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(54) **Basket handle**

(57) Fork-spoon-knife basket for dishwashers according to the invention comprises a handle (1) having an adjustable height and a body (2) inside which fork-spoon-knife tools are placed. In this basket, a couple of ribs (31) extending downwards from the upper section on at least one surface (30) of the mounting plate (3) associated with the body (2); a passage (35) located be-

tween the ribs (31) in which a rod shaped lower body (14) of the handle (1) is guided to enable up and down movements thereof, are present. There is a respective hook (32) extending downwards from the lower section of each rib (31), such that there is a gap (32v) between each rib (31) and the surface (30) in which a leg (11) of the handle (1) is engaged.

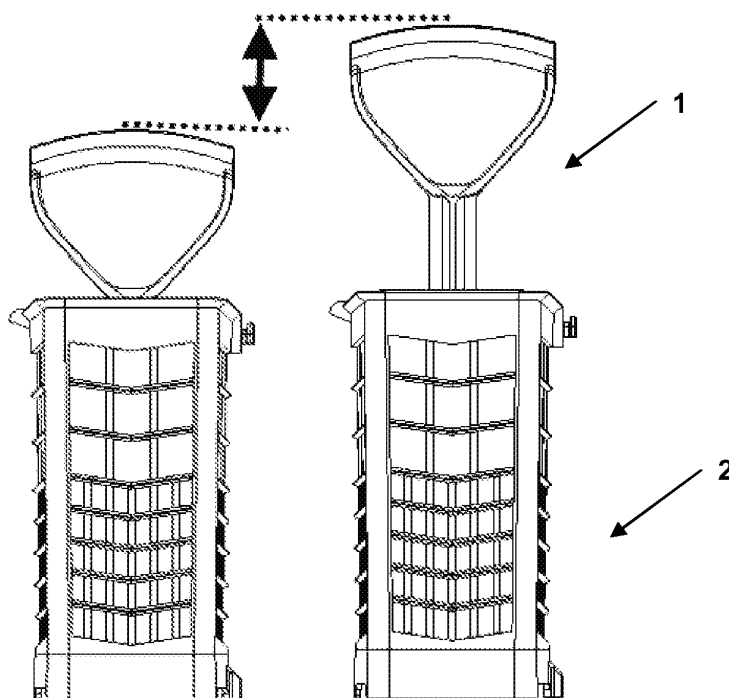


Figure – 1

Description

Technical Field

[0001] This invention relates to a cutlery basket (basket for forks-spoons-knives) with an adjustable handle length for use in dishwashers.

Prior Art

[0002] In dishwashers, movable baskets for washing cutlery tools such as fork-spoon-knife are widely used. In general, these baskets are placed at the middle section on the dishwashers' lower basket. Since they are portable, it is possible to take them out of the machine, if desired. Therefore, there are handles on the baskets through which the users can grip. In general, handles rose up from the center of the fork-spoon-knife basket are kept longer in order to prevent sharp objects to pierce the users' hands. This usually brings a problem for fork-spoon-knife baskets put in the lower basket and prevents this basket (fork-spoon-knife basket) being used in the upper basket. Although fork-spoon-knife baskets with removable handles have been developed, assembly-disassembly operations in these baskets keep users too much employed. Moreover, said snags in these handles generally fitted as snag engagement are deformed by being overused and then they can possibly be broken causing loss in their functions.

[0003] In prior art published patent application US2002139809, a fork-spoon-knife basket whose handle can turn both right and left is described. In this basket although it is possible for this handle to give more space for its basket by turning to right and left, protruding sections of the elongated stemmed tools in the basket obstruct handle to come its central position which is the lifting up position of the handle. Also the handle, due to its structure, forms a protrusion on the side at which it is turned and causes some constriction in the available space at sides of the basket.

[0004] In prior art another published patent application W02004000090, a fork-spoon-knife basket which can be separated into many parts is described. In order to use this basket in the upper dish basket, the handle should be completely separated from the basket. Furthermore, removing handle from the basket is used for demounting all parts of the basket. Although it is possible to use demounted basket parts in the upper basket, it is troublesome for putting and taking them out of the upper basket without a handle and it also causes a problem for a user to grip and carry the basket. Additionally, assembly-disassembly operations of the basket take time and also the user should keep the unused parts in a secure place. In addition, since the mounting operation of these multiple parts baskets is time consuming, it causes an increase in the cost during production.

Brief Disclosure of the Invention

[0005] Fork-spoon-knife basket improved according to this invention has a compact structure with a handle which is easily shortened and elongated without the need of demounting in order to be placed in the upper basket. The handle positioned at the central section of said basket (or at the center of gravity) is shortened and elongated by moving it a bit towards and away from the basket, if desired. In order to achieve this, lower part of the handle is divided into two symmetrical sections. Each of them is attached on two opposite surfaces of the vertical mounting plate in the middle of the basket. On each surface, there is a respective socket to guide the lower part of the handle and a respective hook on the upper section of the socket to prevent complete separation of the handle from the basket.

[0006] The user can utilize the handle according to his/her needs by moving it downwards or upwards. When it is pushed completely downwards, the height of the handle can be adapted to be equal to the heights of the tools inside and thus it is easily placed in the upper dish shelf. If the basket is taken out from the dishwasher, then the handle can simply be elongated for ease of carrying. In particular, the handle should be elongated during carriage to prevent tools inside from piercing the users' hands. Another advantage for shortening ability of the basket handle is that it provides easiness to place it in cupboards and shelves in the kitchen when it is not used in the machine. In the case the heights of the shelves are not enough, height of the handle is shortened and this provides an advantage for placing the basket.

[0007] An important feature of the invention is that mounting of the basket is achieved in a fast way. Owing to small number of parts to be mounted and simple geometric structures of these parts, both easiness of mounting and time saving are achieved. Also this makes used parts more reliable and long lasting.

Objective of the Invention

[0008] An objective of this invention is a basket for forks-spoons-knives which can be placed in both lower and upper dish baskets in dishwashers.

[0009] Another objective of the invention is to provide a handle for said basket with a structure having shortening and elongating capability.

[0010] Further object of the invention is to provide a fork-spoon-knife basket having a compact structure which can be placed in the upper basket without the need of demounting.

[0011] Another object of the invention is to provide a fork-spoon-knife basket which has fast mounting and which is reliable and inexpensive.

Description of the Drawings

[0012] An exemplary fork-spoon-knife basket for dish-

washers according to the invention is shown in the attached drawings, wherein:

Figure 1 shows side views of the fork-spoon-knife basket for dishwashers.

Figure 2 is a top perspective view of the fork-spoon-knife basket.

Figure 3 is a perspective view of handle when it is attached to the mounting plate at the basket.

Fig. 4 is a perspective view of the mounting plate.

Fig. 5 is a front view of the plate.

Fig. 6 is a side sectional view of the plate.

Figure 7 is a perspective view of the handle.

Figure 8 is a side perspective view of the handle.

[0013] The parts in the figures are numbered one by one and the corresponding terms of these numbers are given below.

Handle (1)

Body (2)

Grip section (10)

Leg (11)

Upper body (12)

Opening (13)

Lower body (14)

Mounting plate (3)

Plate surface (30)

Rib (31)

Rib inclination (35)

Hook (32)

Snag (32s)

Gap (32v)

Support surface (33)

Rib (34)

Upper edge (34u)

Lower edge (34d)

Passage (35)

Gap (36)

Disclosure of the Invention

[0014] Fork-spoon-knife basket whose side views are given in figures 1-2 comprises a handle (1) movable up and down and a body (2) inside which fork-spoon-knife tools are placed. As can be seen from the perspective view in Figure 3, handle (1) is attached to a mounting plate (3) placed in the middle section of the body (2). (Mounting plate (3) can be considered as a constant or a removable part of the body (2). In order to make attached drawings more illustrative, mounting plate (3) is shown unattached from the body in figures 4-6).

[0015] The mounting plate (3) shown in figures 4-6 comprises a couple of ribs (31) extending downwards from the upper section on at least one surface (30) of the plate (3); a passage (35) located between the ribs (31); a respective hook (32) at the lower section of each rib (31), extending downwards such that there is a gap (32v) between them and the surface (30); a support surface (33) located below the hooks (32) and having a distance to the surface (30), a leg (11) of the handle (1) (figures 7-8) can be engaged from above to below into that gap (36) between it and the surface (30).

[0016] The gap (35) between said ribs (31) is formed such that the handle (1) can only move up and down. In other words, ribs (31) extend vertically to the surface (30) and run downwardly parallel to the vertical edges of the surface. In this way, only up and down movements of the handle (1) placed in the gap (35) between two ribs (31) are possible.

[0017] There is a respective inclination (31i) expanding downwards on the upper section of each rib (31). These inclinations (31i) are utilized during the first mounting (details are described below) of the handle (1) to the plate (3).

[0018] As shown in figures 4 and 6, on the support surface (33) there is at least one rib (34) extending from the support surface (33) to the plate surface (30). The gap (36) between each rib (34) and the plate surface (30) has a width such that the lower section of the handle (1) can pass through. Upper edge (34u) of each rib (34) is inclined upwards and the lower edge (34d) is inclined downwards. Support surface (33) is connected to the plate surface (30) from at least one side thereof (from both sides on the exemplary views in figure 4).

[0019] At the lower section of each hook (32), there is at least one snag (32s) with a triangular shape whose one edge extends towards to the gap (32v) between it and the surface (30). The snag (32s) has a dimension such that it allows the leg (11) at the lower section of the handle (1) to be engaged compressively into said gap

(32v).

[0020] All details on a surface (30) of aforementioned plate (3) may be at the opposite face thereof in a symmetrical manner. Although it is possible to implement the invention by using details at only one surface (30), using with a pair of surfaces concerning with a handle (1) to carry the body (2) in a more balanced way is shown in attached figures.

[0021] The handle (1) shown in Figures 7-8 comprises a grip section (10) formed on its upper section for a user to hold; an upper body (12) extending below that section (10) downwards in a rod shape; a lower body (14) formed by at least one of two opposite surfaces of upper body (12) via extending downwards as a rod shape; a respective leg (11) extending towards at least one side below the lower body (14). In a handle (1) shown in Figures 7-8, the opening (13) between a pair of lower body (14) which is formed by extension downwards of both opposite surfaces of upper body (12) is kept in a width to receive the plate (3). When a second lower body (14) is used, there is a respective leg (11) extending towards at least one side below that lower body (14).

[0022] Firstly in the mounting of the handle (1) to the plate (3), a respective leg (11) spaced apart at two separate lower bodies (14) of the handle (1) is pushed towards the plate (3) such that the upper section of the plate (3) is engaged into the gap (13) there between. At the same time, surfaces of the legs (11) which are facing each other contact with the outside of the ribs (31). The expansion of each rib (31) with a respective inclination to downward (31i) causes legs (11) and lower bodies (14) to separate from each other by stretching. When the legs (11) progress a little bit downwards from where the rib's inclinations (31 i) ended, they come close to the plate surface (30) by stretching back after being released from the ribs (31). In this position, when the handle (1) is pulled up, legs (11) are compressively fixed in lower section of the hook (32) from between the surface (30) and the snag (32s). In this position shown in Figure 3, handle (1) does not slide downwards per se unless it is pushed that way. In case that the handle (1) is pushed downwards again, if the legs (11) move away from the plate (3) due to elasticity, they come close to the plate (3) and fit again in aforementioned gap (36) by guiding the inclined upper edges (34u) of the ribs (34). Complete filling of handle's (1) opening (13) by the plate (3) can be considered as the last point of downwards movement of the handle (1). Even the handle (1) moves upwards, inclined lower edges (34d) of the ribs (34) guide the legs again into the gap (36). When they move further, as mentioned earlier, legs (11) are stuck below the hooks (32). Thus, the lower and upper positions of the handle (1) are arranged. By guiding each lower body (14) of the handle in each said passage (35) only up and down movements of the handle are allowed. The handle (1) can be located on intermediate positions per se besides the highest and the lowest positions by the small recessions and protrusions on each part (1, 3) where the handle (1) contacts the plate (3),

and by engagement of both parts (1, 3) together with some friction. Said recessions and protrusions or the amount of friction would not prevent user to move the handle (1) and can be adjusted at a level such that they would not slide down per se.

Claims

1. A fork-spoon-knife basket for dishwashers comprising a handle (1) having an adjustable height and a body (2) in which fork-spoon-knife tools are placed, **characterized in that** it comprises a couple of ribs (31) extending downwards from the upper section on at least one surface (30) of the mounting plate (3) associated with the body (2); a passage (35) located between the ribs (31) in which a rod shaped lower body (14) of the handle (1) is guided to enable up and down movements thereof; a respective hook (32) extending downwards from the lower section of each rib (31), such that there is a gap (32v) between them and the surface (30) in which a leg (11) of the handle (1) is engaged; a support surface (33) located below the hooks (32) and a leg (11) of the handle (1) is engaged into a gap (36) between it and the surface (30).
2. A fork-spoon-knife basket according to the claim 1, **characterized in that** at least one rib (34) extending towards the plate surface (30) from the support surface (33) is present.
3. A fork-spoon-knife basket according to the claim 2, **characterized in that** each rib (34) is inclined such that its upper edge (34u) faces upwards.
4. A fork-spoon-knife basket according to the claim 2, **characterized in that** each rib (34) is inclined such that its lower edge (34d) faces downwards.
5. A fork-spoon-knife basket according to the claim 2, **characterized in that** the support surface (33) is attached to the plate surface (30) from at least one side.
6. A fork-spoon-knife basket according to the claim 1, **characterized in that** at the upper edge of each rib (31) there is a respective inclination (31 i) expanding downwards.
7. A fork-spoon-knife basket according to the claim 1, **characterized in that** at the lower edge of each hook (32) there is at least one snag (32s) expanding towards the gap (32v).
8. A fork-spoon-knife basket according to the claim 7, **characterized in that** the snag (32s) has a dimension such that it allows the leg (11) of the handle (1)

to be engaged compressively into said gap (32v).

9. A fork-spoon-knife basket according to the claim 1,
characterized in that a lower body (14) at the han- 5
dle (1) has a rod shaped structure formed by extend-
ing downwards of at least one of two opposite sur-
faces of upper body (12) in a rod shape.
10. A fork-spoon-knife basket according to the claim 9,
characterized in that the handle (1) comprises a 10
grip section (10) formed above the upper body (12)
for a user to hold.
11. A fork-spoon-knife basket according to the claim 1,
characterized in that said leg (11) is such that it 15
extends towards at least one side below each lower
body (14).
12. A fork-spoon-knife basket according to the claim 9,
characterized in that an opening (13) in a width to 20
receive the plate (3) is present between lower bodies
(14).
13. A fork-spoon-knife basket according to the claim 1,
characterized in that small recessions and protru- 25
sions are present on both parts (1, 3) where the han-
dle (1) contacts the plate (3), without preventing the
user to move the handle (1) and being at a level such
that sliding down per se is prevented. 30
14. A fork-spoon-knife basket according to the claim 1,
characterized in that frictionally contacting parts of 35
the handle (1) and the plate (3) are such that they
would not prevent the user to move the handle (1)
and also prevent it from sliding down per se.
15. A fork-spoon-knife basket according to any of the
preceding claims, **characterized in that** said all de- 40
tails on a surface (30) of the plate (3) are present at
the opposite face thereof in a symmetrical manner.

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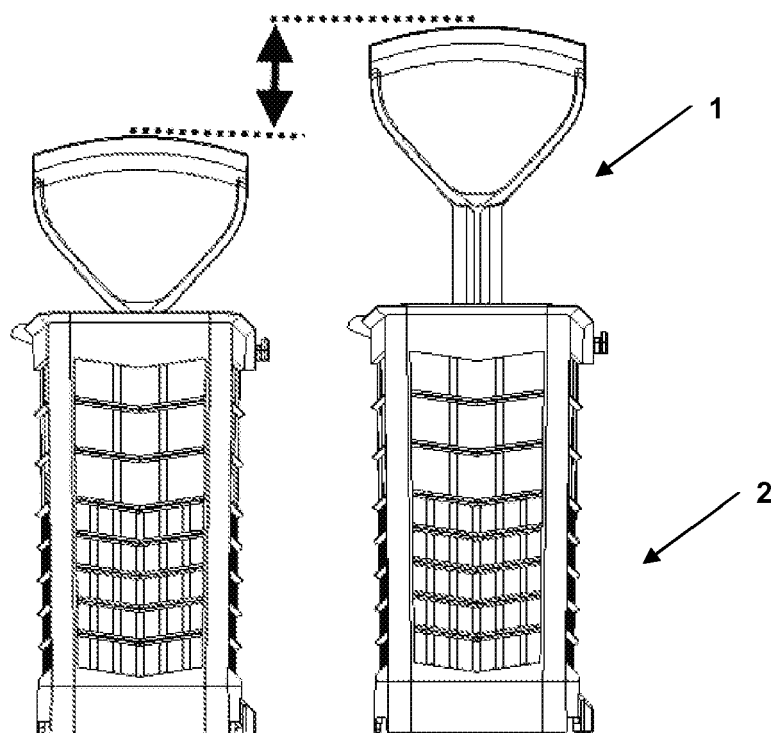


Figure - 1

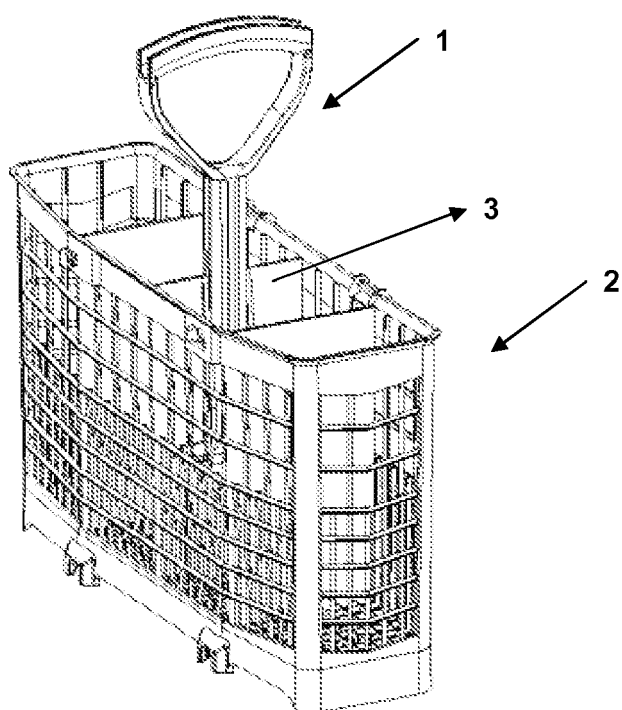


Figure - 2

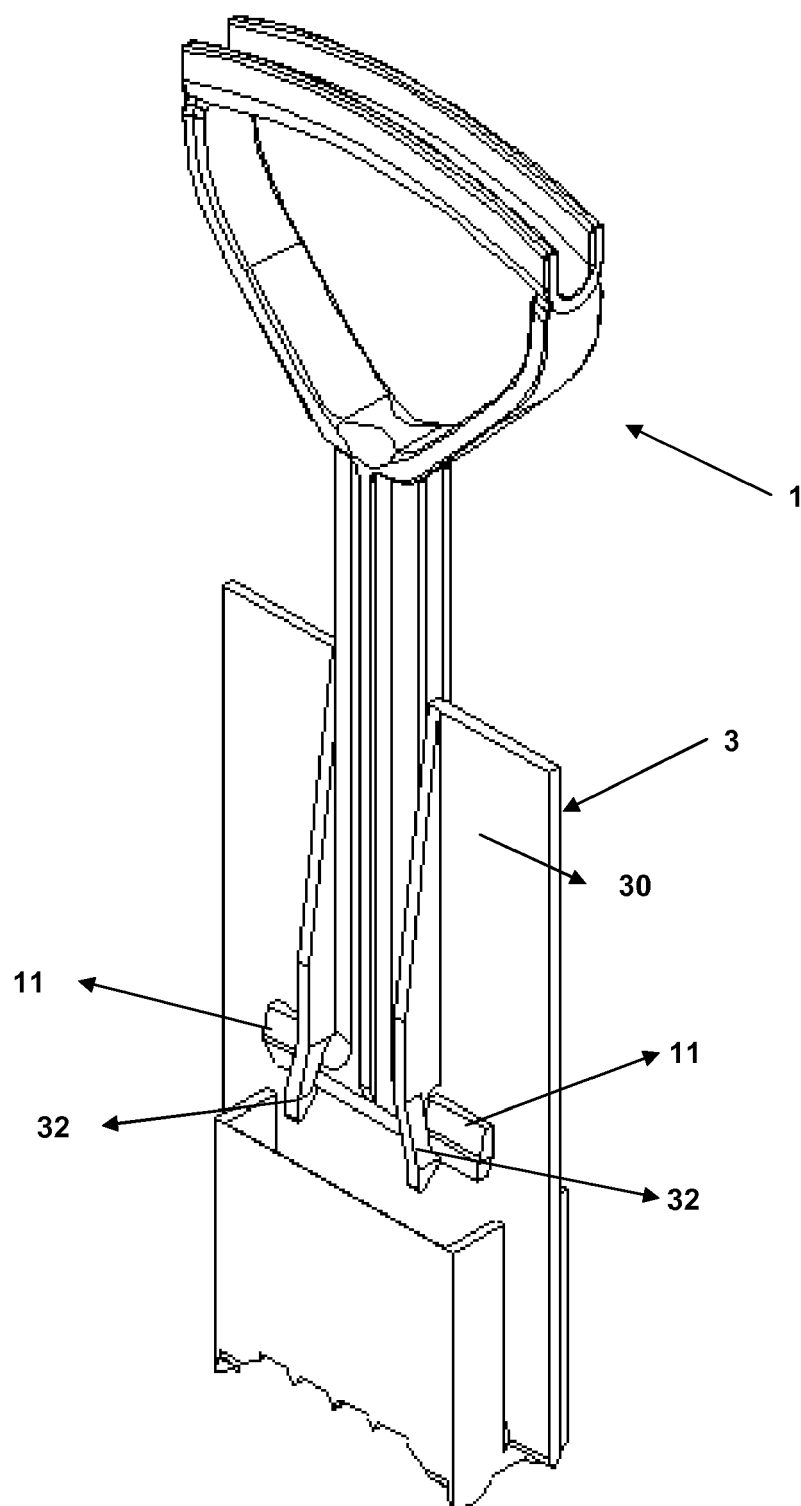


Figure – 3

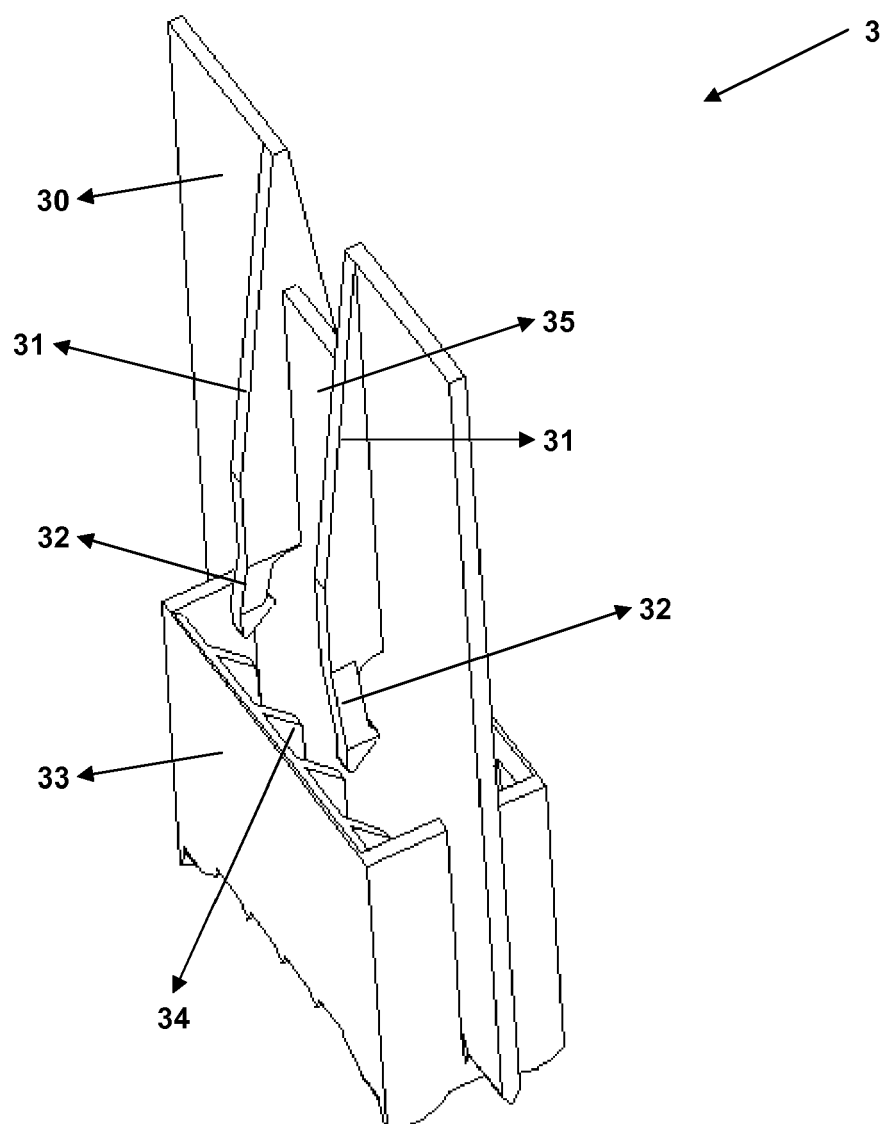


Figure – 4

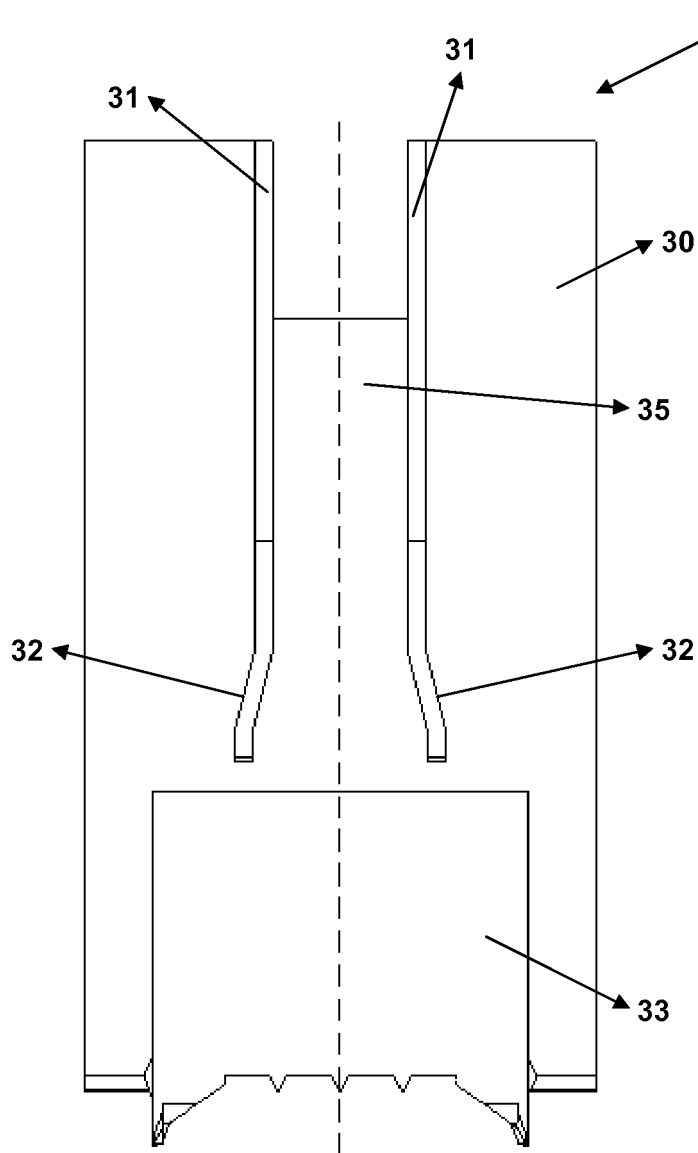


Figure – 5

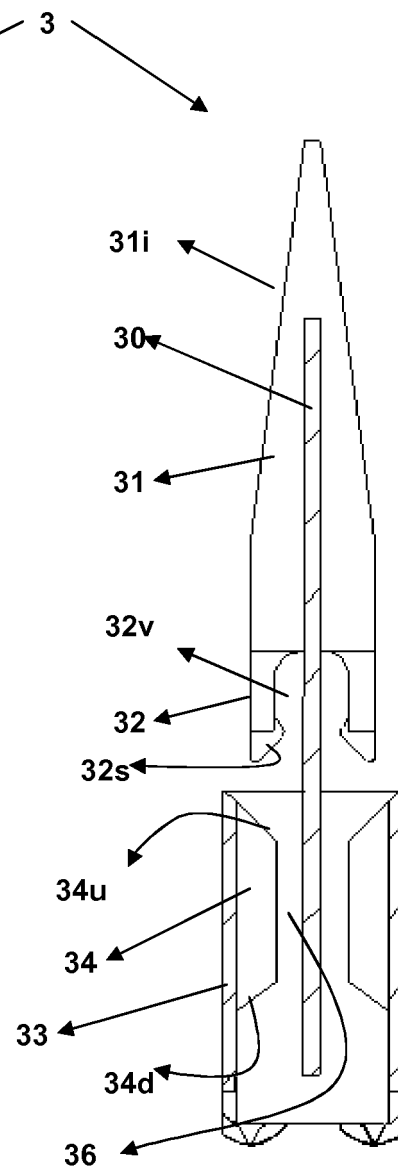


Figure – 6

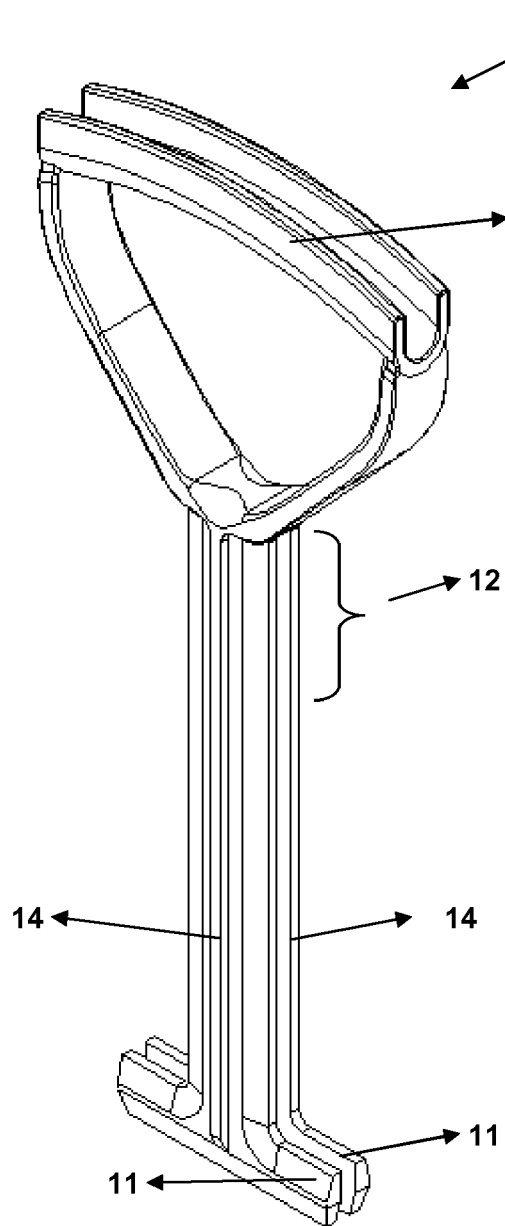


Figure - 7

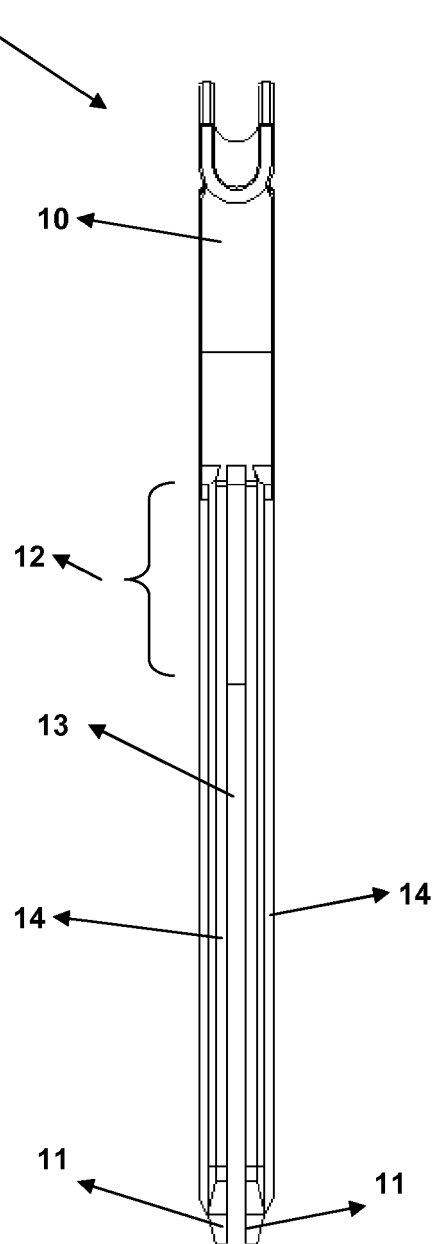


Figure - 8



European Patent
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EUROPEAN SEARCH REPORT

Application Number
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Munich		12 August 2008	Lodato, Alessandra
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