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(54) **Device and method for opening an oyster**

(57) A device for opening an oyster, comprising an oyster support (1) for supporting the oyster, an opening element holder (2) which is arranged so that it is movable in its longitudinal direction and in one opening element holder end (22) thereof comprises an opening element (10), a drive handle (3) for driving the opening element holder (2), which drive handle (3) comprises a first (14) and second handle end (13), is pivotably connected by the first handle end (14) thereof to a fixed point of rotation and between the first (14) and second handle end (13) is connected to the opening element holder (2) and a supporting element (5) for supporting the opening ele-

ment holder (2), in which the support element (5) is adjustable relative to the oyster support (1), the device comprises guide means (7,15) for guiding the adjustable support element (5) in the direction of movement of the opening element holder (2), and in which the support element (5) comprises fixing means (11) for fixing the support element (5) on the guide means (7,15), which has the effect that the distance between the support element (5) and the oyster support (1) can be adjusted, and also a method for opening an oyster.

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Description

[0001] The invention relates to a device for opening an oyster, comprising an oyster support for supporting the oyster, an opening element holder which is arranged so that it is movable in its longitudinal direction and in one opening element holder end thereof comprises an opening element, a drive handle for driving the opening element holder, which drive handle comprises a first and second handle end, is pivotably connected by the first handle end thereof to a fixed point of rotation and between the first and second handle end is connected to the opening element holder and a supporting element for supporting the opening element holder and the drive handle.

[0002] Such a device is disclosed in US patent 3,151,352. In order to open an oyster, the oyster is placed in the correct position against the oyster support. The drive handle is then moved manually towards the oyster support, so that the opening element holder moves in the direction of the oyster until the opening element comes into contact with the oyster. From this position the drive handle is moved with a powerful movement in the direction of the oyster support for the actual opening of the oyster.

[0003] Oysters by their nature have different dimensions. These dimensions can vary between 5 and 20 cm. As a result of this, with oysters of different dimensions and in the situation described above where the opening element makes contact with the oyster, the drive handle in the known device is in different positions relative to the opening element holder. This means that the drive handle is often not in the position in which the greatest possible power transmission to the opening element holder is achieved. The user consequently has to exert unnecessarily great force on the drive handle. Since such devices are often used for opening large quantities of oysters, it is very important for the opening to proceed with as little physical effort as possible from the user, in order to prevent injuries.

[0004] An aim of the invention is to provide a device for opening oysters in which optimum power transmission from the drive handle to the opening element holder is obtained. This aim is achieved in that the support element is adjustable relative to the oyster support, the device comprises guide means for guiding the adjustable support element in the direction of movement of the opening element holder, and in that the support element comprises fixing means for fixing the support element on the guide means. The effect of this is that the distance between the support element and the oyster support can be adjusted. This means that with the different dimensions of the oysters the support element can be fixed in such a position on the guide means that in the situation described above where the opening element makes contact with an oyster a line extending through the point of rotation and through the second handle end is positioned perpendicularly to the direction of movement of the open-

ing element holder. The greatest power transmission of the drive handle to the opening element holder is achieved in this position. It enables the user to open an oyster with the least possible physical effort.

[0005] In one embodiment of the device according to the invention the guide means comprise a first and a second guide, the first and second guides being located at a distance from each other. This has the advantageous effect that a very stable construction of the device is produced. It is also advantageous in the situation where the device according to the invention comprises an electric drive motor for the drive, instead of a drive handle. The first and second guides can extend substantially parallel to each other and in the direction of the oyster support. The first and second guides can be bar-shaped.

[0006] In one embodiment according to the invention the device comprises positioning means connected to the guide means, which positioning means extend away from the guide means in such a way that when the device is placed on a flat surface in such a way that the positioning means make contact with the flat surface the support element is located at a distance from the flat surface. In the position for use the oyster opener is placed on a flat work-surface. Owing to the fact that the positioning means ensure that in the position for use the support element does not make contact with the work-surface, the work-surface does not constitute an obstacle to the movement of the support element along the guide means when the device is in this position. This means that the distance between the support element and the oyster support can be adjusted without it being necessary to lift the device off the work-surface. This makes the device considerably easier to use.

[0007] In one embodiment the support element comprises a fixing handle for controlling the fixing means and, measured in the direction of movement of the opening element holder, the fixing handle is located at a greater distance than the opening element from the oyster support. This specific positioning of the fixing handle means that the user does not have to place his hands in the path of the opening element in order to adjust the position of the support element. This is important for increasing the safety of the user at the time of adjustment of the position of the support element.

[0008] The guide means can comprise markings and the support element can comprise a viewing aperture for making it possible to see markings covered by the support element. Oysters sold on the market are usually sorted by size. The oysters on sale are grouped into various groups, all oysters of a group being approximately of the same size. Virtually all oyster sellers on the market use the same measurements for grouping oysters. By placing the markings in such a position on the guide means that the support element is at an optimum position for a certain group when a marking is visible through the viewing aperture, the user can place the support element quickly in the correct position for a certain group.

[0009] Oysters sold on the market are often divided

into four groups. In one embodiment according to the invention the fixing means are therefore arranged in such a way that the support element can be fixed in four specific places on the guide means. The distance between these four specific places can be 6 cm. In the situation where a line extending through the point of rotation and through the second handle end is positioned perpendicularly to the direction of movement of the opening element holder the distance between the opening element and the oyster support in those four specific positions of the support element can be 6, 12, 18 and 22 cm.

[0010] In one embodiment according to the invention the device comprises liquid collection means for collecting liquid from an oyster to be opened, and the liquid collection means comprise a filter element for filtering the liquid collected. Liquid is released during the opening of an oyster. This liquid is very tasty. Collecting it means that this liquid can be put back in the opened oyster again. The filter element is preferably positioned in such a way that the released liquid is filtered before it is collected by the collection means. In this way a direct separation is achieved between the liquid and the grit released from the oyster shell when it is opened. This is important for minimising the taste transfer between the grit and the liquid. The filter element can comprise a fine-mesh gauze.

[0011] The oyster support can comprise a stop element of elastic material. By means of this elastic material, preferably rubber, a good grip of the oyster on the oyster support is obtained, and during the opening of the oyster the side of it which is in contact with the oyster support is less damaged.

[0012] In one embodiment according to the invention the guide means comprise first recesses and the fixing means comprise a rotary rod interacting with the first recesses, which rotary rod comprises a second recess for guiding the support element along the guide means. In this way the user is able to fix the support element on or disconnect it from the guide means by a single turning movement exerted upon the fixing handle.

[0013] The invention furthermore relates to a method for opening an oyster, which method comprises the steps of positioning an oyster against an oyster support, positioning a support element - which support element is adjustable along guide means and comprises a drive handle and an opening element which is movable in the longitudinal direction - in such a position that the opening element is placed against the oyster and the drive handle is in the position in which a maximum power transmission to the opening element is obtained, fixing the support element in that position on the guide means, and moving the drive handle in order to open the oyster with the opening element.

[0014] The invention will be explained in greater detail with reference to the drawings, in which:

Fig. 1 is a schematically perspective view of a device according to the invention;

Fig. 2 is a schematically partial cross-sectional view through the line II of the device of Fig. 1;

Figs 3a and 3b are a schematically side view and top view respectively of the opening element of the device of Fig. 1.

[0015] Figure 1 shows a device according to the invention which comprises an oyster support 1 for supporting an oyster to be opened, and in which an oyster is positioned against the stop element 23 of the oyster support 1. The device comprises an opening element holder 2, which is arranged in such a way that it can be moved in its longitudinal direction. An opening element 10 is accommodated in an opening element holder end 22 of the opening element holder 2. The device furthermore comprises further a drive handle 3 for driving the opening element holder 2, which drive handle 3 comprises a first handle end 14 and a second handle end 13. The first handle end 14 is connected to a fixed point of rotation 4. The drive handle 3 is arranged so that it can pivot about the point of rotation 4 and between the first handle end 14 and second handle end 13 is connected to the opening element holder 2. A pivoting movement of the drive handle 3 causes the opening element holder 2 to move away from or towards the oyster lying against the oyster support 1. The direction of movement of the opening element holder 2 is indicated by the arrow 41 shown beside the opening element holder 2. The opening element holder 2 and the drive handle 3 are fully supported by an adjustable support element 5. The opening element holder 2 and the opening element 10 accommodated in it together form a through opening 12. A pin can be inserted through said through opening 12 in order to connect the opening element 10 to the opening element holder 2. The device comprises guide means 7, 15 for guiding the adjustable support element 5 in the direction of movement of the opening element holder 2. The support element 5 comprises fixing means 11 for fixing the support element 5 on the guide means 7, 15. The point of rotation 4 is part of the support element 5. When the support element 5 is fixed on the guide means 7, 15 the point of rotation 4 is also fixed for use of the device. For control of the fixing means 11, the latter comprise a fixing handle 6. The fixing handle 6 is positioned in such a way that the fixing means 11 can be controlled without the user's hands being placed in the path of the opening element holder 2, and therefore also in the path of the opening element 10. The guide means 7, 15 comprise a first and second guide 7 and 15. The first guide 7 comprises markings 8 made on it. These markings 8 are visible through a viewing aperture 9 when the support element 5 is situated above one of the markings 8. The viewing aperture 9 can also be used for supplying a lubricant to the first guide 7. For this application the support element 5 comprises a second viewing aperture 40 for making it possible to see the second guide 15. The device comprises positioning means 19 which are connected to the guide means 7, 15. On one end of the guide means 7, 15 the positioning means

19 are formed by the bottom part of the oyster support 1. The positioning means 19 extend so far from the guide means 7, 15 that when the device is positioned on a flat surface in such a way that the positioning means 19 make contact with the flat surface the support element 5 is located at a distance from the flat surface. In this way the support element 5 can be moved along the guide means 7, 15 while the device is positioned on a flat surface. The direction of the movement of the support element 5 is indicated by the arrow 42 shown beside the support element 5. The device furthermore comprises liquid collection means 16, positioned against the oyster support 1 and below the guide means 7, 15, for collecting oyster liquid which is released when the oyster is opened. The liquid collection means 16 comprise a filter element 17 for filtering the oyster liquid.

[0016] Figure 2 shows a cross-sectional view through line II of the device of Fig. 1, part of the cross section being shown. The first guide 7 comprises a first recess 20. The fixing means 11 comprise a rotary rod 24 interacting with the first recess 20. In order to fix the support element 5, the rotary rod 24 is rotated into such a position that the rotary rod 24 extends through the first recess 20 into the first guide 7. The rotary rod 24 comprises a second recesses 21. In order to move the support element 5 along the first guide 7, the rotary rod 24 is positioned in such a way that the second recess 21 is directed towards the guide means 7. In this position of the rotary rod 24 the latter does not constitute any obstruction to the movement of the support element 5 along the first guide 7.

[0017] The rotary rod 24 can also extend through the entire support element 5, so that the rotary rod 24 can become fixed in a corresponding manner on the second guide 15. In this situation it is possible for the rotary rod 24 to be placed in the support element 5 both on the side of the first guide 7 and on the side of the second guide 15, so that the fixing handle 6 is situated on the side that is advantageous for right-handed or left-handed users respectively.

[0018] Figure 3a shows a side view, with a partial cross section, of the opening element 10 and a part of the opening element holder 2 of the device of Figure 1. The opening element 10 comprises a connecting part 25, which is connected to it and is accommodated in the opening element holder end 22 of the opening element holder 2. The opening element holder 2 and the connecting part 25 accommodated in it form a through opening 12 for connecting the opening element 10 to the opening element holder 2. This connection is achieved by placing a pin (not shown) through the through opening 12. Said pin then preferably extends through the entire through opening 12. The connecting part 25 and the inside of the opening element holder end 22 can also comprise interacting screw thread.

[0019] Figure 3b shows a top view, with a partial section, of the opening element and a part of the opening element holder of the device of Figure 1. The opening

element 10 comprises a disc-shaped part 26. This means that the opening element 10 has no sharp corners, which makes the device safer to use. The disc-shaped part 26 has a thickness of more than 3 mm. This has the advantage that the disc-shaped part has a blunt side edge 30.

[0020] It will be clear to the person skilled in the art that yet further variants are conceivable within the scope of protection defined by the claims.

Claims

1. Device for opening an oyster, comprising an oyster support (1) for supporting the oyster, an opening element holder (2) which is arranged so that it is movable in its longitudinal direction and in one opening element holder end (22) thereof comprises an opening element (10), a drive handle (3) for driving the opening element holder (2), which drive handle (3) comprises a first and second handle end (14 and 13), is pivotably connected by the first handle end (14) thereof to a fixed point of rotation (4) and between the first and second handle end (14 and 13) is connected to the opening element holder (2), a supporting element (5) for supporting the opening element holder (2) and the drive handle (3), **characterised in that** the support element (5) is adjustable relative to the oyster support (1), the device comprises guide means (7, 15) for guiding the adjustable support element (5) in the direction of movement of the opening element holder (2), and **in that** the support element (5) comprises fixing means (11) for fixing the support element (5) on the guide means (7, 15).
2. Device according to claim 1, wherein the guide means (7) comprise first recesses (20) and the fixing means (11) comprise a rotary rod (24) interacting with the first recesses (20), said rotary rod (24) comprising a second recess (21) for guiding the support element (5) along the guide means (7).
3. Device according to one of the preceding claims, wherein the guide means (7, 15) comprise a first guide (7) and a second guide (15), wherein the first and second guides (7 and 15) are spaced from each other.
4. Device according to claim 3, wherein the first and second guides (7 and 15) extend substantially parallel to each other and in the direction of the oyster support (1).
5. Device according to claim 3 or 4, wherein the first and second guides (7 and 15) are rod-shaped.
6. Device according to one of the preceding claims, wherein the device comprises positioning means

- (19) connected to the guide means (7, 15), which positioning means (19) extend away from the guide means (7, 15) in such a way that when the device is placed on a flat surface in such a way that the positioning means (19) make contact with the flat surface the support element (5) is spaced from the flat surface.
7. Device according to one of the preceding claims, wherein the support element (5) comprises a fixing handle (6) for controlling the fixing means (11) and, measured in the direction of movement of the opening element holder (2), the fixing handle (6) is located at a greater distance than the opening element (10) from the oyster support (1). 5 10 15
 8. Device according to one of the preceding claims, wherein the guide means (7, 15) comprise markings (8) and the support element (5) comprises a viewing aperture (9) for making it possible to see markings (8) covered by the support element (5). 20
 9. Device according to one of the preceding claims, wherein the fixing means (11) are arranged in such a way that the support element (5) can be fixed in four specific places on the guide means (7, 15). 25
 10. Device according to claim 9, wherein, with the drive handle (3) in such a position that a line extending through the point of rotation (4) and the second handle end (13) is positioned perpendicularly to the direction of movement of the opening element holder (2), the distance between the opening element (10) and the oyster support (1) in the four specific positions is 6, 12, 18 and 22 cm. 30 35
 11. Device according to one of the preceding claims, wherein the device comprises liquid collection means (16) for collecting liquid from an oyster to be opened, and the liquid collection means (16) comprise a filter element (17) for filtering the liquid collected. 40
 12. Device according to one of the preceding claims, wherein the oyster support (1) comprises a stop element (8) of elastic material. 45
 13. Device according to one of the preceding claims, wherein the opening element (10) comprises a disc-shaped part (26). 50
 14. Device according to claim 13, wherein the disc-shaped part (26) has a thickness D of at least 3 mm.
 15. Device according to one of the preceding claims, wherein the opening element (10) comprises a connecting part (25) and the opening element holder (2) and the connecting part (25) accommodated in it 55
- form a through opening (12) for connecting the opening element (10) to the opening element holder (2).
16. Method for opening an oyster, said method comprising the steps of positioning an oyster against an oyster support (1), positioning a support element(s) - said support element (5) being adjustable along guide means (7, 15) and comprises a drive handle (3) and an opening element (10) which is movable in the longitudinal direction - in such a position that the opening element (10) is placed against the oyster and the drive handle (3) is in the position wherein a maximum power transmission to the opening element (10) is obtained, fixing the support element (5) in said position on the guide means (7, 15), and moving the drive handle (3) in order to open the oyster with the opening element.

Fig 1

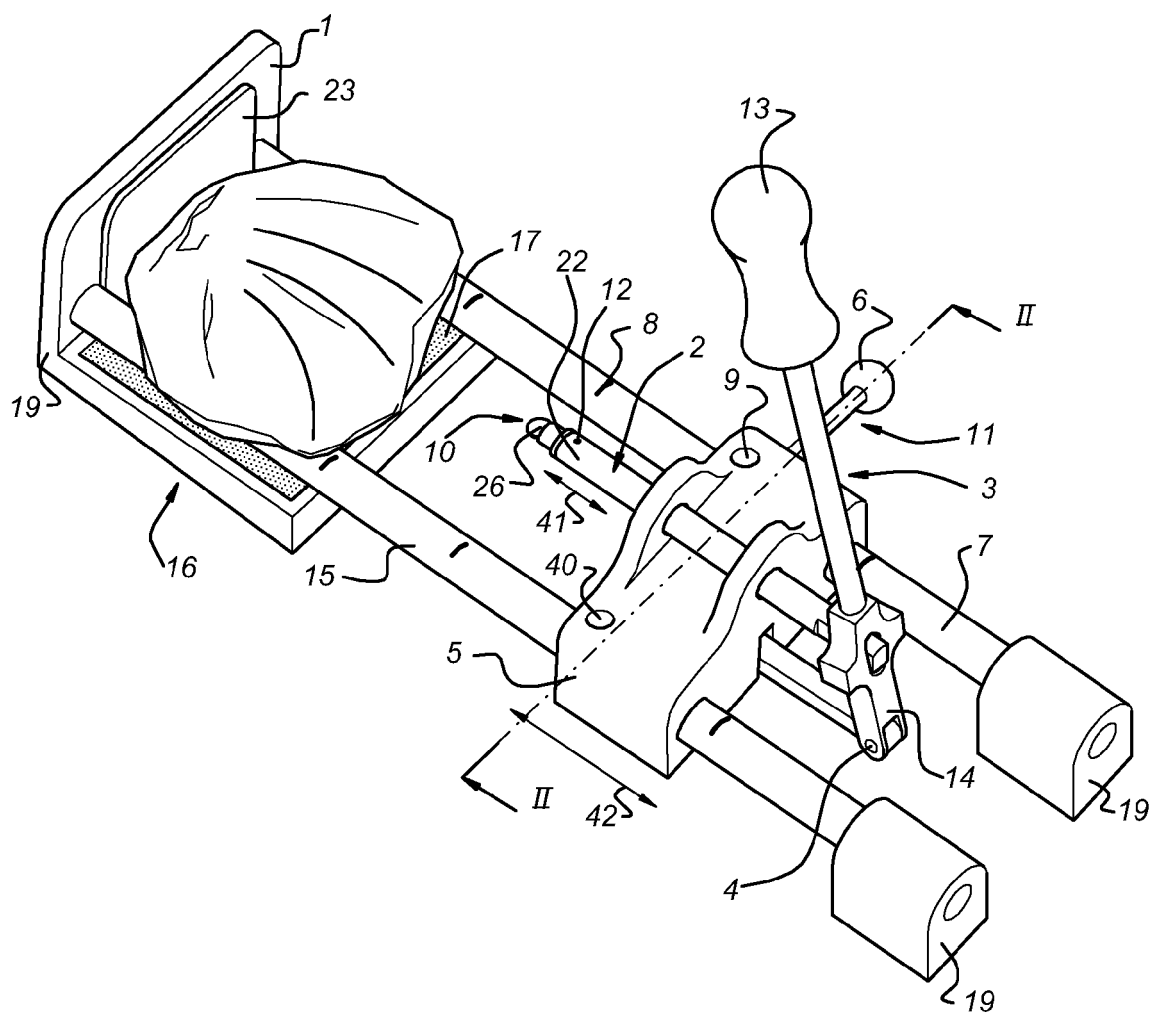


Fig 2

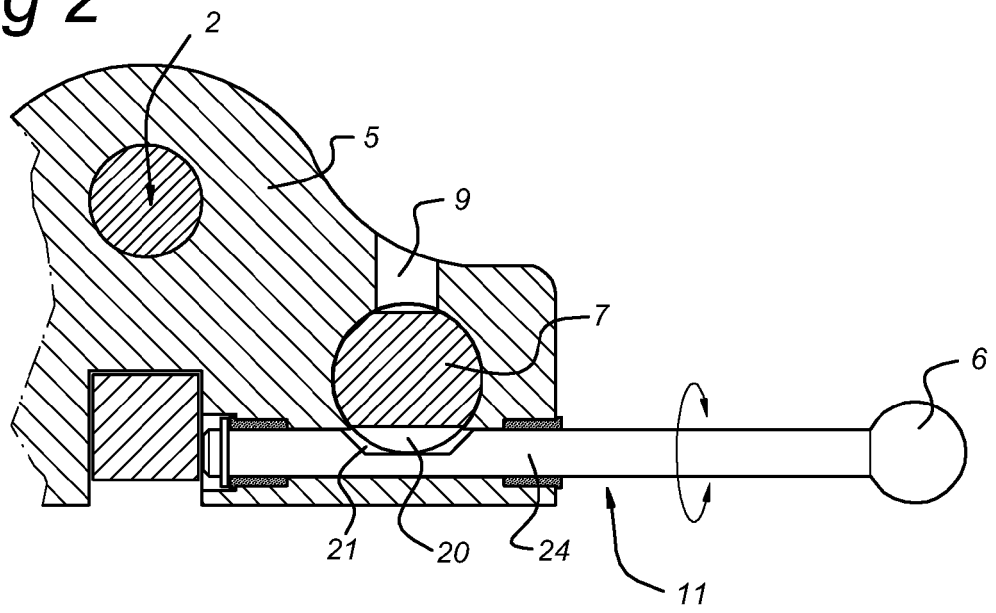


Fig 3a

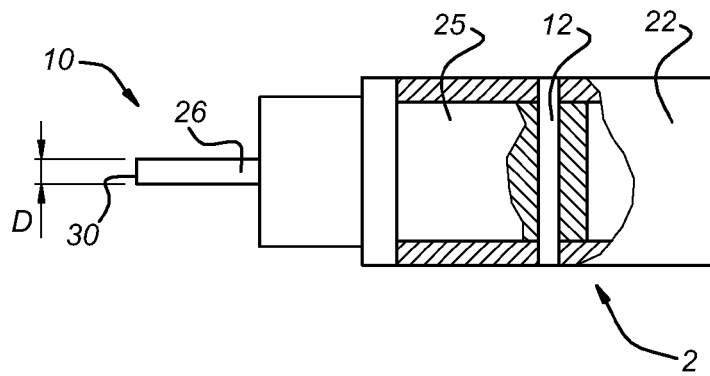
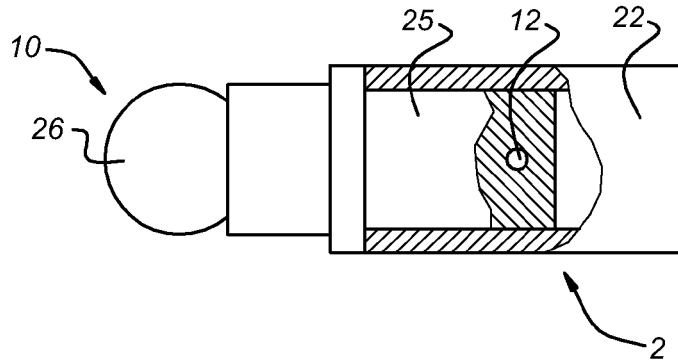


Fig 3b



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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