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HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
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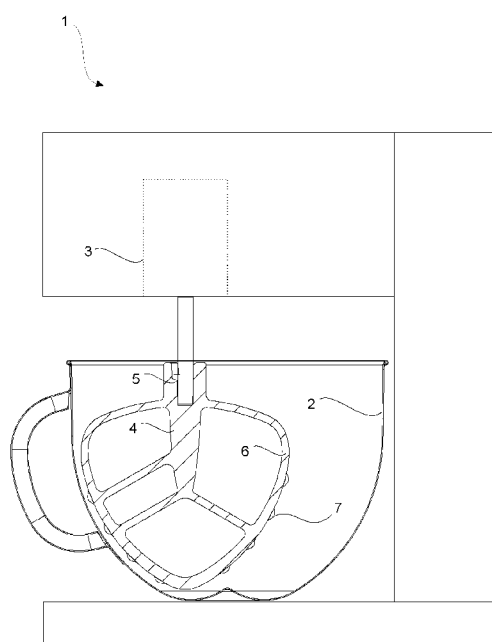
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(54) Title: A BEATER AND A STAND MIXER WHERE THE SAME IS USED

Figure 1



(57) Abstract: The present invention relates to a beater (4) that is suitable for use on a stand mixer (1) comprising a mixing container (2) and a mixing motor (3) thereon, the beater (4) comprising an end (5) that enables the beater (4) to be attached to the motor (3), and a body (6) that contacts the material so as to mix/knead the same.

Description**A BEATER AND A STAND MIXER WHERE THE SAME IS USED**

- [0001] The present invention relates to a beater with improved functionality and a stand mixer to that the beater and different mixing apparatuses can be attached.
- [0002] Beaters in different sizes that are used on stand mixers are known. The beaters used mostly to knead dough and similar materials have a large size while the beaters used to mix liquid have a small size. High density materials can be easily kneaded with large size beaters. However, if the material to be kneaded contains a material that must be ground, the beater performing the kneading process cannot completely perform the grinding process. In this case, the material in granule form that must be ground and blended into the kneaded dough preserves its granule form at the end of the kneading process and the dough cannot be obtained in the desired consistency. An example of this situation can be kneading of çiğ köfte (raw meatball). Çiğ köfte is prepared by kneading bulgur in granule form and minced meat together while grinding bulgur and cooking minced meat in the course of kneading. While kneading minced meat by means of the beaters used in the stand mixers, the bulgur in granule form is not ground and the taste of the çiğ köfte does not meet expectations.
- [0003] In the state of the art International Patent Application No. WO2011141690, a beater comprising a scraper thereon is disclosed.
- [0004] In the state of the art International Patent Application No. WO2007007202, a beater comprising a knife thereon is disclosed.
- [0005] The aim of the present invention is the realization of a beater with improved kneading efficiency and a stand mixer wherein the same is used.
- [0006] The beater realized in order to attain the aim of the present invention, explicated in the claims, is suitable for use in the stand mixers, comprising more than one protrusion on the lateral surface of the body thereof, that provides better blending, kneading and grinding of the material. By means of the protrusions, the material between the mixing container of the stand mixer and the body of the beater is better ground and kneaded.
- [0007] In an embodiment of the present invention, the protrusions are positioned

on the lateral surface of the body in a successive manner. Thus, the surface area used in the grinding process performed simultaneously with the kneading process is enlarged while shortening the total time.

- [0008] In another embodiment of the present invention, the protrusions are in almost semi-circular form, in other words, the protrusions are in rounded form. By means of this embodiment, a bulb form is obtained as in the process of kneading by hand and the efficiency of the kneading process is increased.
- [0009] In another embodiment of the present invention, the protrusions cover almost the entire width of the lateral surface of the body. In this embodiment, kneaded material is prevented from remaining between the protrusions and the beater is enabled to be easily cleaned after the kneading process.
- [0010] In another embodiment of the present invention, the protrusions on the beater are periodically arranged along the width and the length of the lateral surface of the body. By means of the periodic arrangement of the protrusions, homogeneity of the kneading process is ensured and the entire material is kneaded uniformly.
- [0011] In another embodiment of the present invention, the width of the protrusions is half the width of the lateral surface of the body and the protrusions are positioned such that there are two protrusions along the width of the lateral surface of the body. In this embodiment, the size of the protrusions is reduced so that a softer mixture is obtained.
- [0012] In another embodiment of the present invention, the protrusions are arranged on the lateral surface of the body in the form of a zigzag, in other words, in the form of an S.
- [0013] By means of the beater of the present invention, mixtures such as çığ köfte, prepared by kneading by hand are enabled to be hygienically kneaded untouched by human hand with the same consistency.
- [0014] The beater and the stand mixer realized in order to attain the aim of the present invention are illustrated in the attached figures, where:
- [0015] Figure 1 – is the schematic view of a stand mixer.
- [0016] Figure 2 – is the perspective view of the beater in an embodiment of the

present invention.

[0017] Figure 3a - is the front view of the beater in an embodiment of the present invention.

[0018] Figure 3b - is the enlarged view of the cross-section A in Figure 3a.

[0019] The elements illustrated in the figures are numbered as follows:

1. Stand mixer
2. Mixing container
3. Motor
4. Beater
5. End
6. Body
7. Protrusion

[0020] Suitable for use on a stand mixer (1) comprising a mixing container (2) and a mixing motor (3) thereon, the beater (4) comprises an end (5) that enables the beater (4) to be attached to the motor (3), and a body (6) that contacts the material so as to mix/knead the same. The user can attach the beater (4) from the end (5) thereof to the motor (3) and knead the materials in the mixing container (2).

[0021] The beater (4) of the present invention comprises more than one protrusion (7) that is disposed on the outer lateral surface of the body (6) and that enables the materials in granule form between the mixing container (2) and the body (6) to be ground during the beating process.

[0022] By means of the beater (4) of the present invention, during the kneading process in the stand mixer (1), the materials in granule form are ground by means of the protrusions (7). By placing the material to be kneaded into the mixing container (2) and attaching the beater (4) of the present invention to the stand mixer (1), the kneading and mixing process is started, and the part of the material remaining between the mixing container (2) and the outer lateral surface of the body of the beater (4) is thoroughly ground and kneaded by means of the protrusions (7). Thus, for example a specially designed çığ köfte tray for mixing the ingredients in the preparation of çığ köfte can be simulated. Thus, when the user wants to prepare çığ köfte, he/she can easily prepare çığ köfte in a shorter time

by using the stand mixer (1) without the need for kneading by hand. By means of the present invention, the preparation of *çiğ köfte* is facilitated and the efficiency of the regular dough kneading process is increased by means of the protrusions (7). With the body (6) thereof, the beater (4) rotates the kneaded material in the mixing container (2) so as to provide macro kneading while the protrusions (7) provide micro kneading of the material.

[0023] In an embodiment of the present invention, the protrusions (7) are arranged at equal intervals on the outer lateral surface of the body (6). By means of this embodiment, a periodic structure is formed on the outer lateral surface of the body (6) and along with the kneading process, the grinding process is efficiently performed by means of the outer lateral surface of the body (6) with a periodic structure thereon instead of a flat surface.

[0024] In another embodiment of the present invention, the protrusion (7) is in the form of a fractional wave on the outer lateral surface of the body (6), in other words, in cambered form. By means of the cambered form of the protrusions (7), the kneaded material is enabled to be efficiently ground. By means of the protrusions (7) in cambered form arranged in a successive manner, the knuckled structure of a hand is simulated and thus the material is enabled to be kneaded as if by hand.

[0025] In another embodiment of the present invention, the width of the protrusion (7) is as much as the width of the outer lateral surface of the body (6). The protrusion (7) extends along the width of the outer lateral surface of the body (6). In this embodiment, the width of the protrusion (7) is as much as with the width of the outer lateral surface of the body (6). Thus, the material to be kneaded is prevented from remaining and sticking between the protrusion (7) and the outer lateral surface of the body (6). Thus, the cleaning of the beater (4) is facilitated.

[0026] In another embodiment of the present invention, the protrusions (7) are arranged in two rows on the outer lateral surface of the body (6). The protrusions (7) are arranged so as to extend along both the width and the length of the outer lateral surface of the body (6). By means of this

embodiment, the material to be kneaded is enabled to be properly ground between the inner wall of the mixing container (2) and the body (6).

[0027] In another embodiment of the present invention, the protrusions (7) are arranged so as to be side by side along the width of the outer lateral surface of the body (6). In this embodiment, the outer lateral surface of the body (6) is longitudinally divided into two and the protrusions (7) are arranged such that there are two protrusions (7) along the width of the outer lateral surface. By means of this embodiment, the size of the protrusions (7) is designed to be smaller and thus the contents of the material to be kneaded can be ground in smaller sizes.

[0028] In another embodiment of the present invention, the protrusions (7) are arranged in a staggered manner along the width of the outer lateral surface of the body (6), in other words such that there is one protrusion (7) along the width of the outer lateral surface of the body (6). In this embodiment, the outer lateral surface of the body (6) is longitudinally divided into two and the protrusions (7) are arranged in a zigzag manner on the outer lateral surface. By means of the arrangement of the protrusions (7) in this embodiment, the kneaded material is ground by moving the same vertically, in other words, up and down between the protrusions (7). The material being kneaded by being moved horizontally with the rotation of the beater (4) is also moved up and down by means of this embodiment. Therefore, the kneading efficiency is increased.

[0029] By means of the beater (4) of the present invention, the kneading processes, that are normally performed by hand and that take a longer time in the stand mixers (1), are performed more hygienically untouched by human hand and in a shorter time. By means of the protrusions (7) on the beater (4), both the macro kneading process and the micro kneading process are performed simultaneously. The protrusions (7) enable the material remaining between the mixing container (2) and the body (6) of the beater (4) to be ground.

Claims

1. A beater (4) that is suitable for use in a stand mixer (1) comprising a mixing container (2) and a mixing motor (3) disposed thereon, the beater (4) comprising an end (5) that enables the beater (4) to be attached to the motor (3) and a body (6) that contacts the material so as to mix/knead the same, **characterized by** more than one protrusion (7) that is disposed on the outer lateral surface of the body (6) and that enables the materials in granule form between the mixing container (2) and the body (6) to be ground during the beating process.
2. A beater (4) as in Claim 1, **characterized by** the protrusions (7) that are arranged at equal intervals on the outer lateral surface of the body (6).
3. A beater (4) as in Claim 1 or 2, **characterized by** the protrusion (7) that is in the form of a fractional wave on the outer lateral surface of the body (6).
4. A beater (4) as in any one of the above claims, **characterized by** the protrusion (7) that has a width as much as the width of the outer lateral surface of the body (6).
5. A beater (4) as in any one of the above claims, **characterized by** the protrusions (7) that are arranged in two rows on the outer lateral surface of the body (6).
6. A beater (4) as in any one of the above claims, **characterized by** the protrusions (7) that are arranged so as to be side by side along the width of the outer lateral surface of the body (6).
7. A beater (4) as in any one of the above claims, **characterized by** the protrusions (7) that are arranged in a staggered manner along the width of the outer lateral surface of the body (6).
8. A stand mixer (1) wherein a beater (4) as in any one of the above claims is used.

Figure 1

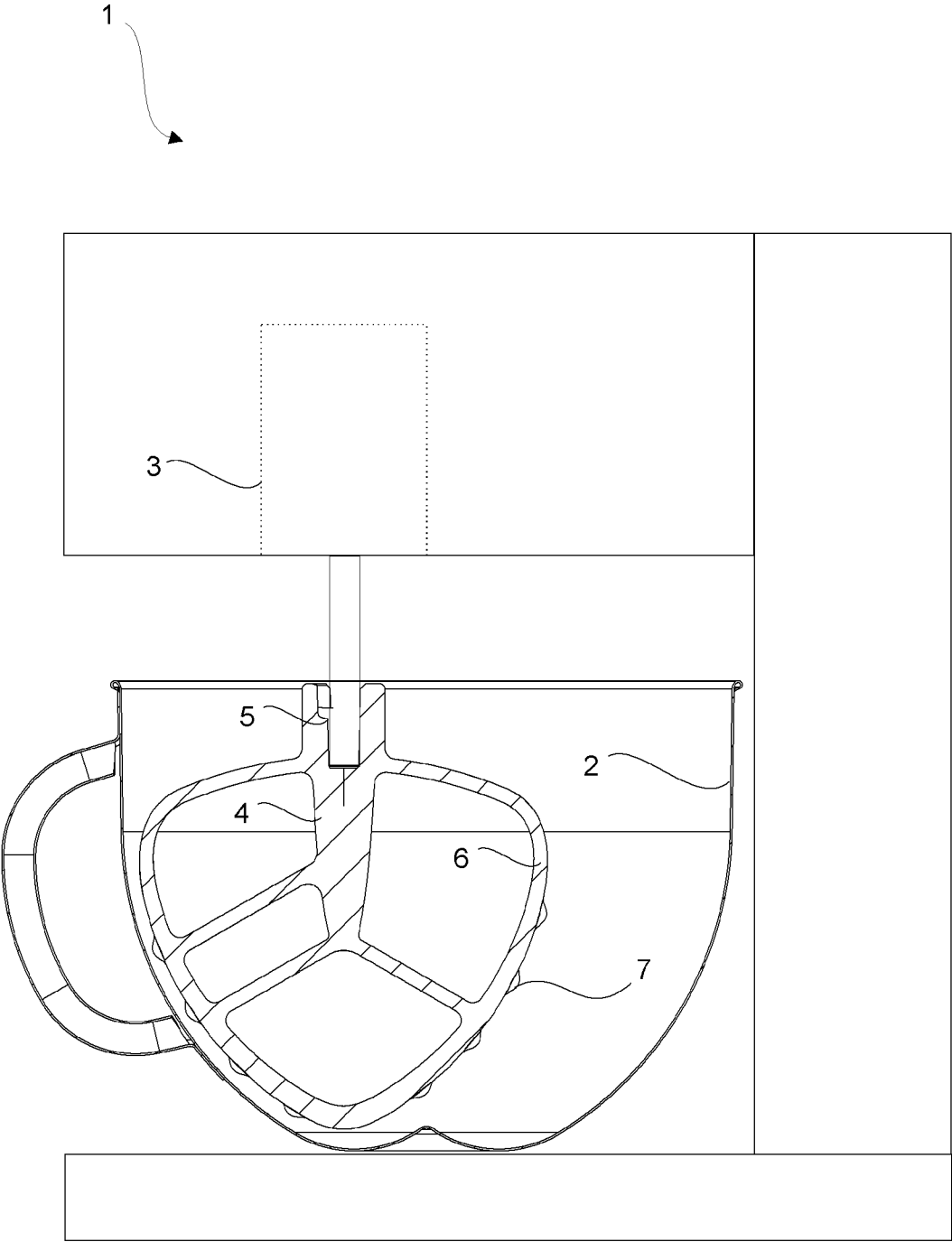


Figure 2

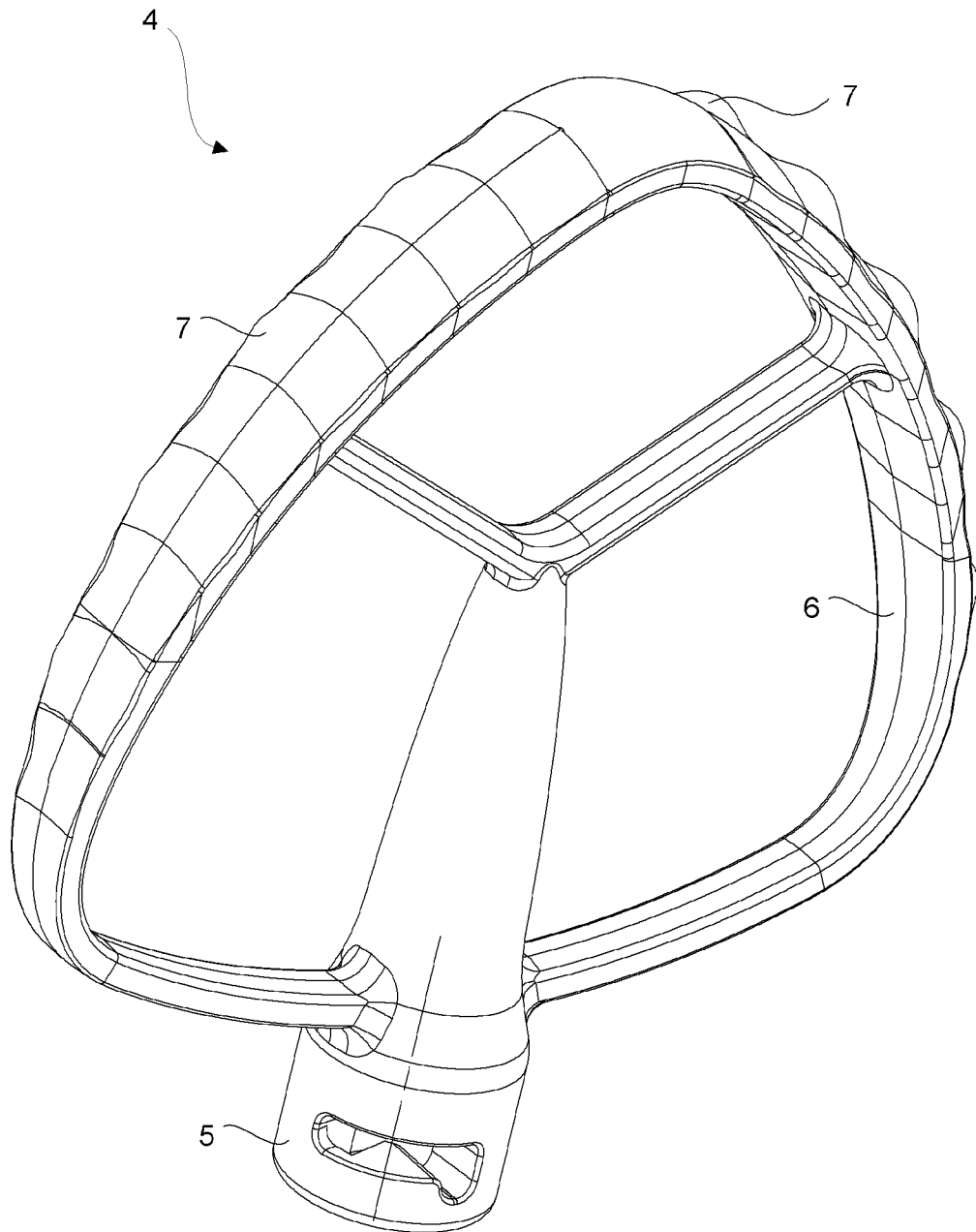


Figure 3a

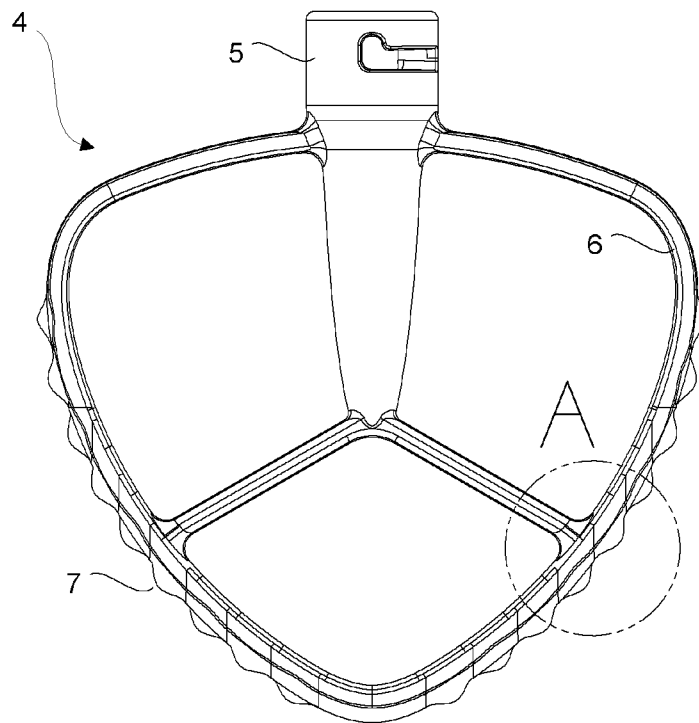
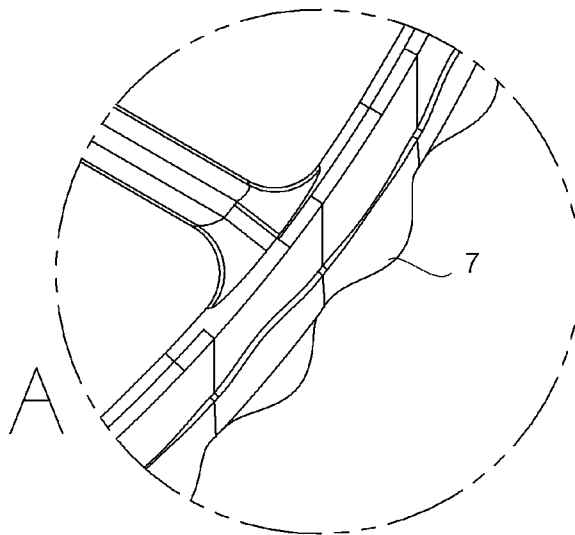


Figure 3b



INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

INV. B01F7/00

ADD. A22C5/00 A47J43/07

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)

B01F A47J A21C A22C

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)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X A	WO 2013/188925 A1 (BREVILLE R & D PTY LTD [AU]) 27 December 2013 (2013-12-27) figure 31 -----	1,2,6,8 3-5,7
	----- -/-	



Further documents are listed in the continuation of Box C.



See patent family annex.

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"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

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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Information on patent family members

International application No

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