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(54) **CASUAL EXERCISE DEVICE**

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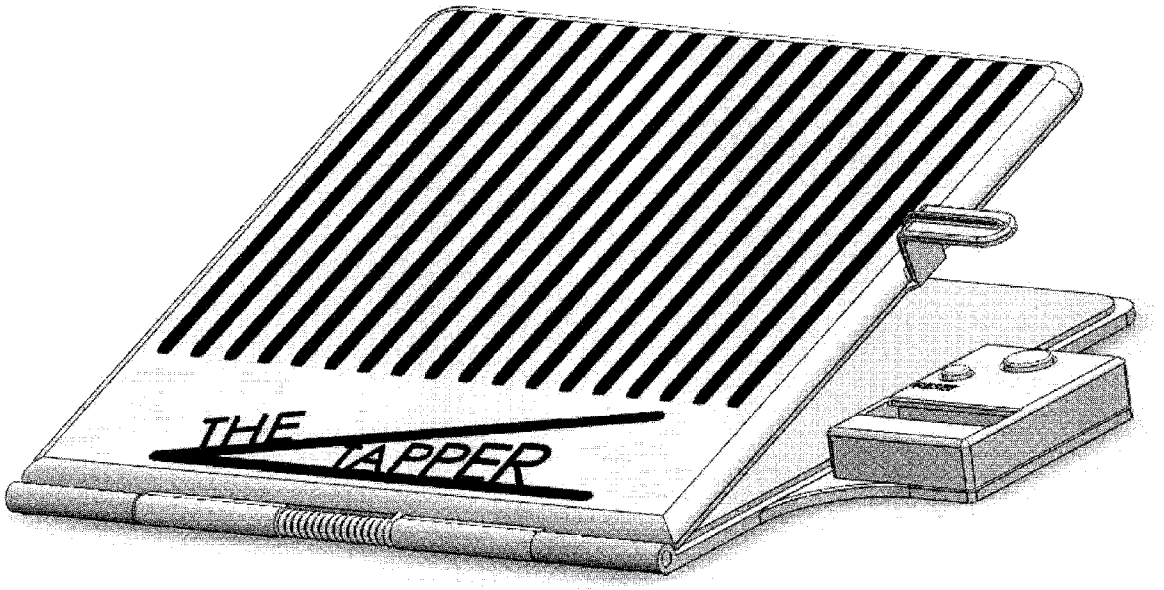
(57) **ABSTRACT**

According to an embodiment of the invention, a casual exercise device includes a pedal movably attached to a base by a hinge at the base of the pedal. The base may be configured to lie flat on a floor or the ground, and force may be exerted to elevate the edge of the pedal distal from the hinge, such as by a spring incorporated into the hinge. This force may also resist a user's pushing down on the pedal. A counter may count the number of times the user taps the pedal, where a tap includes the user's pressing the pedal to the base, or within a specified angle or distance of the base, and then allows the pedal to rise again past a predetermined point.



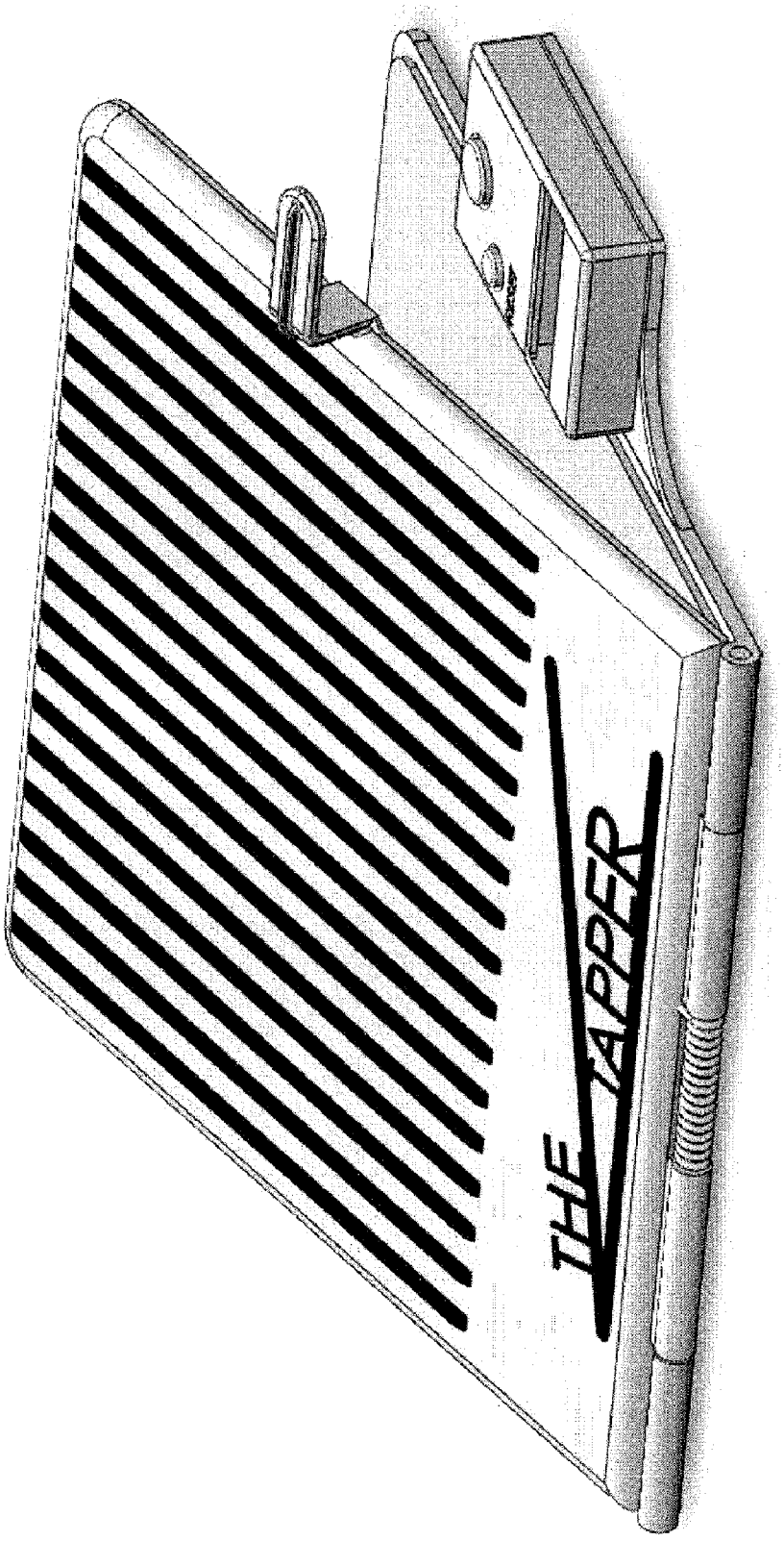


FIG. 1

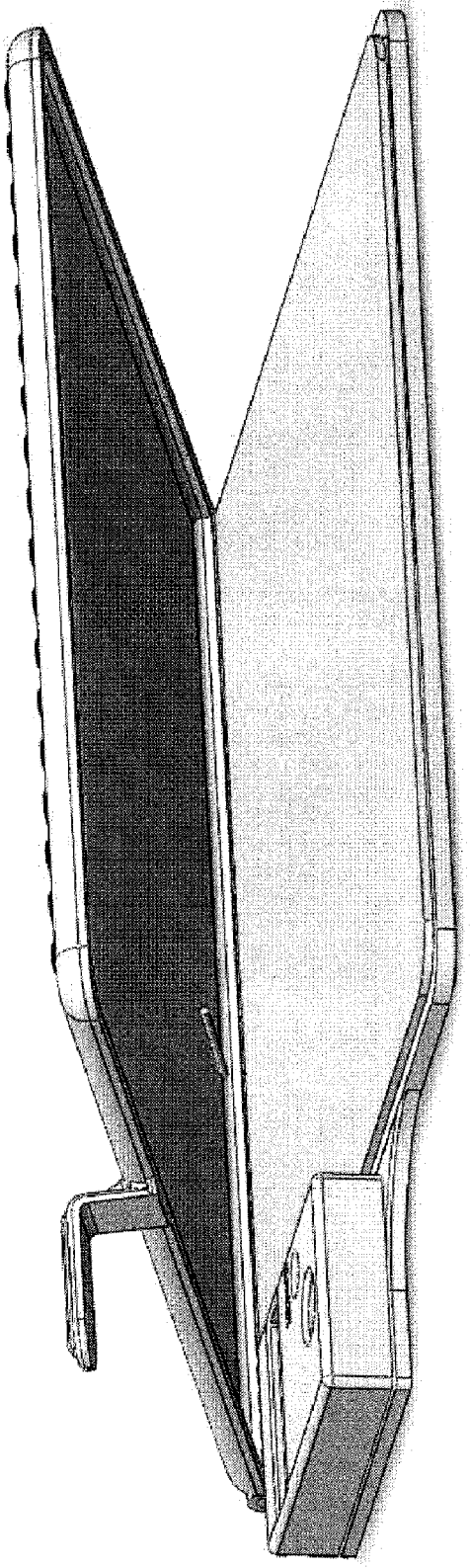


FIG. 2

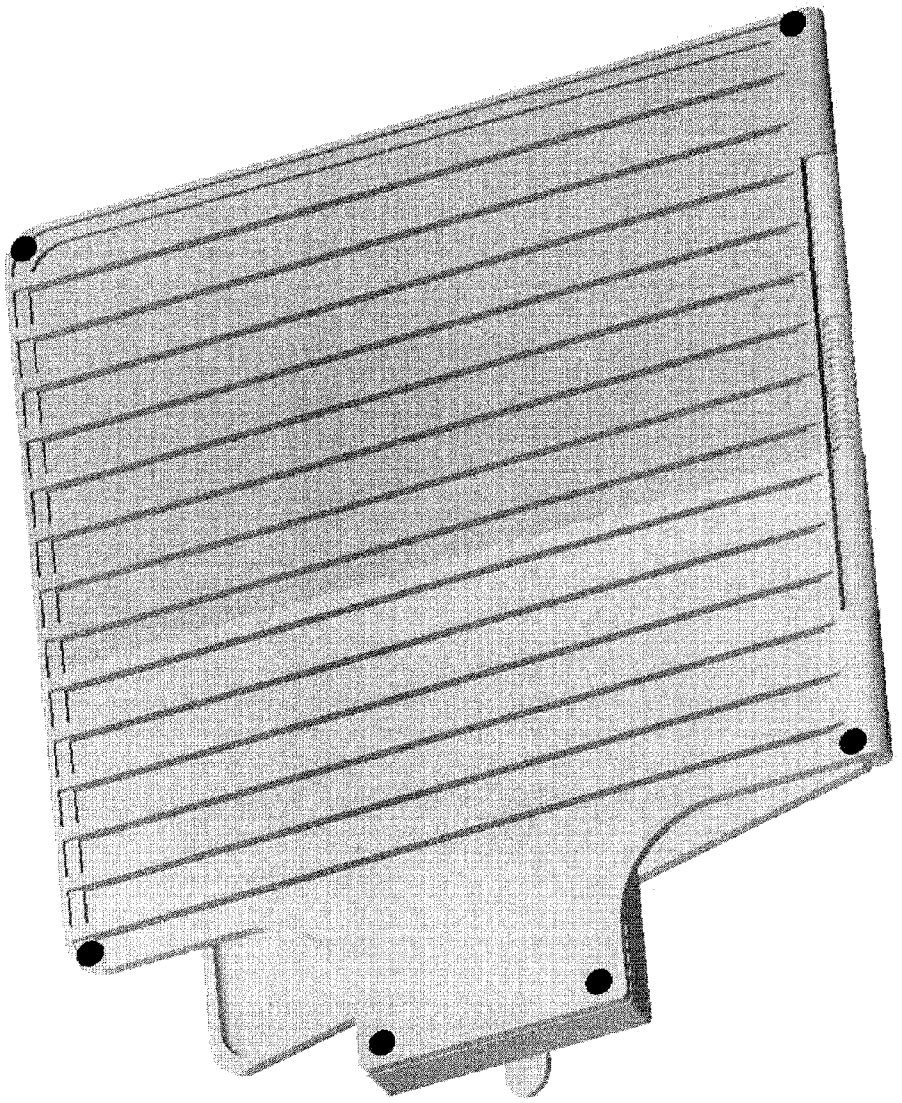


FIG. 3

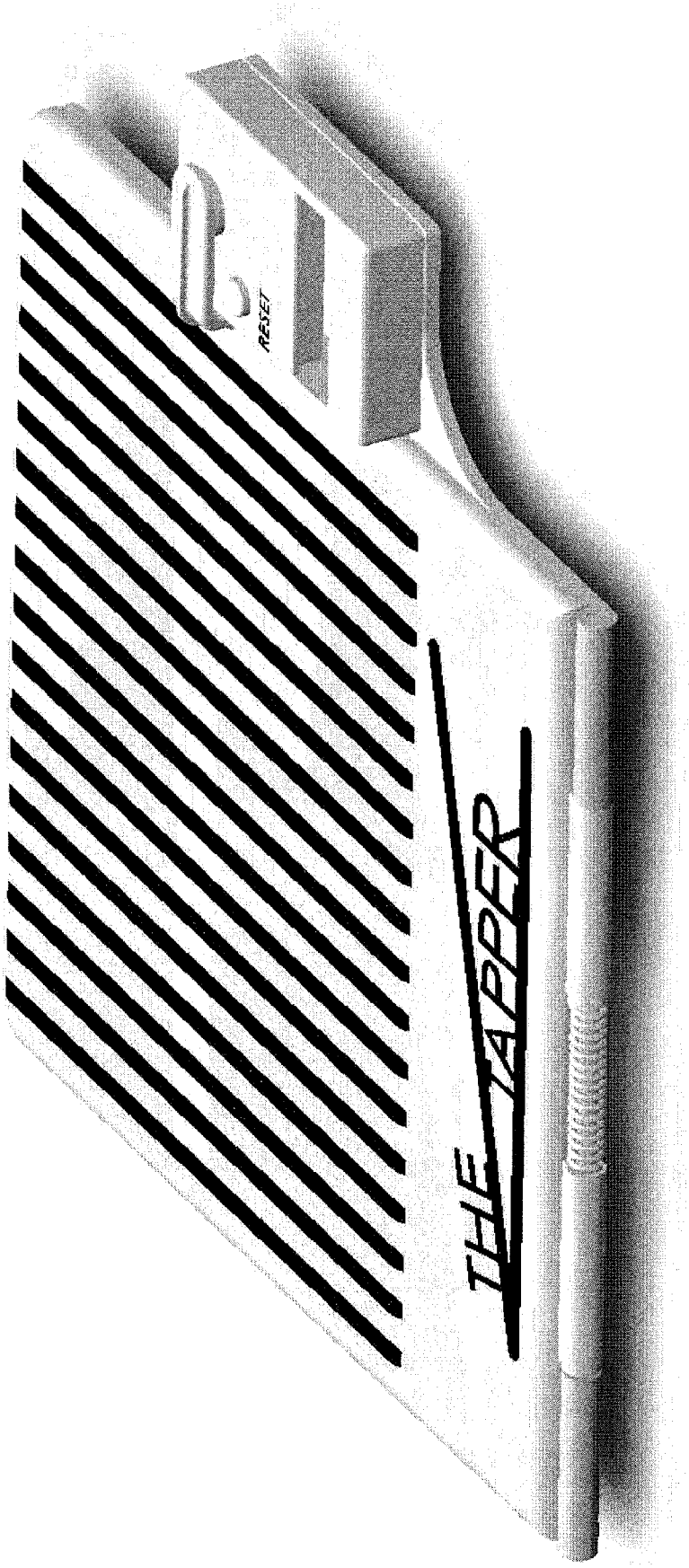


FIG. 4

CASUAL EXERCISE DEVICE

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims priority of U.S. Provisional Application Ser. No. 61/487,698, filed May 18, 2011, which is incorporated by reference herein, including without limitation all appendices thereto.

BACKGROUND

[0002] The growing prevalence of obesity and related metabolic disorders is widely believed to reflect, in part, the growing prevalence of sedentary lifestyles. Research now suggests that extended periods of inactivity, such as working while seated at a desk all day, may themselves be unhealthful and even may diminish the benefits of regularly engaged in strenuous exercise. That same research further suggests, however, that even minimal movement, if performed frequently during the day, may suffice to mitigate the deleterious effects of inactivity. Accordingly, there is a need for ways to make casual exercise convenient, e.g., during the workday.

BRIEF SUMMARY OF THE INVENTION

[0003] A casual exercise device according to an embodiment of the invention may comprise a pedal movably attached to a base, e.g., by a hinge at the base of the pedal. The base may be configured to lie flat, e.g., on a floor or the ground, and force may be exerted to elevate the edge of the pedal distal from the hinge, e.g., by a spring incorporated into the hinge. This force may also resist a user's pushing down on the pedal.

[0004] In an embodiment of the invention, a casual exercise device may incorporate a counter. Such a counter may be, e.g., electrical, mechanical, or electromechanical, and it may be configured to count the number of times that the pedal has been depressed substantially all the way to the base. The counter in an embodiment of the invention may display a running count. Such a counter may comprise a button or other means for resetting the counter, e.g., to zero.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIGS. **1-4** are different views of a casual exercise device according to an embodiment of the invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0006] FIGS. **1-4** depict a casual exercise device according to an embodiment of the invention. As depicted, the device comprises a pedal movably affixed to a base by a hinge. The hinge incorporates a spring that exerts a force tending to rotate the pedal up and away from the base. The hinge may be configured to limit the maximum relative rotation of the pedal away from the base, e.g., to prevent the pedal from rotating into a position that makes it inconvenient for use.

[0007] As the name suggests, a casual exercise device according to an embodiment of the invention may be intended for use, e.g., in performing an exercise. For example, a user may rest one foot on the pedal. The user may then exert sufficient force with the foot to push the pedal down until it contacts the base and may then relax the foot partially or completely to allow the spring or other force-exerting element to raise the pedal again. The word "tap" may, depending on the context, refer to the moment of contact between the pedal and the base, the movement of the pedal from a substantially fully raised position to contact with the base, or the full movement of the pedal down to the base and back up again.

[0008] As depicted, resistance is provided by a spring incorporated into the hinge, but this configuration is not required. In an embodiment of the invention, resistance may be provided by any element or combination of elements in any configuration that is consistent with the purpose of the device. In an embodiment of the invention, the force exerted by such an element is sufficient to provide noticeable resistance to the user, but not so much as to lead to substantial muscle exertion with each tap, or localized muscle fatigue after a large number of taps. In an embodiment of the invention, the resistance may be adjustable, e.g., by a dial or screw that may be turned to tighten or loosen the spring.

[0009] The contact between the pedal and the base with each tap may produce undesired noise. Accordingly, in an embodiment of the invention, sound-dampening material, which may, e.g., cushion the impact between the pedal and the base with each tap, may be attached, e.g., to all or part of the underside of the pedal, all or part of the upper side of the base, or all or part of both surfaces, to reduce or minimize the sound produced when using the device.

[0010] In an embodiment of the invention, the undersurface of the base (viz., the surface intended for contact with, e.g., a floor) may be coated or covered wholly or partially with a material tending to prevent the base from slipping or otherwise moving laterally on the floor. In addition to or instead of the foregoing, in an embodiment of the invention, the upper surface of the pedal may be coated or covered wholly or partially with a material tending to limit the user's foot or shoe from moving against the surface of the pedal.

[0011] As depicted, a counter is incorporated or affixed to the base. The counter comprises a large button protruding from its upper surface and positioned to correspond to a lip protruding from the pedal. The relative configuration of the lip and the button are such that the lip depresses the button when the user presses the pedal all the way (or substantially all the way) to the base, such that the counter registers a tap. The counter may incorporate a mechanical and/or electronic display that indicates the number of taps counted. The counter may also include a "reset" button that, when depressed, resets the displayed count, e.g., to zero.

[0012] The depicted configuration is exemplary. In an embodiment of the invention, a counter may detect a tap in any way considered suitable. For example, a magnet or magnetic material may be embedded in the pedal, and a corresponding magnet or magnetic material may be embedded in the counter, and the counter may use the relative force between the two to detect taps. In an embodiment of the invention, the counter may include a photosensor capable of detecting the desired movement of the pedal. In an embodiment of the invention, the counter may be connected to, e.g., an electromechanical switch embedded in the base or in the pedal and capable of detecting the desired movement of the pedal.

[0013] Although depicted as part of the base, or attached to it, a counter according to an embodiment of the invention and/or a switch, button, sensor, or other means for detecting a tap may be part of and/or attached to the base, pedal, or both, in any configuration capable of detecting a tap for purposes of counting. Numerous alternative configurations that are suitable will be apparent to those skilled in the relevant arts.

[0014] As discussed above, an embodiment of the invention may be used, e.g., at a workplace, under a user's desk, to provide a convenient opportunity for casual exercise that may only minimally interrupt the user's work. It will be appreciated that in such an environment, an embodiment of the invention may be in close physical proximity to one or more business machines and/or other devices capable of electronic data processing and communication with other electronic devices, e.g., a computer, MP3 or other audio player, PDA, and/or smartphone. (Such devices and other devices capable of functioning like them in ways relevant hereto may be referred to collectively herein as "computing devices".) It will be appreciated that a casual exercise device according to an embodiment of the invention may cooperate with one or more computing devices, e.g., to encourage regular exercise.

[0015] For example, in an embodiment of the invention, a casual exercise device may comprise a counter that is capable of physically and logically interfacing with one or more computing devices, e.g., through a wired or wireless technology such as, e.g., the Universal Serial Bus (USB), Bluetooth®, and/or Wi-Fi™, among many possibilities. An application configured to cooperate with a casual exercise device according to an embodiment of the invention may be resident and/or executing on a computing device that is in communication with a counter that is incorporated into such a casual exercise device. Such communication may enable various functions, which may include, but are not limited to, counting on the computer the number of taps that the counter has recorded; reminding the user periodically throughout the workday to use the device; presenting such a reminder as a visual and/or auditory alert from the computing device that may be dismissed by performing a prescribed number of taps; and resetting the counter, among many other possibilities.

[0016] In an embodiment of the invention, a counter may lack any capability to display a count to the user, such capability being limited, e.g., to a computing device in communication with the counter. In another embodiment of the invention, the counter may be replaced with, e.g., a device capable only of detecting taps and transmitting an indication of each tap to the computing device, and counting and/or display functions may be provided exclusively by one or more applications on one or more such computing devices.

[0017] Embodiments of the invention are further described in the appendix hereto, which is in its entirety part of this disclosure.

1. A casual exercise device, comprising:

a base that comprises an underside configured to lay substantially flat against a floor;

a pedal that is joined to the base by a spring-loaded hinge configured to allow the pedal to move relative to the base around an axis of rotation that is parallel to the floor; and

a tap counter;

wherein the pedal comprises an upper surface that is configured to receive a force applied by a foot and also comprises an edge that is from the hinge;

wherein the spring is configured to exert a force on the pedal tending to rotate the pedal in a direction such that the distal end of the pedal is elevated above the base and tending to oppose the force exerted by the foot upon the upper surface; and

wherein the tap counter is configured to register a tap each time the pedal is rotated from a position that forms a first angle with the base that is larger than a first specified angle to a position that forms a second angle with the base that is smaller than a second specified angle.

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