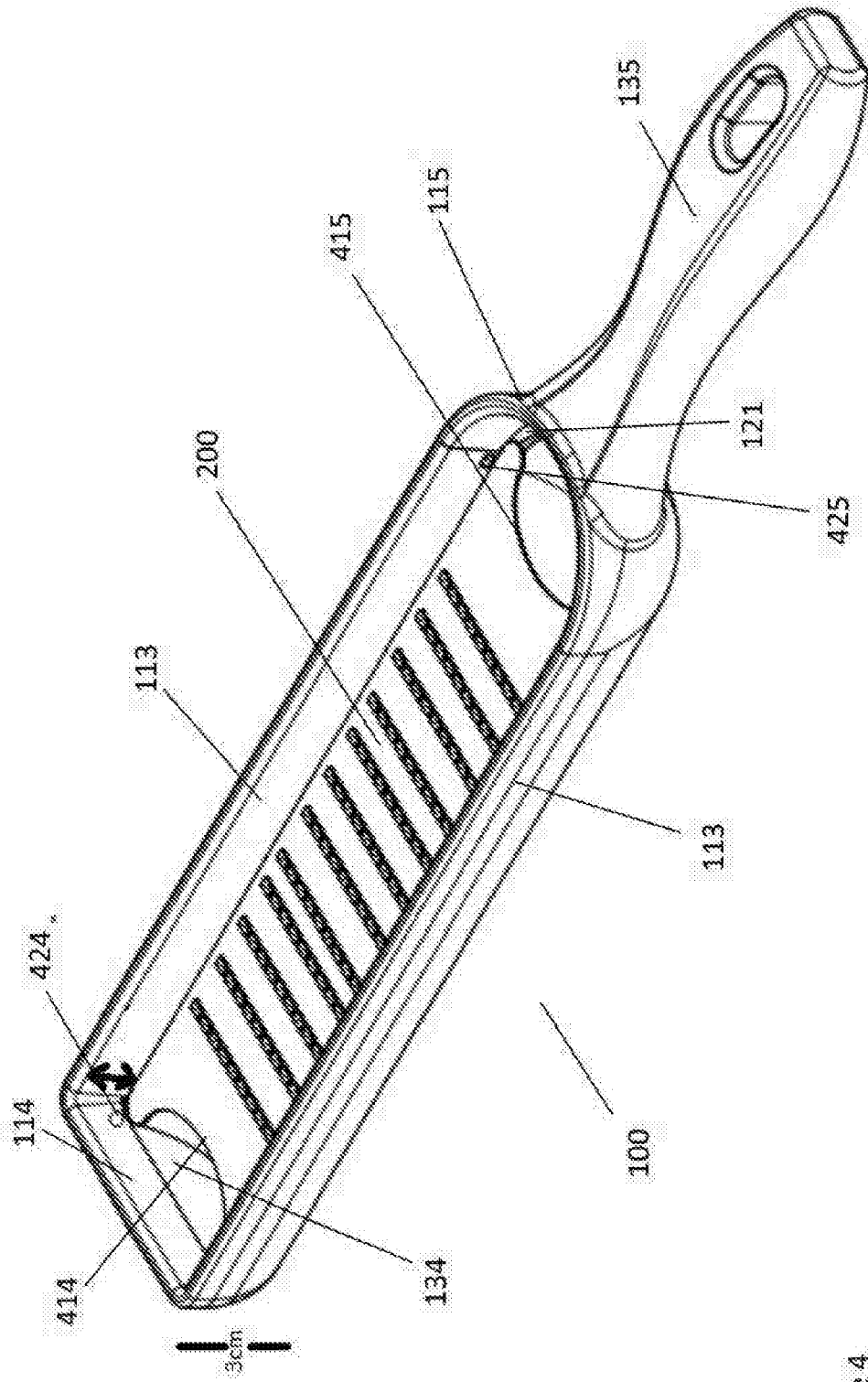


Figure 4

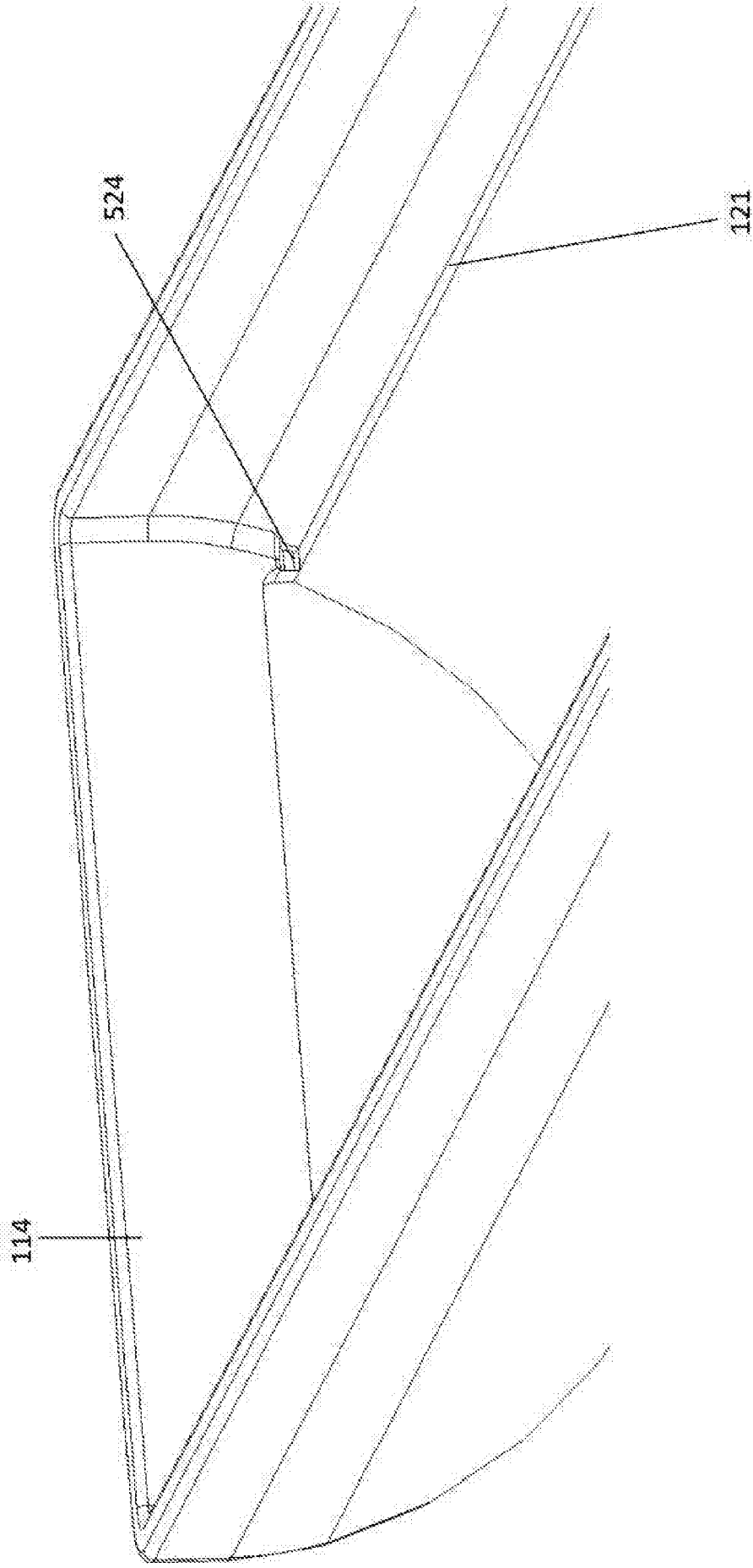


Figure 5

Grater

[001] The present invention relates to a grater. In particular it relates to a handheld cheese grater. More particularly the present invention relates to a handheld cheese grater having a cavity to collect grated cheese, and an aperture to dispense the grated cheese. Even more particularly the present invention relates to a handheld cheese grater having a cavity to collect grated cheese, an aperture to dispense the grated cheese, and a guard to catch stray cheese fragments and protect a user's fingers.

10 Background of the Invention

[002] Cheese is a long-held staple of modern diets, particularly modern western diets. Even with the current trend to veganism, there has grown a market for vegan friendly cheese substitutes. So, it would appear cheese, at least in some form, isn't going anywhere any time soon.

[003] One very common way of preparing cheese for a variety of uses is to grate it. The method and tools for grating are well established and long standing. However, there are still a number of common problems with traditional cheese graters. Firstly is accuracy, although it is usually easy to get most of the grated cheese where it is wanted, it is almost a certainty that some will end up where it is not desired (missing the plate etc) due to the spreading effect of the grating process.

[004] To counteract this there are a number of graters which have been developed which are connected to a sealable compartment to catch the grated cheese. These work to some extent, but do not catch the grated cheese which does not pass through the grater, these stray cheese fragments still cause a mess although reduced. Also, these graters with compartments requires the user

takes the extra step of handling the grated cheese out of the compartment to the desired location. This means there is still a chance for the grated cheese to end up somewhere undesired, and increases the amount of handling the grated cheese needs which can be a hygiene risk.

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[005] There is also the risk when using a traditional grater that a user may scrape their knuckles/hand on the grater and injure themselves.

[006] It is an object of the current invention to provide a handheld cheese grater which substantially addresses the problems mentioned above.

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Summary of the Invention

[007] According to a first aspect of the invention there is provided a grater comprising a main body having a base, two opposing side walls and two opposing end walls defining substantially an open topped trough. On an internal surface of the side and end walls, at a location between the base and the top of the trough, there is a ledge. And a grater plate which rests upon the ledge separating the trough into upper and lower section, the upper section surrounding and extending above the grater plate.

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[008] An embodiment of the first aspect wherein an end wall further comprises an escape aperture located below the ledge, is use the aperture guiding grated material out of the trough to a desired location.

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[009] An embodiment of the first aspect wherein the grater plate is releasably held in place in the main body via a snap fit. The grater may comprise a plurality of different interchangeable grater plates.

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[010] An embodiment of the first aspect wherein the grate plate comprises an aperture such that in use any grated material caught above the grater in the upper portion can pass to the lower portion.

5 **Brief Description of the Drawings**

[011] The invention will be described in more detail, by way of example, with reference to the following drawings:

[012] Figure 1 depicts a first embodiment of the invention from a first angle;

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[013] Figure 2 depicts a first embodiment of the invention with the grater plate removed;

[014] Figure 3 depicts a second embodiment of the invention;

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[015] Figure 4 depicts a second embodiment of the invention;

[016] Figure 5 depicts a third embodiment of the securing means.

20 **Detailed Description**

[017] With reference to figures 1 to 3 it can be seen that the cheese grater 100 of the present invention comprises a body 110 and a grater plate 200 releasably held within the body 110.

25 [018] The body 110 is in the form of a trough 111 having a base 112, side walls 113, and end walls 114 and 115, which define the open topped trough. In the figures the trough has a substantially U-shaped longitudinal cross section, however any suitable trough shape can be used.

[019] The grater plate 200 is held within the trough 111 approximately half way down such as to separate the cavity of the trough into an upper and lower section and providing a raised rim around the grater. As can be seen the dimensions of the grater plate 200 are such to substantially match the internal dimensions of the trough 111 cavity approximately half way down the side walls so as to avoid unwanted shifting of the grate plate 200 when in use.

[020] Inside the trough 111 approximately half way down the interior walls there is a protruding ledge 121 tracing the interior perimeter of the trough. The grater plate 200 rests upon ledge 121 inside trough 111 when in use. To further secure the position of grater plate 200 when in use there may also be protrusions 124 and 125 on the interior sides of end walls 114 and 115 respectively. Protrusions 124 and 125 are positioned above ledge 121 a distance approximately matching the thickness of grater plate 200 such that when the grater plate 200 is put into position protrusions 124 and 125 form a snap fit, securing grater plate 200 in place. In an alternate embodiment shown in figure 4, the protrusions do not need to be in the form of a ledge, but instead can be protruding node pairs 425 and 424 can be used to form the snap fit securing grater plate 200 in place. In another alternate embodiment, as shown in figure 5, instead of protrusions 424 there can be groves 524 etched into an inner side of wall 114 above ledge 121, into which an end edge of grater plate 200 slides into, and then being held in place via a snap fit with protrusions 125/425. any known suitable snap fit or other known securing means to the skilled person can be used.

[021] End wall 114 further comprises an aperture 134 located below the level defined by ledge 121. Aperture 134 in use provides a guiding pathway for the escape of the grated cheese. The user can point the aperture 134 to the desired

location of the grated cheese to provide more accurate grated cheese placement without having to touch the grated cheese with their hands. To further aid in the ease and accuracy of pointing the aperture 134, and for general increase in the ease of use of the grater 100, there may be provided a handle 135 extending from an outer surface of end wall 115. In a preferred embodiment the handle 135 comprises grip aids such as rubber sections or an ergonomic shape to help aid

[022] The grater plane 200 comprises at least one aperture 214 substantially at one end of the grater plate 200. As discussed above not all cheese when grated passes through the grater plate, some stray cheese fragments will end up resting on top of grater plate 200. Traditionally these stray cheese fragments would fall off the grater plate 200 and more often than not end up in a non-desired location, however the portions of the side walls 113 and end walls 114,115 which extend above the grater plate 200 when in use, will catch the majority of these stray cheese fragments, at which point they can be guided to aperture 214 where they going the rest of the grated cheese on its journey through cheese dispensing aperture 134, which simultaneously reduces mess and reduces wastage of cheese/grated material. The walls extending above the grater plate 200 also provide additional protection to the users' fingers/hand. As seen in figure 4 the aperture for letting the grated material pass can be in the form of notch 414.

[023] At an opposing end of grater plate 200 to that of aperture 214, there is another aperture 215 (or notch 415 as seen in figure 4), which provides a suitable finger hole for gripping grater plate 200 and releasing it from the snap fit. Removal of the grater plate 200 can be for washing of the grater plate 200 and/or replacement with an alternate grater plate 200. There are a variety of different grater hole/blade designs already known in the art for achieving size

and shapes of grated material. The grater 100 can have a plurality of different grater plates 200 which can be used interchangeably.

- 5 [024] The grater plate(s) 200 are preferably made from stainless steel, however any suitable material known to the skilled person can be used. The grater body 110 is preferably made from durable material such as plastic, metal or wood, however any suitable material known to the skilled person can be used.
- 10 [025] In a preferred embodiment the trough of the grater 100 has a length of 28.5cm, a width of 5.5cm and a depth of 3cm with the edges of the trough extending above the grate plate 200 by 1.2cm. The handle 135 being 10cm in length. The grate plate 200 is preferably 171mm by 46mm by 0.4mm. However, the invention is scalable and can be of any reasonable size.
- 15 [026] It is noted that throughout the specification specific mention to the grating of cheese. Although this is not intended to limit the scope of the invention, the grater of the present invention can be used to grate any material suitable for grating.
- 20 [027] The invention has been described with reference to a preferred embodiment. The description is intended to enable a skilled person to make the invention, not to limit the scope of the invention. The scope of the invention is determined by the claims.

Claims

1. A grater comprising: a main body having a base, two opposing side walls and two opposing end walls defining substantially an open topped trough, on an internal surface of the side and end walls at a location between the
5 base and the top of the trough there is a ledge;
and, a grater plate which rests upon the ledge separating the trough into upper and lower section, the upper section surrounding and extending above the grater plate.
- 10 2. The grater according to claim 1 wherein an end wall further comprises an escape aperture located below the ledge, in use the aperture guiding grated material out of the trough to a desired location.
3. The grater according to any preceding claim wherein the grater plate is
15 releasably held in place in the main body via a snap fit.
4. The grater according to claim 3 comprising a plurality of different interchangeable grater plates.
- 20 5. The grater according to any preceding claim wherein the grate plate comprises an aperture such that in use any grated material caught above the grater in the upper portion can pass to the lower portion.

Claims

1. A grater comprising: a main body having a base, two opposing side walls
and two opposing end walls defining substantially an open topped trough,
on an internal surface of the side and end walls at a location between the
base and the top of the trough there is a ledge;
and, a grater plate which rests upon the ledge separating the trough into
upper and lower section, the upper section surrounding and extending
above the grater plate; wherein an end wall further comprises an escape
aperture located below the ledge, in use the aperture guiding grated material
out of the trough to a desired location
2. The grater according to any preceding claim wherein the grater plate is
releasably held in place in the main body via a snap fit.
3. The grater according to claim 2 comprising a plurality of different
interchangeable grater plates.
4. The grater according to any preceding claim wherein the grate plate
comprises an aperture large enough for at least one finger of a user, to aid in
the removal of the grater plate.



Application No: GB2018516.1

Examiner: Christopher Nash

Claims searched: 1-5

Date of search: 14 December 2020

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1, 3-5	JP H07236578 A (FURUKAWA) See; EPODOC Abstract, (Figs.1 & 4)
X	1, 3-5	CN 209269312 U (YUANBIAO) See; EPODOC Abstract, (Figs, 2 & 3)
X	1, 3, 4	WO2005/107544 A1 (CORNFIELD) See; EPODOC Abstract, (Figs.1D,1F & 2)
X	1, 3, 4	JP2003061839 A (KUMADA) See; WIPO Abstract, (Figs.1 & 4)
A	-	US D467136 S (LEVIEN et al.) See in particular; (Figs.1, 6 & 8)

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^X :

Worldwide search of patent documents classified in the following areas of the IPC

A47J

The following online and other databases have been used in the preparation of this search report

WPI, EPODOC, INTERNET

International Classification:

Subclass	Subgroup	Valid From
A47J	0043/25	01/01/2006