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(71) Applicant: Owings, Jesse
Mound, Minnesota 55364 (US)

(72) Inventor: Owings, Jesse Mound, Minnesota 55364 (US)

(74) Representative: Peel, James Peter J.P. Peel & Co Ltd 5 Kew Road Richmond, Surrey TW9 2PR (GB)

(54) SELF-INFLATING TRAVEL MEDITATION MAT AND PILLOW

(57) An inflatable meditation device (10) comprising a combination of a mat (14) or leg portion (14) and a pillow (12) or seat portion (12), wherein the mat (14) and seat (12) are individually inflatable and are removably

connectable to form a travel mediation device (10) with the seat portion (12) being raised above the mat portion (14).

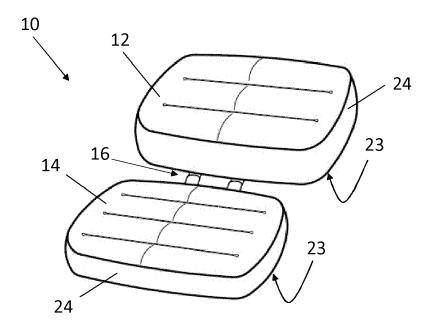


FIG. 1

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Description

CROSS-REFERENCE TO RELATED APPLICATION

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[0001] The present application is a continuation-in-part of U.S. patent application Serial No. 16/183,440, filed on November 7, 2018, which is based on and claims the benefit of U.S. provisional patent applications Serial No. 62/557,407, filed September 12, 2017, the content of which is hereby incorporated by reference in its entirety.

BACKGROUND

[0002] The present invention relates to travel mediation pillows and mats. More specifically, the present invention relates to self-inflating travel mediation pillows and mats of various sizes and configurations.

SUMMARY

[0003] An aspect of the present disclosure relates to a self-inflatable combination travel pillow and meditation device. The device includes a mat portion having a first geometry and a pillow portion having a second geometry. [0004] Another aspect of the present disclosure relates to a self-inflatable combination travel mat and meditation device having a mat portion with a mat geometry including an inflated mat height, a mat nozzle for connecting to a pump for inflating the mat portion, and a seat coupling mechanism. The device also includes a seat portion having a seat geometry including an inflated seat height, a seat nozzle for connecting to a pump for inflating the seat portion, a mat coupling mechanism configured to mate with the seat coupling mechanism to removably connect the mat portion to the seat portion. The inflated seat height is greater than the inflated mat height and wherein the difference in height of the inflated mat portion and inflated seat portion is in the range of about 2 inches to about 9 inches such that the seat portion is above the mat portion allowing a user to sit on the seat portion.

[0005] Each of the mat portion and the seat portion have a substantially similar length.

[0006] The seat coupling mechanism and the mat coupling mechanism are snaps.

[0007] The mat portion and the seat portion have different heights.

[0008] Another aspect of the present disclosure a method of inflating a travel mat for meditation comprising inflating a seat portion to an inflated seat height; inflating a mat portion to an inflated mat height wherein the inflated mat height is less than the inflated seat height; and coupling the seat portion to the mat portion along a length of each of the seat portion and the mat portion such that the seat is higher than the mat portion and a sitting surface of the seat is above an upper surface of the mat portion by at least two inches.

[0009] Yet another aspect of the present disclosure relates to a travel mediation device comprising a combina-

tion of a mat and a seat, wherein the mat and the seat are individually inflatable pieces and wherein the mat and the seat are removably connectable to one another to form the travel mediation device with the seat being adjacent to and taller than the mat portion.

[0010] Another aspect of the present disclosure relates to a kit for travel meditation. The kit includes a mat portion having an inflated mat height in the range of about 2 to about 4 inches, a coupling mechanism positioned along a length of the mat portion, and a nozzle for inflating and deflating the mat portion. The kit also includes a seat portion having an inflated seat height in the range of about 6 inches to about 10 inches, a coupling mechanism positioned along a length of the seat portion and the respective coupling mechanisms configured to secure to one another, a nozzle for inflating and deflating the seat portion. The kit further includes an air pump coupleable to the nozzle for inflating and deflating the mat portion and coupleable to the nozzle for inflating and deflating the seat portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011]

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FIG. 1 is a front perspective view of a combination seating device.

FIG. 2 is a front perspective view of a seat portion of the combination seating device.

FIG. 3 is a rear perspective view of a leg or foot portion of the combination seating device.

FIG. 4 illustrates a pump and nozzle and method for inflating or deflating the combination seating device.

DETAILED DESCRIPTION

[0012] A self-inflatable, combination, seat and mat is illustrated in the figures. The combination seat and mat may come in a variety of shapes and sizes configured to support various needs, including seating and/or meditation needs at home or "on the go" or when a user is traveling or otherwise away from home. The device can be used for meditation, meditation style yoga such as Nidra, sitting yoga, and can also be used for ergonomic or seating in various settings including but not limited to office seating.

[0013] A mat and a pillow may be provided as a single unit. The inflatable travel pillow may also be separate but removably connectable to the also inflatable travel mat. When provided as separate components, the pillow and mat are individually inflatable and may be used together in various configurations. For example, the pillow may be secured to the mat along one side with snaps, a zipper, hook and loop fastener, or other fastening means such as a unitary cover (described in further detail below) where the cover has dimensions configured to receive the mat and the pillow therein and position the mat and pillow for use such as sitting on the pillow and resting

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legs on the mat.

[0014] The combination travel pillow and meditation mat include a mat portion and a pillow portion that, in one embodiment, are integrally connected such that one self-inflation mechanism and nozzle allows for inflation and deflation of both the mat and pillow portion.

[0015] The combination travel pillow and meditation mat include a mat portion and a pillow portion that, in one embodiment, are removably connected such that one inflation mechanism and nozzle allows for inflation and deflation of each of the mat and pillow independently.

[0016] One or both of the mat portion and the pillow portion may be equipped with the self-inflation mechanism and nozzle such that the mat portion and the pillow portion may be separable or individually inflated and/or deflated.

[0017] One or both of the mat portion and the pillow portion may be formed by way of molding wherein one or both of the mat portion and the pillow portion each comprise a single chamber for inflation.

[0018] The pillow portion may be provided as a separate chamber from the mat portion wherein the chamber of the pillow portion is integral to the mat and extends at least partially thought the mat to provide the pillow portion on and above the mat when inflated. The chamber of the pillow portion has is a separate inflation mechanism and is inflatable separately from the mat chamber.

[0019] The self-inflation mechanism may comprise a nozzle for self-inflation such as a mouth nozzle or nozzle that can be used to manually inflate the mat and/or pillow using a hand pump, integrated pump, or a user's breathing into the nozzle. The nozzle may include a two-way or multi-way valve allowing for inflation and deflation of the device through the same nozzle.

[0020] The self-inflation mechanism may alternatively comprise a small motor operably connected to the nozzle such that manipulation of the nozzle (e.g., rotation, displacement, etc.) activates the motor to draw air into the mat and/pillow portion with an air pump. The self-inflation mechanism may alternatively or additionally be manually operated via a switch or button separately from the nozzle.

[0021] More specifically, the self-inflation mechanism may comprise a small air pump motor. The motor may be an electric air pump motor. The motor may battery operated and may further be compatible with a rechargeable battery. In one embodiment, the self-inflation mechanism is secured to at least one of an exterior surface of the mat portion and pillow portion and may installed in a compartment that protects the self-inflation mechanism while securing the mechanism to the unit and allowing for open access on at least one side of the air pump for drawing in air for inflating the unit. The air pump may be otherwise provided with the mat and seat device in order for quick inflation and deflation as needed.

[0022] The self-inflation mechanism may alternatively comprise a foam system wherein the mat and pillow comprise a porous foam (e.g., memory foam) that can be

rolled or compacted by removal or expelling air from the foam to provide a compact mat and/or pillow. When unrolled or unpacked, the foam takes in air and expands to provide a cushion and depth to the mat and/or pillow. In this embodiment, the mat and pillow are constructed of a memory foam material or like foam that is porous and in which the air can be easily expelled when the foam is compacted.

[0023] The combination travel pillow and meditation mat, regardless of the mechanism of inflation can also be adjustable such that for example, the pillow portion may be less inflated than the mat portion or vice versa. The pillow and mat are selectively inflatable and thus firmness is adjustable.

[0024] The combination travel pillow and meditation mat is a device that may be constructed of one or more materials. These materials may include one or more of the following: cotton, polyester, nylon, memory foam or blends thereof. The materials may also be durable and water resistant, such that the materials may easily be wiped down for cleaning. In the embodiment described herein the travel pillow and mediation mat have outer layers are constructed from a synthetic waterproof fabric permeable to air and water vapor, examples of which including Gore-tex®. Inner layers of the travel pillow and meditation mat may be comprised of polypropylene, thermoplastic polyurethane coated fabric, or like materials. This provides a durable inflatable device that can bear the weight of a user that is lightweight, and the outer layers are easily cleanable.

[0025] The mat portion is a cushion that may be construction of the same or a different material than the pillow portion.

[0026] The combination travel pillow and meditation mat may further comprise a cover portion. The cover portion may be a washable cover that is removable from covering the mat and/or pillow. The cover is configured to receive the mat and/or pillow therein and can be removably sealed around the mat and pillow via a resalable mechanism such as a zipper, button or other closure mechanism. The cover may be customizable with designs and/or labels or logos. The logos may be positioned on a top or side surface of the pillow and/or mat portion. The cover can receive the inflated and deflated combination travel pillow and meditation mat therein. Further, the cover may be a singular construction having dimensions to receive the pillow and mat portion therein, and cover the devices when inflated. That is, the cover has dimensions that substantially match the dimensions of the inflated pillow and mat so as to smoothly cover the pillow and mat when inflated.

[0027] The cover may be constructed of a brushed or quilted cotton or organic cotton or like material that is washable, reusable, durable and soft. The cover may be constructed to provide additional padding to the mat and/or pillow and may be embroidered with identifying information, such as the name and/or source of the mat and/or pillow.

[0028] The cover or the combination travel pillow and meditation mat may further comprise one or more pouches, pockets, and/or flaps for storage or accessory attachment. For example, a storage pocket or pouch may be integrated into the cover or the outer surface of the pillow and/or mat portion, where the pocket or pouch has dimensions sufficient to receive a user's keys, mobile phone or other accessories.

[0029] A timer may also be integrated or built into the cover, or alternatively integrated or built into the device, in the pillow or mat portion. The time can be used to allow the user to time sessions of mediation or relaxation or to alert the user as to the expiration of a set time for such activity. The timer may be selectively set to various time increments and have an audial, visual, and/or tactile alert to alert a user as to the passage of the selected time increment. For example, a bell, light, or a vibration may indicate the expiration of the selected time increment.

[0030] Sensors can also be attached to or provided with the cover or otherwise be integrated with the cover or the seat and/or mat of device where the sensors may comprise biometric sensors, breathing sensors, and other sensors for use by the wearer for measuring movement.

[0031] It is further contemplated that the cover or the device itself, such as the outer surface of the pillow portion or the mat portion, may be further adapted with pouches, pockets or attachment mechanisms such as D-rings, grommets, cords, or the like which allow for the receipt and carriage of accessories with the cover and/or mat and for securing the mat to a surface for use. Further examples of accessories include an incense holder with an integrated pouch in the cover or an inflatable alter with a pouch. Additional accessories could include reusable water bottles, or yoga mats or other accessories where the accessories can be attached, secured to or stored with or on the cover or the device itself. As noted above, attachment mechanisms such as D-rings may be secured in one or more positions on the cover or on the pillow and/or mat portion for connection with various accessories or to allow for storage of the device.

[0032] When inflating the self-inflating combination travel pillow and meditation mat, the pillow is positioned to "pop up" or otherwise be elevated above the mat portion. The pillow portion has a height at inflation that is greater than the height of the mat. This allows a user to comfortably sit on the pillow and rest their feet and/or legs on the mat portion for mediation in traditional seated poses. This configuration of the mat and pillow height also allows a user to comfortably kneel on the mat portion and rest an upper body on the pillow potion. The height difference between the foot mat and seat portion may range from about 1 inch to about 9 inches, or from about 2 inches to about 6 inches, or otherwise be anywhere from about 1 inch to about 9 inches or more in difference. In the embodiment illustrated, the pillow portion when inflated and connected to the mat portion and has a seating surface in the range of about 2-4 inches above a

seating surface of the mat portion when also inflated. [0033] As illustrated in FIGS. 1 and 3, a combination meditation device 10 is a combination travel seat and meditation mat 10 that includes a pillow or seat portion 12 and a mat or leg portion 14. The combination device 10 includes a seat portion 12 that is separable from the mat portion 14. The seat portion 12 and mat portion 14 are connectable along a first side length via one or more connection mechanisms 16 to enable removable but secure connection with one or both of the seat portion 12 and mat portion 14 are inflated. The one or more connection mechanisms 16 as illustrated are connectable components that frictionally engage such as "snaps". However, the connection mechanisms may additionally or alternatively include zippers, hook and loop fasteners, ties or other removable but secure coupling mechanism. In the embodiment illustrated, the each of the seat 12 and mat 14 are constructed of two outer layers 22 and 23, which are a top layer 22 and bottom layer 23 are connected by sidewalls 24. The layers 22 and the sidewalls 24 are secured to one another at seams to form the base surface and seating surface of each of the seat 12 and mat 14. Sidewalls 24 of each of the seat 12 and mat 14 provide a height to each mat where the height of each of the seat 12 and mat 14 may be the same or different. In the embodiment illustrated, the height of the seat 12 is greater than the height of the mat 14.

[0034] The seat 12 includes one inflation chamber which may provide an overall quilted quality to the seat 12. The interior chamber of the seat 12 can be formed by thermally sealing or adhering the top 22 layer to a bottom layer 23 via sidewalls 24 of the seat 12 in a manner that provides sidewalls 24 to the seat 12 for providing height upon inflation. Baffles are thermally sealed to or otherwise adhere the top 22 layer to a bottom layer 23 to hold shape upon inflation. The top layer 22 and bottom layer 23 may each have a multi-layer construction. That is, each of the top layer 22 and bottom layer 23 have an inner layer and an outer layer wherein the inner layer is positioned within the device 10 and the outer layer is an outer surface of the device 10. As described above, the inner layer may comprise polypropylene and the outer layer may comprise a water resistant, lightweight material.

[0035] The mat 14 includes one inflation chamber which may provide an overall quilted quality to the mat 14. The interior chamber of the mat 14 can be formed by thermally sealing or adhering the top 22 layer to the bottom layer 23 of the mat 14 in a manner that provides side walls 24 to the mat 14 for providing height upon inflation. The top layer 22 and bottom layer 23 may each have a multi-layer construction. That is, each of the top layer 22 and bottom layer 23 have an inner layer and an outer layer wherein the inner layer is positioned within the device 10 and the outer layer is an outer surface of the device 10. As described above, the inner layer may comprise polypropylene and the outer layer may comprise a water resistant, lightweight material.

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mate with the inflated mat portion 14 and pillow portion

[0036] As illustrated in FIG. 4, while the pillow 12 and mat 14 are independently inflatable, one or both portions 12 and 14 can be inflated for use as each portion includes its own respective inflation chamber and corresponding access nozzles 30. A pump 32 as described herein in one or more embodiments connects to the nozzles for inflation as well as deflation.

[0037] In one embodiment, the pillow or seat portion 12 may have dimensions such that when inflated, the upper surface of the pillow or seat portion 12 is raised above the upper surface of the mat 14 in the range of about 1 inches to about 9 inches, or for example, in the range of about 3 to about 6 inches. When inflated, the height of the pillow or seat portion 12 from the bottom layer 23 to the top layer 22 may be in the range of about 6 inches to about 12 inches, or for example, maybe about 9 inches. When inflated, the height of the mat portion 14 may be in the range of about 2 inches to 6 inches, for example, may be about 3 to about 4 inches. The pillow or seat portion 12 and the mat portion 14 may each have a length in the range of about 20 inches to about 40 inches, and may have an overall shape that is square or rectangular as illustrated but may also be round or oval. The length of the seat portion 12 and the mat portion 14 may be substantially the same or different. In the embodiment illustrated, the inflated seat portion 12 and mat portion 14 are substantially the same. The pillow or seat portion 12 and the mat portion 14 may each have a width (or depth) in the range of about 10 inches to about 20 inches, and may have an overall shape that is square or rectangular. The width (depth) of the seat portion 12 and the mat portion 14 may be the same or different. In the embodiment illustrated the seat portion 12 and the mat portion 14 have substantially the same width.

[0038] In the embodiment illustrated in the figures, the seat portion 12 has a length of about 30 inches and a height at inflation of about 9 inches, with a width (depth) of about 13 inches. The mat portion 14 has a length of about 30 inches and a width (depth) of about 13 inches with an inflated height of about 3.5 inches. The seat portion 12 and the mat portion 14 are connectable via connection mechanisms 16 positioned on a side wall of the length of each of the seat portion 12 and mat portion 14 to removably connect the seat portion 12 and the mat portion 14 in parallel along the lengths of each. The dimensions of the mat and seat can be scaled up or down depending on the user, such that the dimensions may be scaled down for children and scaled up for taller adults. [0039] The pillow or seat portion 12 is configured to "pop-up" above the mat portion 12 when inflated to allow for seated mediation for example. In the embodiment illustrated the top layer or surface of the seat portion 12 is approximately 5.5 inches above the top layer or surface of the mat portion 12 when each portion 12, 14 is inflated. In one or more embodiments, the inflated height of the seat portion 12 is about 2.5 times that of the mat portion

[0040] A cover 34 may be provided and configured to

12 inserted within the cover 34. The inner dimensions of the cover 34 substantially match the outer dimensions of the device 10 allowing the cover 34 receive the device 10 in either an inflated or deflated state and accommodate and fit taught over the inflated device 10 for use. [0041] The cover 34 may be adapted with a plurality of attachment mechanisms such as D-rings. The D-rings are secured to the cover near two opposing corners on a bottom or near a bottom surface of the cover. The Drings allow a user to secure the device to a surface for use, such as staking the device to the ground when using the device outside or on a soft surface. The D-rings may be positioned in one or more locations spaced apart on the cover. It is also contemplated that the D-rings may be attached directly to one or more locations on the seat portion 12 or mat portion 14, including the bottom surface of two opposing corners on the seat portion 12 or mat

[0042] The cover may also be adapted with one or more handles such as handle positioned on one or more sides of the mat portion. The cover includes a handle positioned on the rear of the mat portion. Seams of the cover are also double stitched and reinforced for durability and the cover may also incorporate an invisible zip or covered zipper on a side of the cover to removably secure the cover over the device 10.

portion 14. In such an embodiment, the cover is adapted

with apertures to allow the D-rings to fit through the cover

when the device 10 is inserted therein.

[0043] The raised pillow or seat portion 12 may take a rounded shape, a curved orthopedic shape (e.g., the shape of a somewhat flattened fortune cookie) or be square or rectangular in shape. Overall, the mat 14 may be square or rectangular and may take a rounded shape, a curved orthopedic shape in shape. The mat may also have non-straight edges allowing for additional areas of different cushioning. Additional configurations are within the scope of this disclosure as the configurations are configured to support a user when the user is in one of various poses or positions for meditation and/or relaxation. These positions include but are not limited to laying, sitting, and/or kneeling.

[0044] The self-inflating travel pillow and meditation mat combination may also include a leg area portion that is larger than the mat, providing elevation for the user's legs near a forward edge. The leg area portion may also be rounded which allows the user to not only elevate their legs, but also utilize a laying position or a cradling position.

[0045] A self-inflating nozzle 30 is positioned on an end of the mat 14 and/or additionally or alternatively may be positioned on or near the pillow or seat portion 12. The self-inflating nozzle is rotatable or displaceable to allow for and force air into the travel pillow and meditation mat to inflate the device. The nozzle also may be rotated to lock the nozzle in place thus retaining the air in the travel pillow and meditation mat and maintaining the travel pillow and meditation mat in an inflated state during use.

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The nozzle then may be counter rotated or otherwise displaced to deflate the travel pillow and meditation mat when the user has completed use of the mat.

[0046] The nozzle also allows the user to select the firmness of the mat and pillow for use.

[0047] Once the mat and pillow are deflated, the mat can then be folded or rolled up compactly for ease of transport and/or travel.

[0048] Although the present disclosure has been described with reference to preferred embodiments, workers skilled in the art will recognize that changes may be made in form and detail without departing from the spirit and scope of the disclosure.

Claims

 A self-inflatable combination travel mat and meditation device comprising:

a mat portion comprising:

a mat geometry including an inflated mat height;

a mat nozzle for connecting to a pump for inflating the mat portion; and a seat coupling mechanism;

a seat portion comprising:

a seat geometry including an inflated seat height;

a seat nozzle for connecting to a pump for inflating the seat portion; and

a mat coupling mechanism configured to mate with the seat coupling mechanism to removably connect the mat portion to the seat portion;

wherein the inflated seat height is greater than the inflated mat height and wherein the difference in height of the inflated mat portion and inflated seat portion is in the range of about 3 inches to about 9 inches such that the seat portion is about the mat portion allowing a user to sit on the seat portion.

- 2. The combination travel mat and meditation device of claim 1 wherein each of the mat portion and the seat portion have a substantially similar length.
- **3.** The combination travel mat and meditation device of claim 1 wherein the seat coupling mechanism and the mat coupling mechanism are snaps.
- **4.** The combination travel mat and meditation device of claim 1 wherein the mat portion and the seat portion have a substantially similar width.

5. The combination travel mat and meditation device of claim 1 wherein the inflated height of the seat portion is about 5.5 inches larger than the inflated height of the mat portion.

6. The combination travel mat and meditation device of claim 5 wherein the seat coupling mechanisms are provided along the length of each of the seat portion and the mat portion for coupling the seat portion to the mat portion in parallel.

7. The combination travel mat and meditation device of claim 1 comprising a combination of the mat portion and the seat portion, wherein the mat portion and the seat portion are individually inflatable pieces and wherein the mat portion and the seat portion are removably connectable to one another to form the travel mediation device with the seat being adjacent to and taller than the mat portion.

8. The combination travel mat and meditation device of claim 1 which is in the form of a kit for travel meditation, the kit comprising:

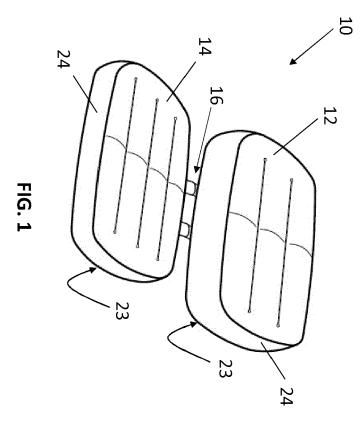
> the mat portion having an inflated mat height in the range of about 2 to about 4 inches, a coupling mechanism positioned along a length of the mat portion and a nozzle for inflating and deflating the mat portion;

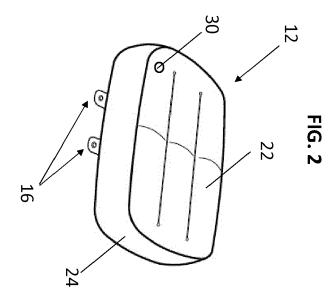
> the seat portion having an inflated seat height in the range of about 6 inches to about 10 inches, a coupling mechanism positioned along a length of the seat portion and the respective coupling mechanisms configured to secure to one another, a nozzle for inflating and deflating the seat portion; and

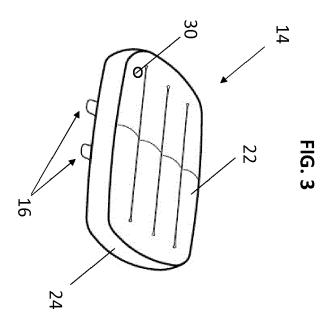
an air pump coupleable to the nozzle for inflating and deflating the mat portion and coupleable to the nozzle for inflating and deflating the seat portion.

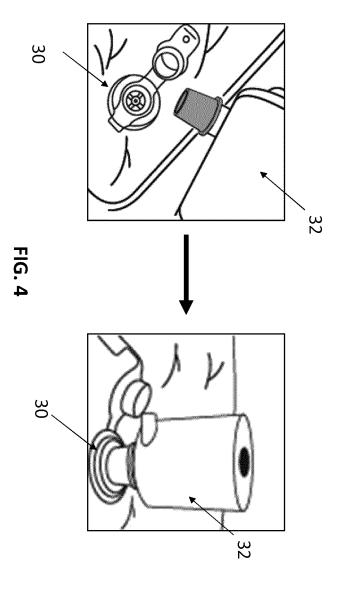
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DOCUMENTS CONSIDERED TO BE RELEVANT

Citation of document with indication, where appropriate,

"ZenGO",

11 July 2020 (2020-07-11), XP055933888,

URL:https://www.facebook.com/zengomeditati

of relevant passages

Retrieved from the Internet:

[retrieved on 2022-06-21]

Jesse Owings:



Category

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EUROPEAN SEARCH REPORT

Application Number

EP 22 15 5746

CLASSIFICATION OF THE APPLICATION (IPC)

INV. A47C27/08

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Relevant

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 22 15 5746

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

22-06-2022

10	Patent document cited in search repor	t	Publication date	Patent family member(s)	Publication date
	US 2019191899	A1	27-06-2019	NONE	
15	FR 3008291	A1	16-01-2015	NONE	
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	P0459				
55	FORM P0459				

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

• US 18344018 [0001]

US 62557407 [0001]