US 20230277893A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2023/0277893 A1**

Neisaleh (43) **Pub. Date: Sep. 7, 2023**

(54) **OPERATING DEVICE FOR AN EXERCISE PROGRAM**

(71) Applicant: **Mohammad Reza Neisaleh**, Munich (DE)

(72) Inventor: **Mohammad Reza Neisaleh**, Munich (DE)

(21) Appl. No.: **18/118,101**

(22) Filed: **Mar. 6, 2023**

(30) **Foreign Application Priority Data**

Mar. 5, 2022 (DE) 102022000782.7

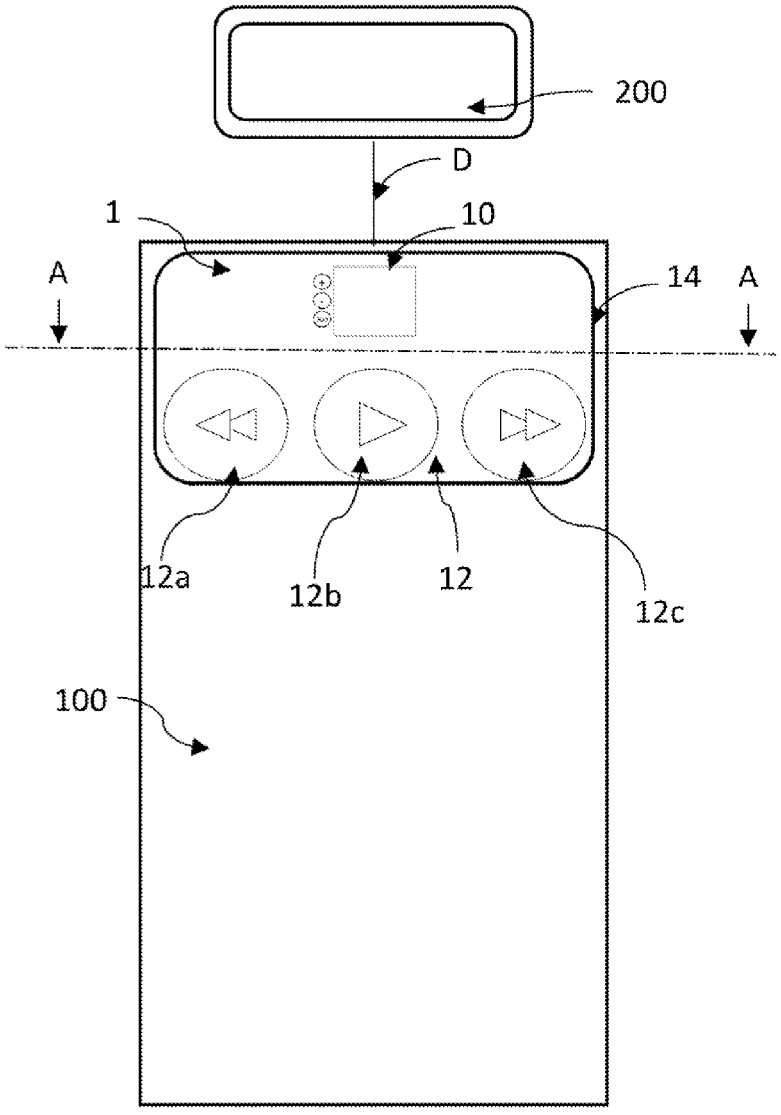
Publication Classification

(51) **Int. Cl.**
A63B 21/00 (2006.01)
A63B 71/06 (2006.01)

(52) **U.S. Cl.**
CPC ***A63B 21/4037*** (2015.10); ***A63B 71/0622*** (2013.01); *A63B 2225/50* (2013.01)

(57) **ABSTRACT**

An operating device for wirelessly controlling a program, in particular an exercise or fitness program, on an electronic output device, comprising a control device (**12**), characterized in that the control device (**12**) is configured to fast-forward or rewind or to pause or continue the exercise or fitness program, wherein the operating device (**1**) can be fastened to an exercise mat (**100**) and/or can be integrated into the exercise or fitness mat (**100**), such that a top side of the operating device (**1**) is flush with a top side of the exercise or fitness mat (**100**) in an integrated state. Furthermore, the present invention relates to an exercise mat (**100**) comprising such an operating device (**1**).



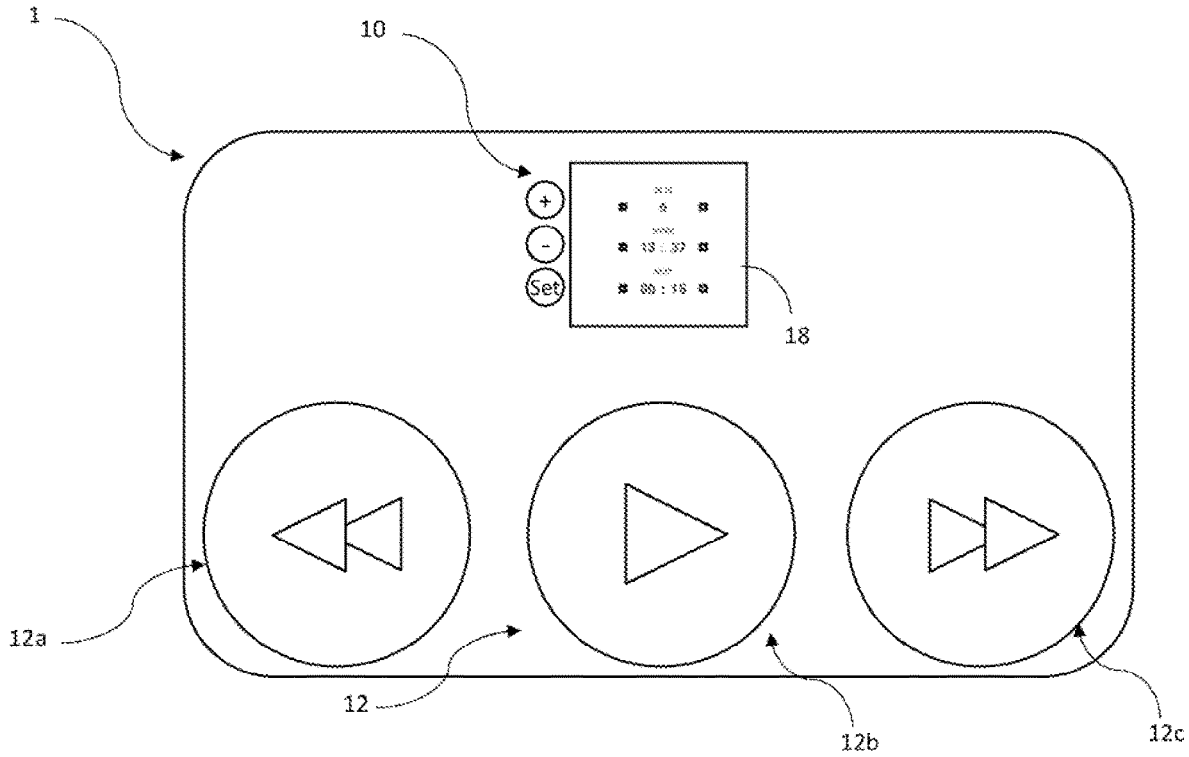


Figure 1

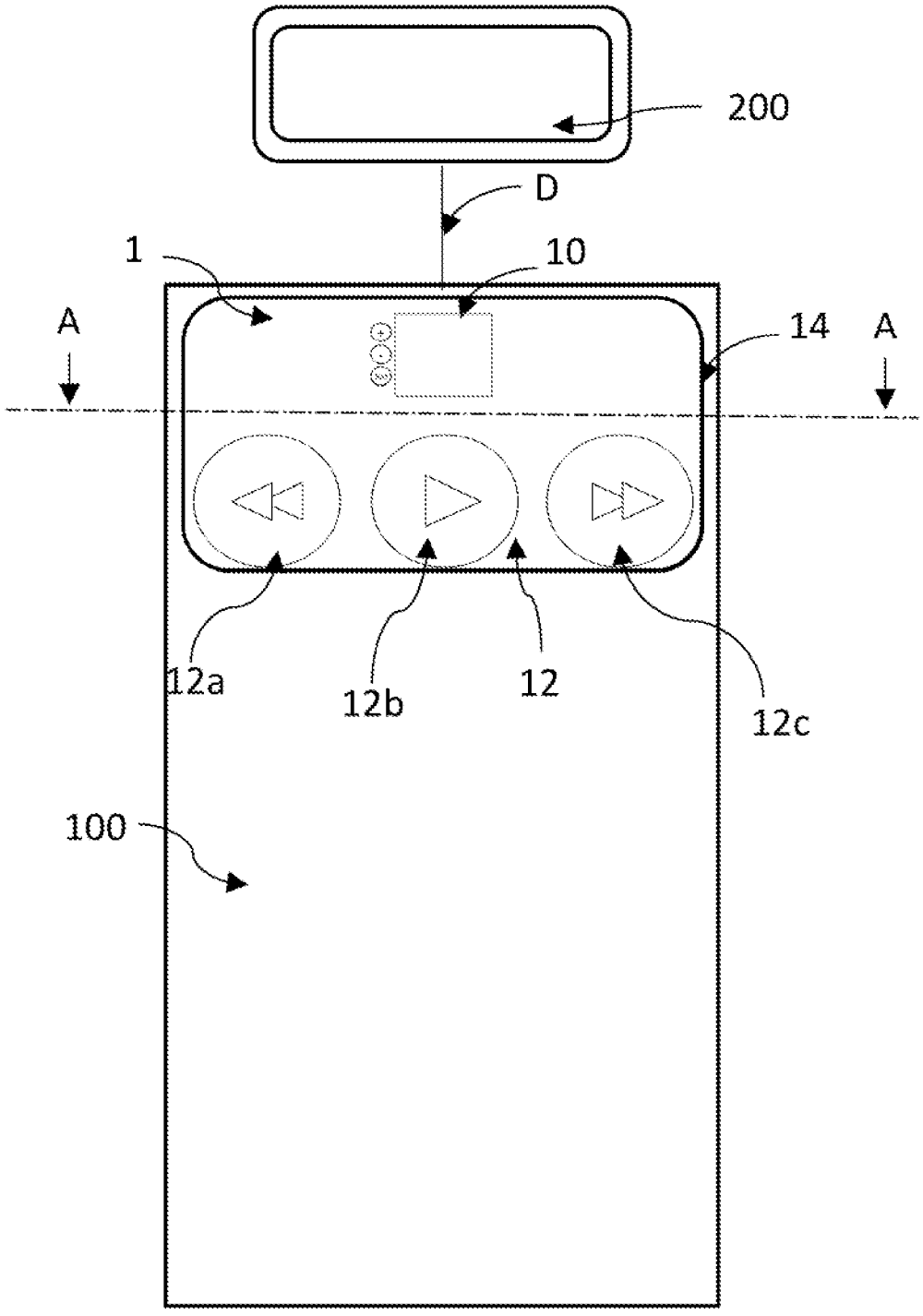


Figure 2A

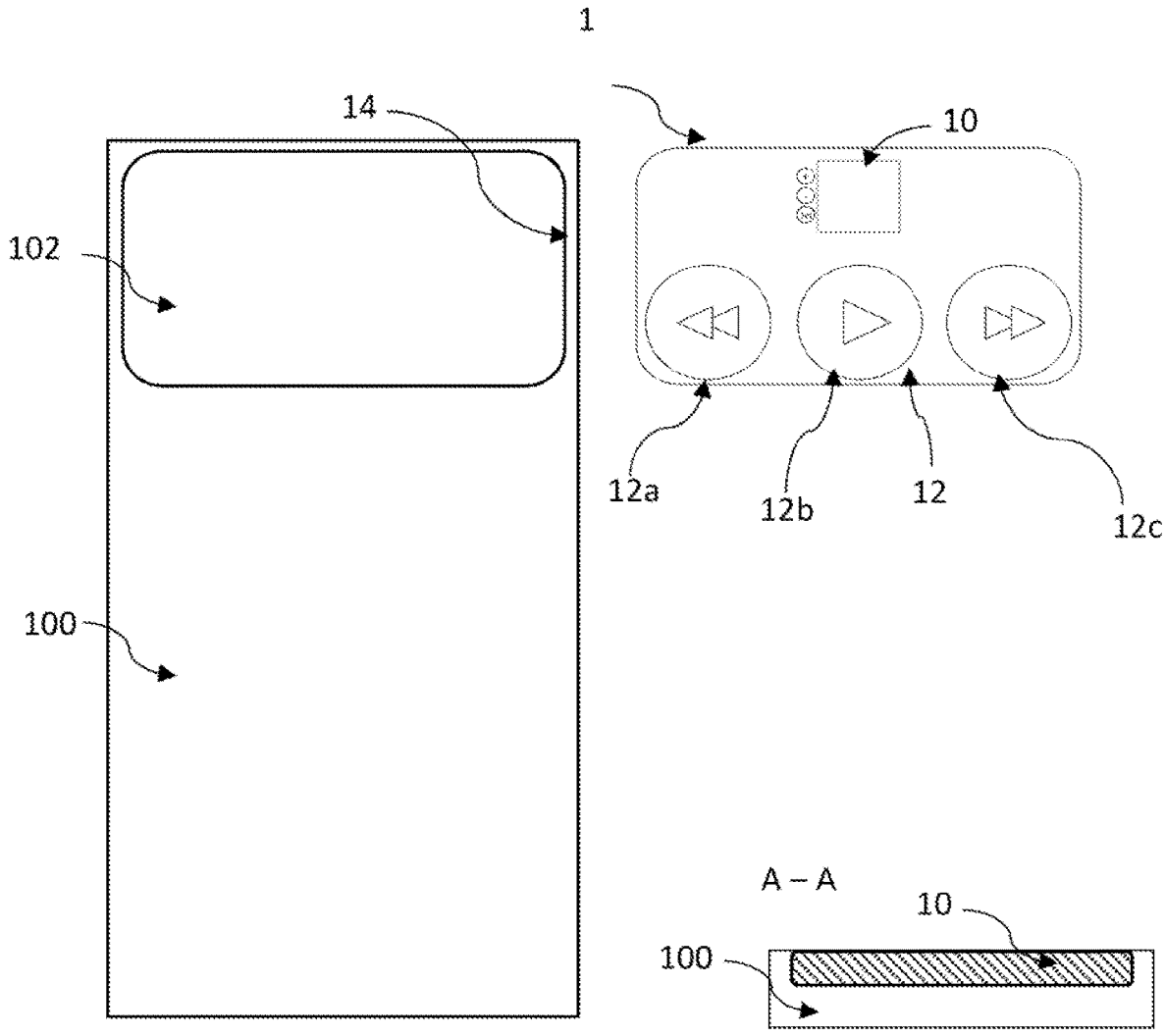


Figure 2B

Figure 2C

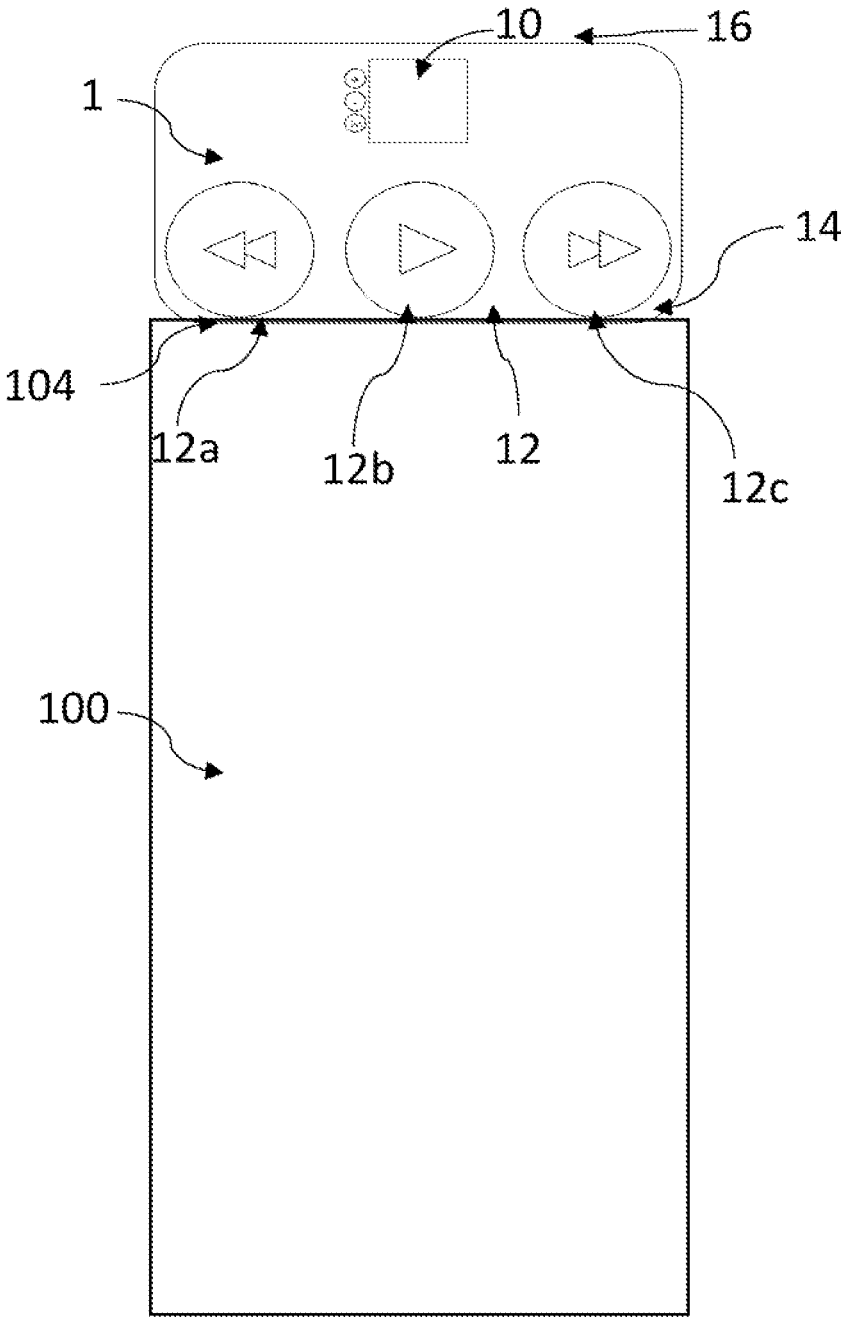


Figure 3

OPERATING DEVICE FOR AN EXERCISE PROGRAM

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims priority under the Paris Convention to German patent application number 10 2022 000 782.7 having a filing date of Mar. 5, 2022, and entitled the same.

FIELD OF THE DISCLOSURE

[0002] The present invention relates to an operating device for wirelessly controlling a program, in particular an exercise or fitness program, and to an exercise or fitness mat comprising such an operating device.

BACKGROUND OF THE DISCLOSURE

[0003] Activities such as yoga, Pilates, meditation, gymnastics, strength training, and/or other related activities are becoming increasingly popular. These activities are increasingly performed from home. In doing so, exercise or fitness programs are nowadays available on electronic media on social platforms such as YouTube or via other channels.

[0004] Training mats such as yoga mats and other exercise or fitness mats are used for this purpose. In many cases, training mats provide a soft material for the user's body parts (e.g., feet, tailbone, knees, etc.), avoiding pain that can occur when performing these activities on hard floor surfaces. In addition to comfort, exercise mats offer other benefits, such as improving balance, stability, and grip when performing activities.

[0005] Exercise programs are mostly streamed on electronic devices, such as smartphones, to be replicated on the exercise or fitness mat. In this process, the electronic output devices are placed either on or next to the exercise mat to perform the exercise or fitness program shown on the smartphone. During the digitalization of the training or fitness programs, these are not individually tailored to the user. Therefore, the problem often arises that the user cannot always follow the training or fitness program, which can lead to the user wanting to pause or fast-forward or rewind the workout.

[0006] However, for the user to be able to control the training or fitness program at any time, to view exercises more than once, if necessary, the electronic output device is mostly placed near the exercise mat to have the electronic output device at hand. However, this has the disadvantage that the electronic output device cannot be placed at an optimal distance for following the training program or fitness program in the best possible way. Furthermore, there is a risk that the electronic device may interfere during the execution of the exercises, for example, in the case that the user steps on the device comprising his feet or comes close to it with his hands.

[0007] Furthermore, the electronic output devices, such as smartphones, are difficult to control under athletic exertion because they have relatively small operating areas and are thus relatively difficult to operate under athletic exertion or possibly even the user must stop the exercise to control the device.

SUMMARY OF THE DISCLOSURE

[0008] Therefore, it is an object of the present invention to provide an operating device and an exercise or fitness mat to facilitate a user's control of a program, in particular an exercise or fitness program, during the execution of the exercise or fitness program.

[0009] This task is solved by an operating device for wireless control of a program, in particular an exercise or fitness program, comprising the features of claim **1**. Advantageous further embodiments result from the dependent claims, the present description, and the figures.

[0010] Accordingly, an operating device for wirelessly controlling a program, in particular an exercise or fitness program, on an electronic output device is proposed, wherein the operating device comprises a control device. The control device is configured to fast-forward or rewind or pause or resume the training or fitness program. The operating device is attachable to an exercise or fitness mat. Additionally, or alternatively, the operating device can be integrated into the training or fitness mat, such that a top side of the operating device is flush with a top side of the exercise or fitness mat.

[0011] The operating device allows a user to place the electronic output device outside the exercise mat at an optimal distance. The operating device is used to control the exercise or fitness program on the electronic output device in a simplified manner. The control device allows the user to repeat the set exercises in a simplified manner or to view or listen to the exercises again on the electronic output device. Furthermore, the exercise or fitness program can be paused to repeat exercises, if necessary, i.e., to set and perform intervals of training exercises, for example. The inconvenient placement of the electronic output device in the vicinity of the training or fitness mat is eliminated since the control of the output medium on the electronic output device can be performed by the operating device. This also allows the output device to be placed at an optimal distance, preferably the smartphone can be placed on a placement device, such as a pedestal, in relation to the training or fitness mat, since the training or fitness program no longer must be performed simultaneously via the electronic output device. By having the operating device attached to the exercise mat, operation during the execution of the exercise or fitness program can also be improved.

[0012] The wireless connection between the operating device and the electronic output device can preferably be established via a wireless connection technology, such as an infrared or a Bluetooth connection.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] The accompanying drawings, that are incorporated in and constitute a part of this specification, illustrate several embodiments of the disclosure and, together with the description, serve to explain the principles of the disclosure.

[0014] Preferred further embodiments of the invention are explained in more detail by the following description of the figures. Therein show:

[0015] FIG. **1** a schematic view of an operating device according to one embodiment,

[0016] FIG. **2**A-**2**C a schematic view of the operating device that can be attached to and/or integrated into an exercise mat or fitness mat,

[0017] FIG. **3** a schematic view of the operating device that can be attached to a top end of the exercise or fitness mat.

DETAILED DESCRIPTION

[0018] In the following, preferred embodiment examples are described based on the figures. In this context, identical, similar, or similarly acting elements are provided with identical reference signs in the various figures, and a repeated description of these elements is partially omitted to avoid redundancies.

[0019] The term "flush" as referred to in the patent should be understood to mean that a top surface of the operating device comprising a top surface of the exercise or fitness mat are on the same plane. In other words, the operating device is integrated into the exercise mat in such a way that the top side of the operating device and the top side of the exercise mat or fitness mat are at the same level as seen in the direction of gravity.

[0020] According to a preferred embodiment, the operating device comprises a releasable fastening device for fastening the operating device to the exercise mat in a substantially non-slip manner. This allows the attachment device to be detached from the exercise mat after exercise. Thus, a user can independently store and transport the operating device and the exercise or fitness mat.

[0021] According to a preferred embodiment, the detachable fastening device comprises a Velcro fastener and/or a clamping device and/or an adhesive connection and/or a magnetic and/or Snap & Click connection.

[0022] Particularly preferably, the operating device is designed in such a way that a side length essentially corresponds to the shorter side length of an exercise mat and preferably has a rectangular or square shape. This allows the operating device to be placed, for example, at the head of the exercise or fitness mat and to be used as an extension of the exercise or fitness mat. Further preferably, the operating device has the same thickness or height in the direction of gravity as the exercise mat in the case where the exercise mat is placed flat on the floor.

[0023] According to a preferred embodiment, the operating device has protection against ingress of water according to IPX protection classes IPX1-IPX8, preferably IPX6, and/or is protected against external forces up to a force of at least 800 N, preferably 1000 N, particularly preferably 2000 N. As a result, an operating device placed at the head of the exercise or fitness mat can also be used for training or exercising at least for a short time, i.e., a user can also use the operating device as a training surface next to the training or fitness mat without hesitation. In other words, a user of the exercise or fitness mat can use the operating device as if it were an extension of the mat and, at least briefly, step on it and perform exercises thereon without discomfort to the user or damage to the operating device.

[0024] According to a preferred embodiment, the control device has a first and a second button to fast-forward or rewind the exercise or fitness program and/or a third button to pause or resume the exercise program. Preferably, the buttons can be designed as capacitive buttons or mechanical buttons. Particularly preferably, the buttons of the control device can be designed as mechanical buttons, as this provides the user with direct feedback on their actuation, which is advantageous under athletic exertion.

[0025] According to one embodiment, the operating device is made of a non-slip material, preferably PVC and/or polyurethane and/or natural rubber, and/or leather and/or suede and/or cork. These have proven to be advantageous in the sports field.

[0026] According to a preferred embodiment, the operating device has a setting device for setting exercise intervals for a particular exercise from the training or fitness program, the setting device preferably having a digital display unit. This allows the user to repeat an exercise from the training or fitness program. In one example, the exercise or fitness program could specify that a training exercise shown on the electronic output device is to be repeated several times, i.e., intervals or repetitions of a particular training exercise are to be performed. These repetitions can be set via the setting device. Preferably, the user can set the number of intervals and their duration, as well as the pause length between training sessions.

[0027] In one example, the user can pause the training or fitness program via the control device in the case where, for example, an exercise is to be performed several times in the exercise or fitness program but is not being played back via the medium, e.g., a video on the smartphone. After pausing, the user can set the desired interval sets using the setting device. Preferably, the number of intervals, the duration and the pause lengths are displayed via the display unit. The user can also track progress in the process. The setting device can also be referred to as an interval clock. After the intervals or repetitions have been performed, a user can continue the exercise or fitness program via the control device. This can be done for several exercises per type of training or fitness program during the training or fitness program via the control device and setting device.

[0028] According to a preferred embodiment, the buttons of the control device have an area between 10-70 cm2, preferably between 20-60 cm2, particularly preferably 50 cm2. This has the advantage that the program can be controlled in a simplified manner, even under movement, to control the program as desired. It has been found that such a size of the buttons is directly operable even under high athletic exertion, for example at a heart rate of 180 beats per minute, i.e., a user does not need multiple attempts to operate the buttons as is very often the case on electronic output devices comprising smaller buttons.

[0029] According to a further aspect, an exercise mat comprising an operating device is proposed, wherein the one operating device comprises a control device for wirelessly controlling a program, in particular an exercise or fitness program, on an electronic output device. The control device is configured to fast-forward or rewind or pause or continue the exercise or fitness program. The operating device is attachable to an exercise mat. Additionally, or alternatively, the operating device can be integrated into an exercise mat so that a top side of the operating device is flush with a top side of the exercise mat.

[0030] According to one embodiment, the exercise mat has a bulge or recess to integrate the operating device into the exercise mat.

DETAILED DESCRIPTIONS OF THE DRAWINGS

[0031] In FIG. **1**, an operating device **1** for wireless control of a program, in particular an exercise or fitness program, on an electronic output device **200** (see FIG. **2**A)

is schematically proposed, comprising a control device **12**. The control device **12** is configured to fast-forward or rewind or pause or continue the exercise or fitness program.

[0032] Preferably, the operating device can have a setting device **10** for performing individual exercises from the training or fitness program in intervals, i.e., for setting the number and duration of the repetitions and the pause lengths between the repetitions.

[0033] Preferably, the setting device **10** is used to set the duration and intensity for a respective exercise from the exercise or fitness program. For example, the exercise or fitness program can be paused on the electronic output device and a particular exercise can be set for a particular number of repetitions or intervals. In one example, a user can set the number of repetitions to be performed, the duration of the repetitions, and the pause length between repetitions using the "set" button and using the + and − buttons shown schematically. The control device **12** allows the user to repeat the set exercises in a simplified manner, or to view or listen to the exercises again on the electronic output device **200**, or to pause them to perform individual exercises in interval units or repetitions as described above. The inconvenience of placing the electronic output device in the vicinity of the exercise or fitness mat **100** is eliminated, since the control of the output medium on the electronic output device can be performed by the operating device **1**. As a result, the output device can also be placed at an optimal distance in relation to the training or fitness mat **100** since the exercise or fitness program no longer must be performed simultaneously via the electronic output device. By having the operating device **1** attached to the exercise mat **100**, operation during execution of the exercise or fitness program can also be improved.

[0034] Preferably, the control device **12** has a first button **12***a* and a second button **12***c* to fast-forward or rewind the exercise program and/or a third button **12***b* to pause or resume the exercise program. Preferably, the buttons **12***a*-**12***c* can be designed as capacitive buttons or mechanical buttons. Particularly preferably, the buttons **12***a*-**12***c* of the control device **12** can be configured as mechanical buttons, as this provides the user with direct feedback on their actuation, which is advantageous under athletic exertion.

[0035] The user can pause the exercise or fitness program via the control device **12**, in the case where, for example, an exercise is to be performed several times in the exercise or fitness program, but is not being played back via the medium, e.g., a video on the smartphone **200**. After pausing, the user can set the desired interval sets using the setting device (see FIG. **1**).

[0036] Preferably, the setting device **10** serves a user to set the number ("sets"), duration ("work"), and pause length ("rest") of repetitions to be performed. Preferably, the number, duration and pause length of the intervals are displayed via the display unit **18**. The user can thereby also track progress by counting down the number, duration and pause length of the intervals. As exemplified in FIG. **1**, a particular exercise is performed comprising six repetitions. The duration of each repetition is set comprising 15 min. As further shown in FIG. **1**, the repetition still lasts thirteen minutes and thirty-seven seconds. A pause of fifteen seconds was set between the repetitions.

[0037] Further exemplarily shown, the buttons **12***a*-**12***c* of the control device **12** have an area between 10-70 cm2, preferably between 20-60 cm2, particularly preferably 50 cm2. This has the advantage that the program can be controlled in a simplified manner even under movement, i.e., the user does not need several attempts to control the program as desired. Furthermore, the operating device allows an improved possibility to pause the program during execution.

[0038] As shown in FIG. **2**A, the operating device **1** is attachable and/or integrable to an exercise mat **100**. The wireless connection between the operating device and the electronic output device can preferably be established via a wireless connection technology such as an infrared or a Bluetooth connection (schematically shown by the dashed line D).

[0039] FIG. **2**B shows an example of the operating device **1** in a state not attached to the exercise or fitness mat. Furthermore, FIG. **2**B exemplarily shows a bulge **102** in the exercise mat **100**. Preferably, the operating device **1** can be integrated into an exercise mat **100**, as shown in FIG. **2**C, such that the top of the operating device is flush with the top of the exercise mat.

[0040] In the example shown in FIG. **2**A and FIG. **3**, the operating device **1** includes a releasable fastening device **14** for fastening the operating device **1** to the exercise mat **100** in a substantially non-slip manner. In other words, the operating device **1** can be releasably connected to the exercise or fitness mat without the operating device **1** slipping during execution of the exercise or fitness program.

[0041] As shown in FIG. **3**, the operating device **1** may preferably be configured such that a top or bottom surface **16** of the operating device substantially corresponds to a top or bottom surface **104** of an exercise mat **100** and preferably has a rectangular or square shape. In this case, the top or bottom side of the exercise mat **104** is shorter than the longitudinal sides of the exercise or fitness mat. This allows the operating device to be placed, for example, at the top **104** or head of the exercise or fitness mat **100** and to be used as an extension of the exercise or fitness mat. The training or fitness mat **100** can thereby be connected to the operating device **1** via the fastening device **14**, for example Velcro.

[0042] As far as applicable, all individual features illustrated in the embodiment examples may be combined and/or interchanged without leaving the scope of the invention.

CONCLUSION

[0043] A number of embodiments of the present disclosure have been described. While this specification contains many specific implementation details, there should not be construed as limitations on the scope of any disclosures or of what may be claimed, but rather as descriptions of features specific to particular embodiments of the present disclosure.

[0044] Certain features that are described in this specification in the context of separate embodiments can also be implemented in combination in a single embodiment. Conversely, various features that are described in the context of a single embodiment can also be implemented in combination in multiple embodiments separately or in any suitable sub-combination. Moreover, although features may be described above as acting in certain combinations and even initially claimed as such, one or more features from a claimed combination can in some cases be excised from the combination, and the claimed combination may be directed to a sub-combination or variation of a sub-combination.

Nevertheless, it will be understood that various modifications may be made without departing from the spirit and scope of the disclosure.

What is claimed is:

1. An operating device (**1**) for wireless control of a program in particular an exercise or fitness program, on an electronic output device, comprising a control device (**12**), characterized in that the control device (**12**) is configured to fast-forward or rewind or pause or continue the training or fitness program, wherein the operating device (**1**) can be fastened to an exercise or fitness mat (**100**) and/or can be integrated into the exercise or fitness mat (**100**), such that a top side of the operating device (**1**) is flush with a top side of the exercise or fitness mat (**100**) in an integrated state.

2. The operating device (**1**) according to claim **1**, characterized in that the operating device comprises a releasable fastening device (**14**) for fastening the operating device to the exercise mat in a substantially non-slip manner.

3. The operating device (**1**) according to claim **2**, characterized in that the detachable fastening device (**14**) comprises a Velcro fastener and/or a clamping device and/or an adhesive connection and/or a magnetic and/or a Snap & Click connection.

4. The operating device (**1**) according to claim **1**, characterized in that the control device (**12**) has a first and a second button (**12***a*, **12***c*) to fast-forward or rewind the training or fitness program and/or a third button (**12***b*) to pause or continue the training or fitness program.

5. The operating device (**1**) according to claim **1**, characterized in that the operating device has protection against ingress water according to the IPX protection classes IPX1-IPX8, preferably IPX6, and/or is protected against external forces up to a force of at least 800 N, preferably 1000 N, particularly preferably 2000 N.

6. The operating device (**1**) according to claim **1**, characterized in that the operating device has a setting device (**10**) for setting training intervals for a specific exercise from the exercise or fitness program, the setting device preferably (**10**) having a digital display unit.

7. The operating device (**1**) according to claim **1**, characterized in that the buttons (**12***a*-**12***c*) of the control area have an area between 10-70 cm2, preferably between 20-60 cm2, particularly preferably 50 cm2.

8. The operating device (**1**) according to claim **1**, characterized in that the operating device is made of a non-slip material, preferably PVC and/or polyurethanes and/or natural rubber, and/or leather and/or suede and/or velour leather and/or cork.

9. An exercise mat (**100**) comprising an operating device according to claim **1**, wherein the exercise mat (**100**) comprises a fastening device matching the operating device (**1**) for fastening the operating device (**1**) to the exercise mat (**100**).

10. An exercise mat (**100**) comprising an operating device (**1**) according to claim **1**, characterized in that the exercise mat (**100**) comprises a bulge for integrating the operating device (**1**) with the exercise mat, wherein a top surface of the operating device (**1**) is flush with the top surface of the exercise mat (**100**) in an integrated state.

* * * * *