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(54) **PORTABLE MASSAGE AND STORAGE DEVICE**

(57) The present invention relates to a portable massage and storage device 10, which comprises a rigid outer container 12 fully enclosing a hollow interior and extends along a longitudinal axis L from a first end 14 to a second end 16. The container 12 is formed of a top shell 18 and a mating bottom shell 20, each shell comprising a concave main shell section 28/29 extending from a longitudinal front edge 22/23 to a longitudinal rear edge

24/25, respectively. The two shells 18, 20 are hingedly connected so that they can be pivoted relative to each other from a closed position, in which the front edges 22, 23 and the rear edges 24, 25 abut each other, to an open position, and the container 12 further comprises locking elements 40 that are releasably engageable with one another for securing the container 12 in the closed position.

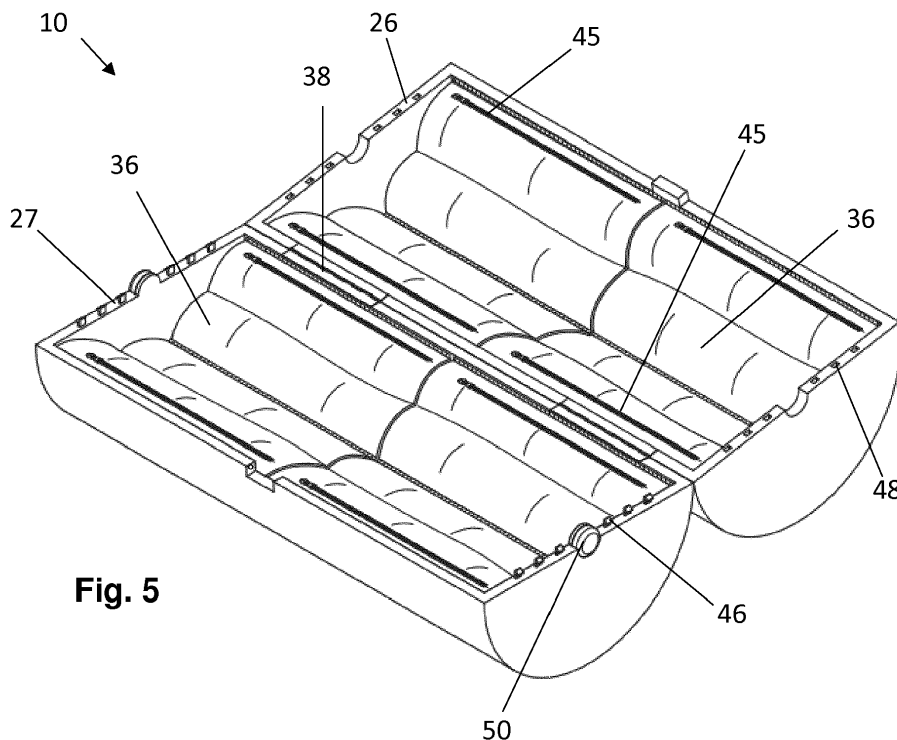


Fig. 5

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Description

[0001] The present invention relates to a portable massage and storage device that allows for therapeutic massage of a body part and for safe storage and transport of personal items.

[0002] Massage therapy and other types of physical therapy are commonly used to treat fatigued, injured, and sore portions of the body. Such therapy is commonplace for individuals who have discomfort arising from exercise or strenuous activity. This therapy is also useful to provide treatment to muscles, tendons, joints, bones and other tissues of the body that have been injured or strained.

[0003] A popular intervention used by athletes and active individuals for treating muscle fatigue, soreness or addressing muscle tightness are "self myofascial release" (SMR) or "soft tissue mobilization" (STM) techniques. Apart from manual massaging, STM often involves the use of massaging devices to enhance and assist the application of pressure to injured or sore body parts.

[0004] Studies suggest that soft tissue mobilization can provide the benefits of, inter alia, increased circulation of blood, decreased muscle of acute muscle soreness and delayed onset muscle soreness (DOMS), relief from joint stress, decreased neuromuscular hypertonicity, increased joint range motion, extensibility of musculotendinous junctions, increased neuromuscular efficiency, and maintenance of normal functional muscle length. These benefits enhance recovery of injuries and also maximize sports performance and result in improved fitness

[0005] Many of the STM devices resemble tubular rollers - known as "foam rolls" - that are used to knead the various parts of the body. By positioning a body part, e.g. an arm, the back or a leg, in various orientations with respect to roller and rolling the body part across the device provides a massaging force to the affected tissue.

[0006] For example, US 2015/0283023 A1 discloses a massage roller including a cylindrical roller core and a generally resilient roller body mounted on the roller core. The roller body includes a plurality of massage zones having various densities. It is used in relieving tender and painful conditions such as muscle or connective tissue conditions and can be used as a core workout or strengthening apparatus.

[0007] US Patent No. 9,597,254 B1 discloses a roller for manipulating soft tissue. The roller has a cylindrical core with a plurality of protrusions disposed thereon, each protrusion having a height, durometer and radius of curvature and separated axially and circumferentially from nearby protrusions. Spacing between tow protrusions may allow protrusions to contact soft tissue while nearby bony tissue, nerves or wounds are avoided. The roller includes end caps that have generally a smooth, continuous solid surface that allows the roller to roll on a floor, wall or other surface, as well as roll along a muscle such that pressure can be applied evenly along the mus-

cle.

[0008] US Patent No. 9,345,921 B2 discloses a therapeutic, fitness, and sports enhancement device which includes a cylindrically shaped body having a predetermined density and predetermined diameter, the body including a plurality of projections of a predetermined shape. One or more of the predetermined density and the predetermined diameter in combination with the predetermined shape of the projections optimize mobilization of soft tissue structures of the human body.

[0009] Aiming to enhance recovery and performance athletes and active individuals use foam rolling not only in their warm-up but also in their training before a specific exercise as well as afterwards in a cool-down routine. As such, it is desirable to have a foam rolls at hand all the time during sports. In addition, foam rolls have also become increasingly popular outside sports, e.g. in our daily life in the office to massage shortened muscles after hours of desk work or at home as part as a calm-down routine to relax before going to bed.

[0010] Smaller sized cylindrical foam rolls may be used to mobilize small soft tissue structures, such as e.g. the foot, plantar fascia, heel or Achilles tendon, these smaller sized cylindrical foam rolls are not optimal for larger muscle groups, e.g. along the spine, quads or glutes. For that reason, although not necessarily heavy in weight, a foam rolls still takes up considerable space when carried around in a sports bag or a trolley. This is a particular issue for people travelling by airplane and having to meet the weight and space limits set for (hand) luggage. Although foam rolling would be a helpful tool to provide relief to stiff joints and muscles after sitting for hours in an airplane, baggage limitations often keep people from including a foam rolls in their hand luggage. The issue of limited space is also well-known by athletes that need numerous pieces of equipment for their sport. For instance, when participating in a triathlon, CrossFit or gymnastics competition, an athlete's bag will usually contain different sets of clothing, sports equipment, protective gear, beverages, snacks, tape and band-aids as well as personal care products. There is thus a need for solutions that help reducing the space demands and facilitate transport of sports equipment and personal items.

[0011] It is therefore an object of the present invention to provide a multi-purpose device that can be used for soft tissue mobilization and at the same time allows for safe storage and transport of personal items.

[0012] The portable massage and storage device of the present invention comprises a rigid container fully enclosing a hollow interior and extending along a longitudinal axis from a first end to a second end. The term "rigid" thereby means that the container allows positioning of a body part, e.g. a leg or the back of a person, on the container without deforming or breaking. Even though the outer surface of the container may be covered with a soft, resilient material, the container will in that case also include a more rigid structure underneath to provide the necessary stability to withstand the weight of at least

a part of the human body.

[0013] The container is formed of a top shell and a mating bottom shell, whereby each shell comprises a concave main shell section extending in a peripheral direction from a respective longitudinal front edge to a respective longitudinal rear edge. The two shells thus enclose the hollow interior of the container, which is configured for storage of personal items. To allow stowing of items inside of and withdrawing them from the container, the two shells are hingedly connected so that they can be pivoted relative to each other to move from an open position to a closed position, whereby in the latter, the opposing front edges and the rear edges abut against each other. Preferably, each shell further includes lateral edges that are preferably straight and connect the respective front and rear edges of the pertaining shell, such that opposing lateral edges also abut each other when the container is in the closed position. In line with the present invention the container further comprises locking elements that are releasably engageable with one another for securing the container in the closed position.

[0014] As such, the inventive device combines personal storage as well as stretching and massage function. In addition, it allows safe transportation of the stored items and provides convenient access to the inside of the container.

[0015] To securely hold any item stored in its interior, the container is preferably closed at the first and second end by end walls attached to the main shell section of one or both of the top and bottom shell. Said end walls are preferably integrally formed with the main section of at least one, preferably both, of the top shell and bottom shell. Instead of integrally formed end walls, the container may also be closed at the first and second end by separate end caps that are removably attachable to the main sections of the top and/or bottom shell when the container is in the closed state.

[0016] If the end walls are provided as separate removable end caps, they preferably consist of only one piece. They may be pressed over the open end faces when the container is in the closed position - meaning when the two shells are positioned on top of each other. For providing a strong press-fit connection, the end caps may include flanges on the inner or outer side of the cap.

[0017] In the preferred case of the container having end walls integrally formed with the main section of one or both shells, the end walls may consist of two or more pieces (i.e. end wall sections or segments) that are joined together when the container is in the closed position. The end wall sections forming together one common end wall are preferably essentially equally sized. Alternatively, a common end wall may be formed of two or more end wall sections of different sizes. For instance, the container may include a respective end wall at the first and second end, whereby each end wall consists of a larger end wall section integrally formed with the main section of the top shell and a smaller end wall section integrally formed with the main section of the bottom shell.

[0018] The closed container is preferably symmetrical about at least one and preferably two planes of symmetry; suitably, the planes of symmetry intersect one another at right angles. One example of a container shape with two planes of symmetry that intersect one another at right angles would be a regular cylinder with a constant cross-section (which cross-section may be circular but may also be ovoid, polygonal or of any other mirror symmetrical shape)

[0019] In a preferred embodiment the closed container has a circular cross-section. This allows smooth rolling of the container over a surface. Alternatively, the closed container may also have an elliptical or oval cross-sectional shape, or a polygonal cross-sectional shape with rounded edges.

[0020] Preferably, the top shell and bottom shell are of identical shape and equally sized. As mentioned, in line with the present invention, each shell comprises a concave main shell section. To enable a smooth rolling movement of the closed container, the two shells preferably each have an arcuate-shaped cross-sectional profile, most preferably a circular-segment-shaped cross-section or a semi-circular cross-section.

[0021] In a specifically preferred embodiment the two shells are shaped as two mutually opposing half cylinders that form a circular cylindrical hollow body when positioned on top of each other. In this case, the closed container includes two circular end walls, one at the first end and one at the second end. As mentioned, each end wall may consist of only one piece or of several pieces (also referred to as segments or sections) that are joined together when the container is in the closed position. In this specific embodiment, each shell preferably comprises a respective semi-circular end wall segment connected to the pertaining main shell section at the first and second end. Said semi-circular end wall segments are preferably essentially equally sized and comprise a lateral edge that extends between and essentially perpendicular to the respective front and rear edges of the pertaining shell. In this case, each lateral edge extends preferably along a straight line and has at least approximately the same length as the diameter of the cylindrical closed container. Preferably, in the closed position of the container, the front edges, rear edges and opposing lateral edges abut each other.

[0022] In a preferred embodiment the top and bottom shells are hingedly connected along their respective rear edge via at least one hinge, such that they can be pivoted about a common axis that runs along the abutting rear edges when the two shells are positioned on top of each other. The hinge may be shaped such that it extends essentially along the full length of two opposing edges of the shells. Alternatively, the shells may also be connected by means of two or more hinges that are longitudinally spaced apart from one another.

[0023] By means of the at least one hinge, the two shells can preferably be pivoted about a common hinge axis over at least 180°. This way, the container can be

fully opened, which facilitates placement or withdrawal of an item into/from the container.

[0024] The hinge or each hinge is preferably integrated into the material of the two shells, e.g. embedded in an outer soft covering, such that it does not protrude from the outer surface of the container in the closed position. Thereby, the hinge does not impede the rolling movement of the closed container or protrude into the soft tissue of the body part being massaged with the aid of the device.

[0025] In a preferred embodiment the locking elements are provided at the front edge of the respective shell. At the front edges, both shells comprise one or more locking element(s) that can engage with each other to hold the two shells together in the closed, locked state.

[0026] In an alternative embodiment the container comprises lateral end walls that are formed in preferably equal parts of an end wall section of the top shell and an opposing end wall of the bottom shell. As described above in connection with the embodiment of a circular cylindrical container, the two opposing end wall sections preferably abut each other along their lateral edges when the container is closed. The locking elements may then also be provided along two opposing lateral edges.

[0027] In an exemplary embodiment, the locking elements include at least one a tongue and a pocket, which form a pair of catches. Alternatively or additionally, some or all locking elements may also be provided in the form of at least one rib or hook protruding from an edge of either one of the two shells (e.g. the front or a lateral edge of the upper shell) and a depression formed in an opposing edge of the other one of the two shells (e.g. the front or a lateral edge of the lower shell), whereby the rib and the depression are shaped to engage in a snap-fit manner. Instead of a snap-fit connection, the two shells may also be securely held together in the closed position of the container by opposing magnets or other types of male and female elements that can reversibly engage with each other.

[0028] In general, the locking elements can be separated by applying an opening force, preferably by actuating an opening element, such as e.g. a push button. Independent of the location of the locking elements - e.g. at the front or lateral edges - the opening element (s) is/are preferably provided at one or both of the first and second end of the container. This ensures that the opening element(s) is/are not accidentally actuated when the device is used to massage a body part - which is generally conducted by positioning a body part on the device and rolling it forth and back over a stable surface.

[0029] In one embodiment the locking elements can be opened by simultaneously actuating a respective opening element provided in the area of the end walls at the first and second end. In this embodiment, the opening elements are preferably localized in the center of the end walls, i.e. positioned on the central longitudinal axis of the container. As mentioned above, the end walls may either be (integrally) formed with the main section of only

one of the top or bottom shell or in part (preferably as equally sized parts) with the main section of both of the top and bottom shell.

[0030] It goes without saying that instead of actuating a push button, opening of the locking elements may also be actuated by pressing on a tap or moving a slider from one position to another. Further, the locking elements may also include a lock that requires entry of a code, number combination or use of mechanical/digital key to allow separation of the locking elements. The lock is preferably designed such that in a locked state it prevents actuation of the opening element(s). Unlocking the lock via a smartphone or other electronic device is also a possibility.

[0031] As regards the shape of the device it is preferred that the closed container has an essentially constant diameter. In a particularly preferred embodiment the closed container has the shape of a regular cylinder. In this embodiment the two shells are preferably shaped as half cylinders of equal size.

[0032] The closed container may be formed of any suitable material, for example, metal, synthetic material such as thermoplastic or composite material or wood. A preferred material is polystyrene. The device may be formed by any suitable technique, such as moulding. In an exemplary embodiment the closed container is made of a semi rigid polyethylene foam or other semi rigid, yet marginally compressible plastic foam material so as not to be impermissibly uncomfortable to a user lying on the device.

[0033] Since the massage and storage device of the present invention is configured to be used to massage various body parts, such as the back, legs or arms of a person, the material and wall thickness of the device should thus provide sufficient stability to sustain at least half of the bodyweight of an average adult person. Thus, the device should withstand a weight of at least 30 kg, preferably at least 40 kg, more preferably at least 50 kg. Ideally, the device is able to withstand the weight of an average male person, i.e. about 80 kg.

[0034] The size of the device is preferably such that an adult person can comfortably lie on the device, and e.g. roll the back muscles over the device. Thus, the length of the device should more or less equal the width of an adult person's back. In general, the length of the device will be at least 15 cm, more preferably at least 20 cm, and most preferably within the range of 20 to 40 cm. The diameter of the device will generally be within the range of 8 to 20 cm, preferably within the range of 10 to 15 cm.

[0035] To provide a more comfortable surface to lie on, the outer surface of the container may be formed of a soft resilient material, e.g. rubber, silicone, neoprene or foam, such as a polyethylene foam.

[0036] Independent of the hardness of the outer surface material the outer surface of the container may be textured and/or may have massaging elements protruding therefrom to improve the massaging effect on a per-

son's musculature.

[0037] The texture and/or massaging elements may cover all or just a portion of the outer surface of the container. The massaging elements may be of various shapes, steepness, angles, and sizes. For example, the outer surface may be roughened, matt, ridged, stepped or grooved to improve contact and friction and/or include massaging knobs, bumps, or protrusions distributed uniformly or non-uniformly about the circumference of the closed container. In one embodiment, the outer surface of the container comprises ribs or ridges extending parallel or perpendicular to the longitudinal axis. The outer surface of the container may also be divided multiple sections that have varying surface textures. For instance, the density and softness of the material and/or the depth of the texture (e.g. the radial height of the massaging elements) on the outer surface can be increased or decreased in a specific section to create different massaging effects.

[0038] The interior or the container is preferably lined with a soft material to protect the items stored therein from shock. For additional protection and safe holding of the stored items, the interior of the container may be cushioned and/or comprise pockets. More specifically, preferably each of the top and bottom shell forms an inner compartment, wherein the respective volume of one or both compartment(s) may be subdivided into a plurality of smaller volumes by a corresponding number of partition members.

[0039] To facilitate carrying the device it may further include a strap or belt attached thereto. Preferably, such a strap or belt is temporarily attachable to one or both end walls of the container. Alternatively, a strap or belt may also be attached to the device by clamping the two end portions of the strap/belt between the two shells when the container is in the closed position. In one embodiment, the end portions may be attached to a respective inner end wall portion, i.e. inside of the shells, and extending outwardly over a respective lateral edge, preferably through a matching depression provided in each lateral edge.

[0040] Preferred embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

- Fig. 1 shows a perspective view of an illustrative embodiment of a massaging and storage device in a closed position;
- Fig. 2 shows a perspective view of the device shown in Fig. 1 in an open state;
- Fig. 3 shows a perspective view of the device shown in Fig. 2 with locking elements;
- Fig. 4 shows a perspective view of the device shown in Fig. 3 in a half closed position;

Fig. 5 shows a perspective view of the device shown in Fig. 3 with cushioned compartments in its interior;

5 Fig. 6 shows a side end view of the device shown in Fig. 1; and

Fig. 7 shows a side end view of an embodiment of the device with an alternative locking element.

10 **[0041]** Fig. 1 shows an exemplary embodiment of the massage and storage device 10 of the present invention. To provide the effects of massage the device 10 is used in conjunction with the persons own body weight by lying on the device 10 with the affected muscles directly on top of the device 10. By slowly rolling over the target area of the affected body part, the underlying muscles are effectively massaged.

15 **[0042]** To provide a storage function, the device 10 comprises a rigid outer container 12 that fully encloses a hollow interior and extends along a longitudinal axis L from a first end 14 to a second end 16. The container 12 is formed of a top shell 18 and a mating bottom shell 20, whereby the shells 18, 20 can be positioned relative to each other to form a hollow body. Each shell having a curved cross-sectional, more specifically a semi-circular, profile and a respective longitudinally extending front and rear edge 24/25. The front and rear edges 22/23, 24/25 of each shell 18/20 are connected at the first and second end 14, 16 of the container 12 via lateral edges 26/27 that extend essentially perpendicular to the respective front and rear edge 22/23, 24/25.

20 **[0043]** In the shown embodiment, each shell 18, 20 forms essentially one half of the container 12 and comprises a half-cylindrical main section 28/29 extending in a peripheral direction between the pertaining front and rear edge 22/23, 24/25 and each shell 18, 20 further comprises a respective end wall section 30/31 at the first end 14 and the second end 16. The two end wall sections 30/31 are integrally formed with the main section 28/29 of the pertaining shell 18/20. Two opposing end wall sections 30/31 form a common circular end wall 32 when the container 12 is closed (as shown in Fig. 1).

25 **[0044]** As can be seen e.g. in Fig. 2, each shell 18, 20 encloses an inner compartment 34/35, such that the interior of the container 12 is made up by the combined space of the inner compartment 34 within the top shell 18 and the inner compartment 35 within the bottom shell 20. In Fig. 2 to 4 the two compartments 34, 35 are empty, whereas Fig. 5 shows an example of how these inner compartments 34, 35 can be cushioned and provided with padded pockets 36 to protect the items to be stored within the container 12 (no items shown).

30 **[0045]** As illustrated in Figs. 2 to 7, the two shells 18, 20 are hingedly connected so that they can be pivoted relative to each other from a closed position (shown in Fig. 1), in which the front edges 22, 23, rear edges 24, 25 and opposing lateral edges 26, 27 abut each other,

to an open position (shown e.g. in Fig. 2). More specifically, the two shells 18, 20 can be pivoted about a common pivot axis L_p that extends along the connection line of the connected rear edges 24, 25 of the two shells 18, 20. The hinge 38 may be configured as a bridge that extends between and over the full length of the connected rear edges 24, 25 of the shells 18, 20 (see Fig. 2). Alternatively, the shells 18, 20 may also be connected by means of two or more hinges 38, e.g. piano-type hinges 38, that are longitudinally spaced apart from one another and connect two opposing portions of the rear edges 24, 25 of the two shells 18, 20 (see Figs. 3 and 5).

[0046] As illustrated in Figs. 3 and 5, in a fully open position two opposing lateral edges 26/27 may enclose an opening angle of at least 180° . This allows stable positioning of the open container 12 on a surface, such that items can easily be placed into or removed from the inner compartments 34, 35 of the two shells 18, 20.

[0047] As mentioned, in the closed position of the container 12, the two shells 18, 20 are positioned on top of each other and thereby seal the interior of the container 12 from the environment. For securing the container 12 in the closed position it further comprises general locking elements 40 that are releasably engageable with one another. For instance, the locking elements 40 may include a tongue 42 protruding from a central portion of the front edge 22 of the top shell 18. The tongue 42 is configured to reversibly engage in a pocket 44 provided in a central portion of the front edge 23 of the bottom shell 20, whereby the tongue 42 and the pocket 44 form a pair of catches. Preferably, the engagement of the tongue 42 within the pocket 44 will generate an audible clicking sound when the container 12 is closed.

[0048] In Figs. 3 to 6 the locking elements 40 further include multiple hooks 46 that are distributed along the lateral edges 27 of the bottom shell 20. The top shell 18 includes mating depressions 48 along its lateral edges 26. The hooks 46 and depressions 48 are positioned such that the hooks 46 protrude into the depressions 48 when the container 12 is in the closed position and each hook 46 comprises a head portion 47 that will snap behind a shoulder provided within each depression 48 (the shoulder is not visible in the figures). Thus, in this embodiment, the hooks 46 of the bottom shell 20 will engage within the depressions 48 of the top shell 18 in a snap-fit manner upon closing the container 12. For disengaging the hooks 46 (or the rods 51 that will be described in connection with Fig. 4 below), the container 12 further comprises opening elements in the form of push buttons 50 that are positioned on both sides (i.e. at the first and second end 14, 16) of the container 12, specifically in the center of each common end wall 32. In the depicted embodiments, the push buttons 50 are fixedly embedded within the pertaining end wall sections 31 of the bottom shell 20. When simultaneously pressing the push buttons 50 inwardly, i.e. in longitudinal direction towards each other, the heads 47 of the hooks 46 retract and the snap-fit engagement of the hooks 46 and the shoulders inside the depressions

48 is released; thus allowing opening of the container 12.

[0049] As presented in Fig. 4, the tongue 42 could also be configured to include rods 51 that can be retracted, e.g. by pressing on the push buttons 50, against a spring force into a withdrawn position, in which the two rods 51 are hidden inside the tongue 42. Upon releasing the push button(s) 50, the rods 51 are also released, such that they are moved by the spring force into a locking position, in which the rods protrude in the longitudinal direction from both sides of the tongue 42 (as shown in Fig. 5). If the container 12 is in the closed position, the two rods 51 will protrude into longitudinal holes 52 provided in each side wall of the pocket 44 and therefore hold the two shells safely locked together. Even though Fig. 4 shows an embodiment having several locking elements 40 (rods 51, hooks 46 ...), basically one of the locking elements is sufficient to securely lock the container. The device may thus comprise one or several different locking elements.

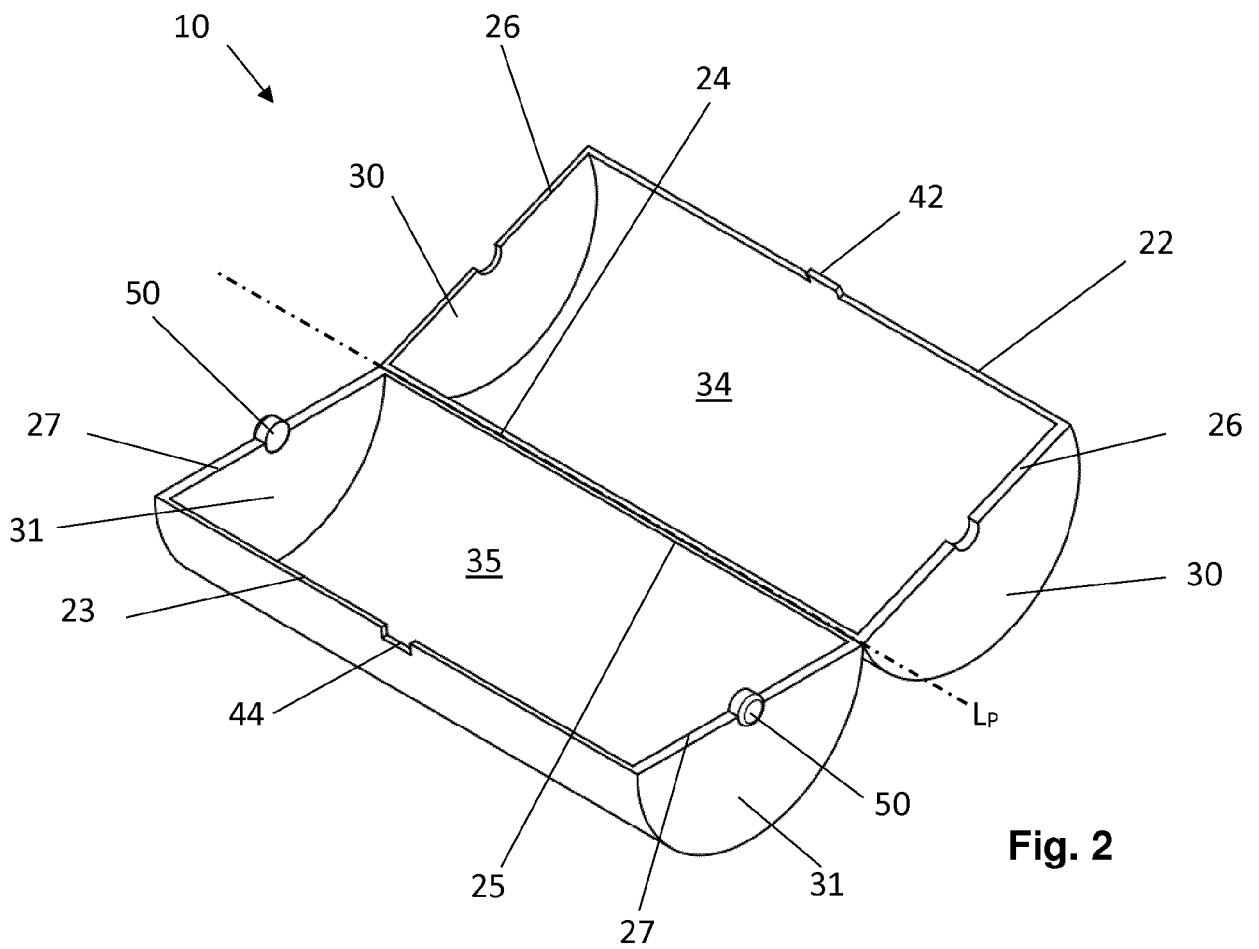
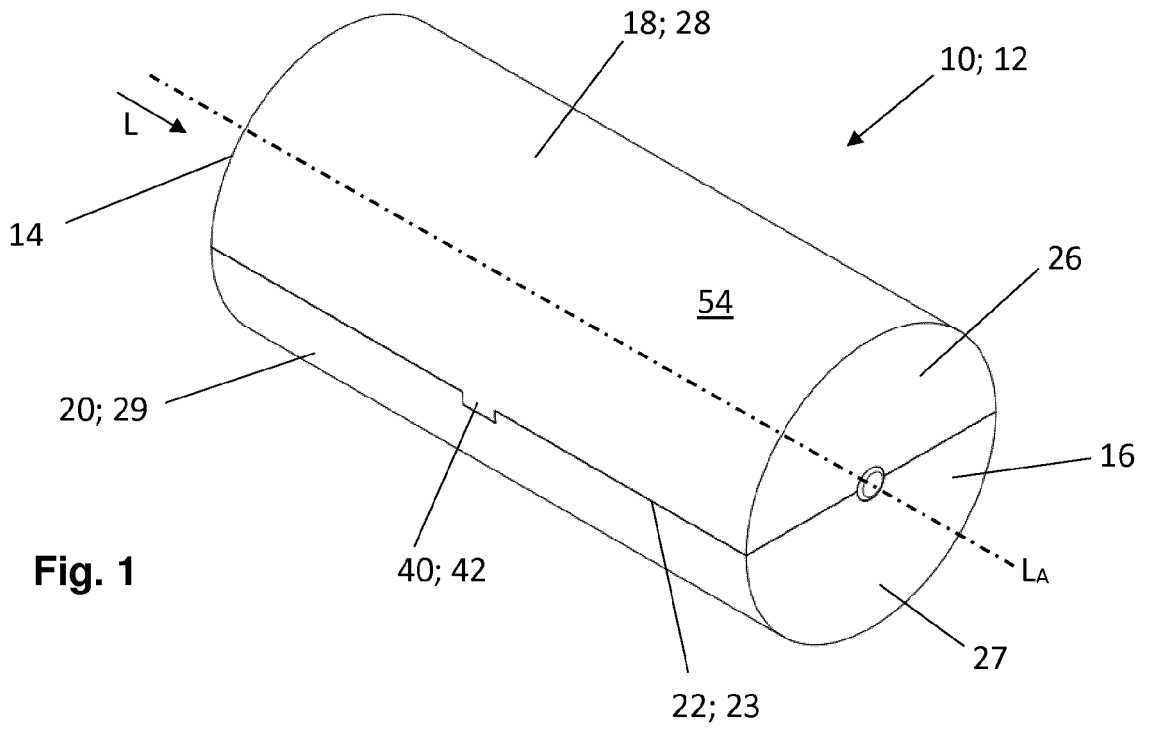
[0050] Instead of snap-fit locking elements 40, the container 12 may also include alternative locking means. For instance, as shown in the alternative embodiment of the device 10' in Fig. 7, the two shells 18, 20 may also be lockable in the closed position of the container 12 by moving a slider 53 from a first position 55, in which the slider 53 is only in contact with the pertaining end wall section 30 of the top shell 18, into a second position 56, in which the slider 53 frictionally engages with the opposing end wall section 31 of the bottom shell 20 and thereby holds the two shells 18, 20 together. As a further alternative, the locking elements 40 may also include a lock that requires entry of a code, number combination or use of mechanical key to allow actuation of the opening elements and/or separation of the locking elements 40.

[0051] The inner compartments 34, 35 of the two shells 18, 20 may further be lined with a soft material or provided with padded pockets 36, e.g. with zippers 45, as exemplified in Fig. 5. The cushioned interior will therefore protect any stored item from shock and other environmental impact. Thanks to the pockets 36 provided inside the two shells 18, 20 the device 10 may also be used as travel kit or cosmetic case. If the locking elements 40 are provided with a key or number combination lock, the device 10 is also well suited for storing valuable items inside.

[0052] Even though not shown in the figures, the outer surface 54 of the container 12 may consist of a softer material than the rigid material of the two shells 18, 20. In particular, the outer surface 54 of the main sections 28 of the two shells 18, 20 may be covered with a foam material, e.g. a chemically cross-linked polyethylene foam. The outer surface 54 of the container 12 may also include a texture or projections that provide(s) for different massaging effects when a body part is positioned on the device 10 and rolled back and forth. Such texturing and/or projections are known to the skilled person from conventional massaging rolls, often referred to as "foam rolls".

Claims

1. A portable massage and storage device (10) comprising a rigid outer container (12) fully enclosing a hollow interior and extending along a longitudinal axis L from a first end (14) to a second end, the container (12) being formed of a top shell (18) and a mating bottom shell (20), each shell comprising a concave main shell section (28/29) extending in a peripheral direction from a longitudinal front edge (22/23) to a longitudinal rear edge (24/25), wherein the two shells (18, 20) are hingedly connected so that they can be pivoted relative to each other from a closed position, in which the front edges (22, 23) and the rear edges (24, 25) abut each other, to an open position, and the container (12) further comprises locking elements (40) that are releasably engageable with one another for securing the container (12) in the closed position. 5
2. The device (10) as claimed in Claim 1, wherein the container (12) is closed at the first and second end (14, 16) by end walls (32) that are either integrally formed with the main section (28/29) of the top shell (18) and/or bottom shell (20) or are in the form of end caps that are removably attachable to one or both of the main shell sections (28/29) when the container (12) is in the closed position. 10
3. The device (10) as claimed in Claim 1 or 2, wherein the cross-section of the closed container (12) has a circular, elliptical or oval shape, or a polygonal cross-sectional shape with rounded edges. 15
4. The device (10) as claimed in any of the preceding Claims, wherein the top shell (18) and bottom shell (20) are of essentially identical shape. 20
5. The device (10) as claimed in any of the preceding Claims, wherein the two shells (18, 20) are connected at their respective rear edge (24, 25) by means of at least one hinge (38), preferably by means of two or more hinges (38) longitudinally spaced apart from one another. 25
6. The device (10) as claimed in Claim 5, wherein the at least one hinge (38) is integrated into the material of the two shells (18, 20), such that it does not protrude from the outer surface (54) of the container (12) in the closed position. 30
7. The device 10 as claimed in any of the preceding Claims, wherein the locking elements (40) are provided on the front edge (22/23) or on least one lateral edge (26/27) extending between and preferably essentially perpendicular to the front and rear edges (22/23, 24/25) of the respective shell (18/20). 35
8. The device (10) as claimed in any of the preceding Claims, wherein the locking elements (40) comprise a tongue (42) and a pocket (44), which form a pair of catches. 40
9. The device (10) as claimed in any of the preceding Claims, wherein the locking elements (40) can be separated by applying an opening force, preferably by actuating an opening element, in particular by pressing a push button (50) or moving a slider (53) from one position to another position. 45
10. The device (10) as claimed in any of the preceding Claims, wherein the locking elements (40) can be opened by simultaneously actuating opening elements provided in the area of a respective end wall (32) at the first and second end (14, 16). 50
11. The device (10) as claimed in any of the preceding Claims, wherein the locking elements (40) include a lock that requires entry of a code, number combination or use of a mechanical or digital key to allow separation of the locking elements (40). 55
12. The device (10) as claimed in Claim 11, wherein the engaged lock prevents actuation of the opening element (s) .
13. The device (10) as claimed in any of the preceding Claims, wherein the closed container (12) has an essentially constant diameter and is preferably in the shape of a regular cylinder.
14. The device (10) as claimed in any of the preceding Claims, wherein an outer surface (54) of the container (12) is formed of a soft resilient material and is preferably textured and/or has massaging elements protruding therefrom.
15. The device (10) as claimed in any of the preceding Claims, wherein the interior of the container (12) is lined, cushioned and/or comprises pockets (36) for safe storage of personal items.



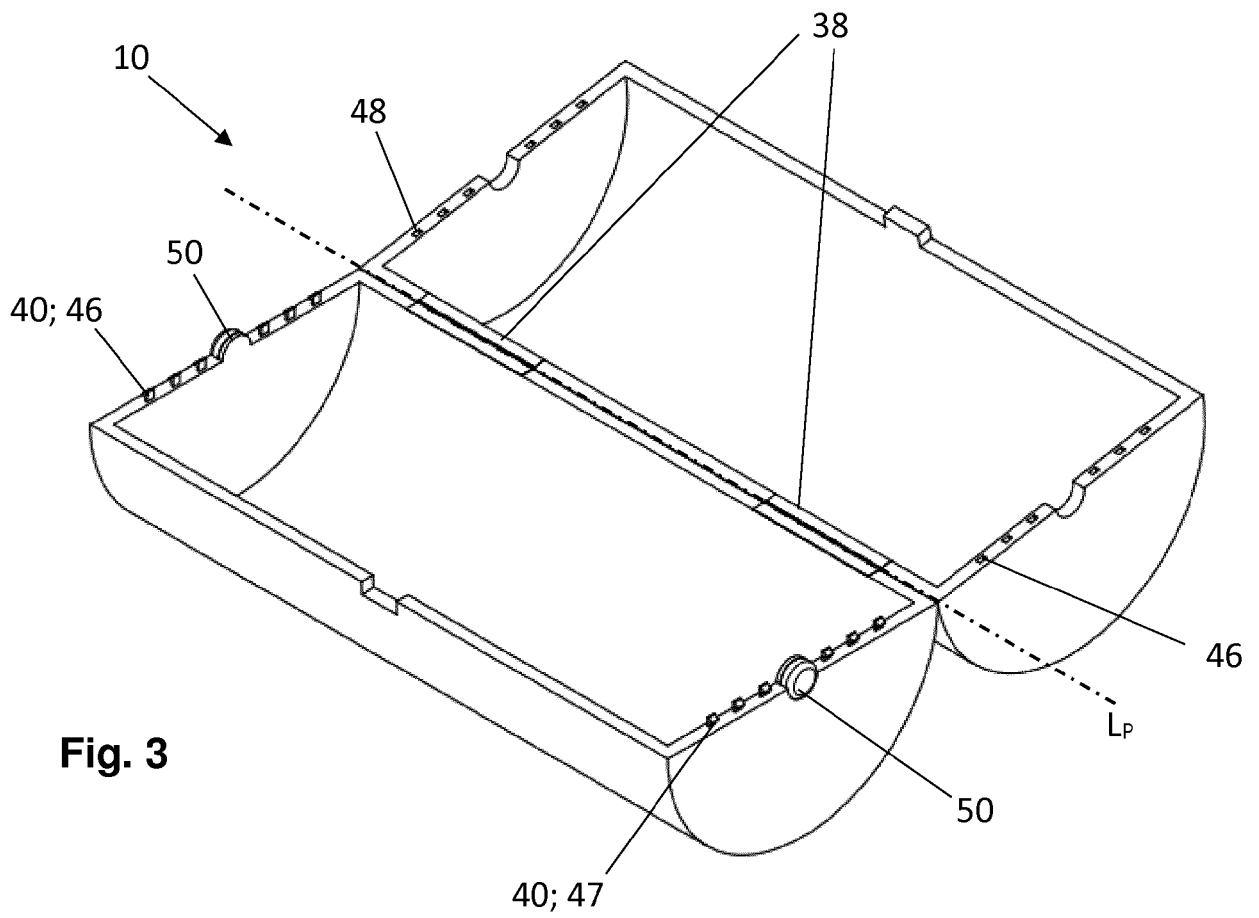


Fig. 3

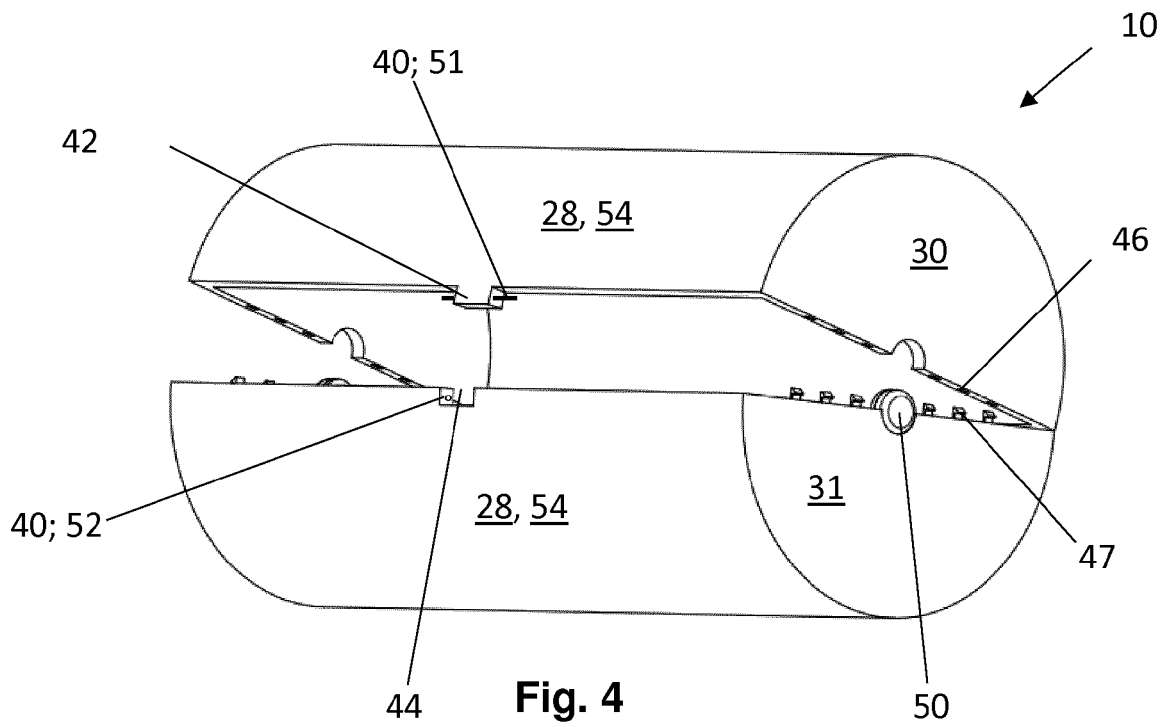
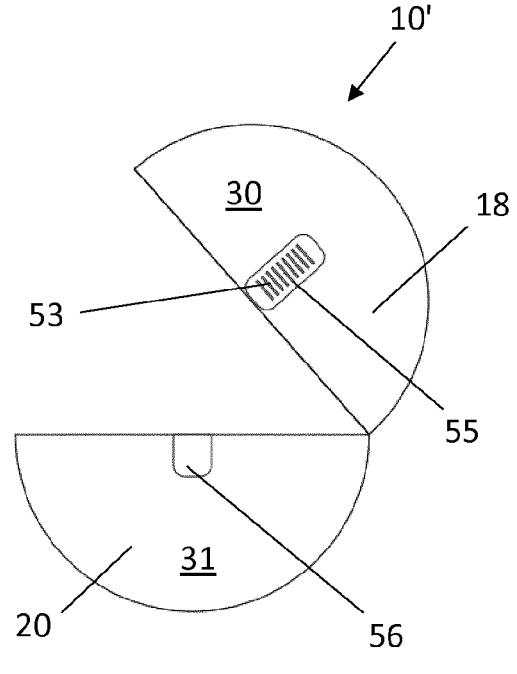
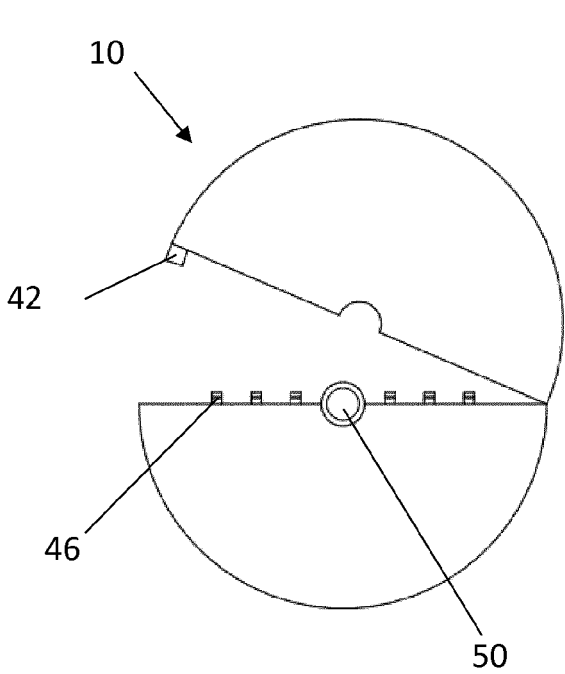
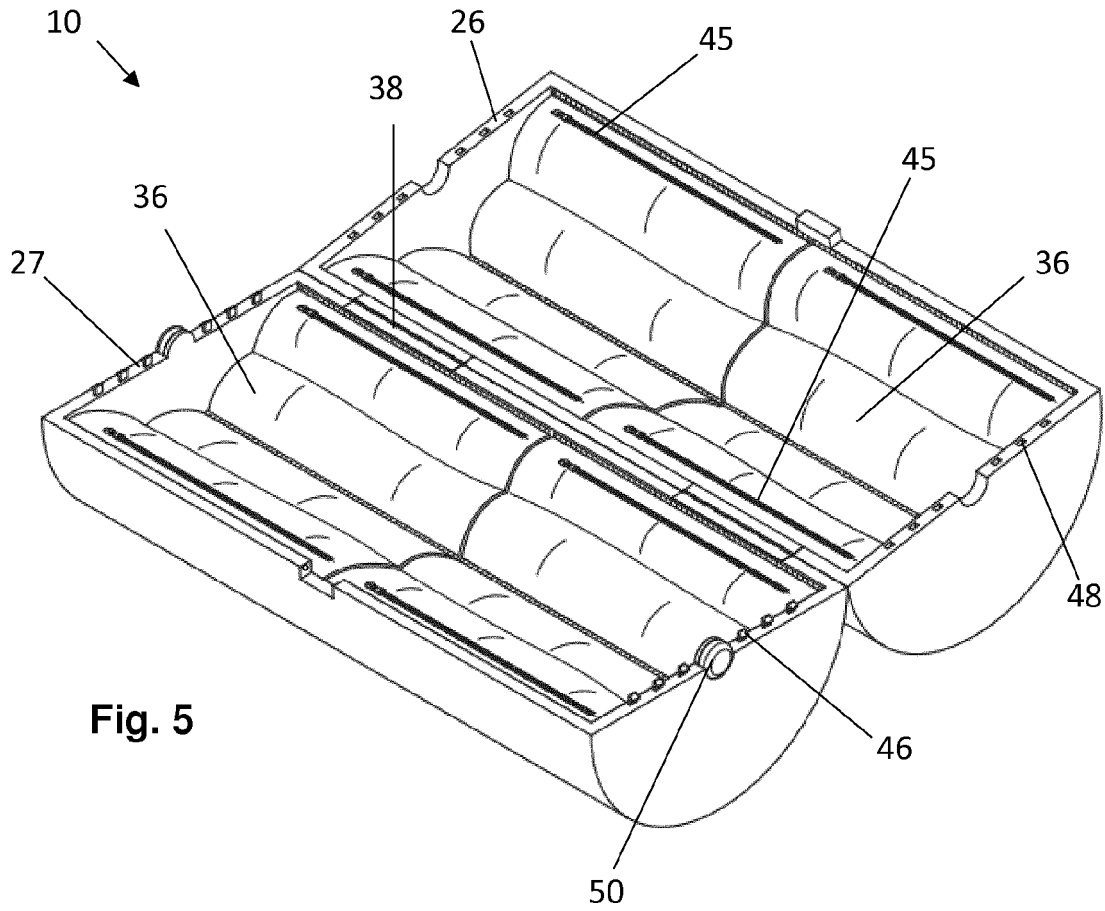


Fig. 4





EUROPEAN SEARCH REPORT

Application Number
EP 18 17 4813

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Munich		20 July 2018	Teissier, Sara
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