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(54) **FOLDABLE TREADMILL**

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(57) **ABSTRACT**

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A foldable treadmill includes a main member having a base and a deck fixed to the base, wherein the deck has a running belt and two handle bars having ends pivoted on the main member. The handle bars are turned along an axial direction between a first position and a second position, and the handle bars are also turned toward the deck to a folded position and turned away from the deck to an extended position. The handle bars are at an extended status when the handle bars are moved to the extended position and the first position, and the handle bars are at a folded status when the handle bars are moved to the folded position and the second position. A panel is detachably mounted on the handle bars with a wire received in the handle bar and connected to a motor in the deck.

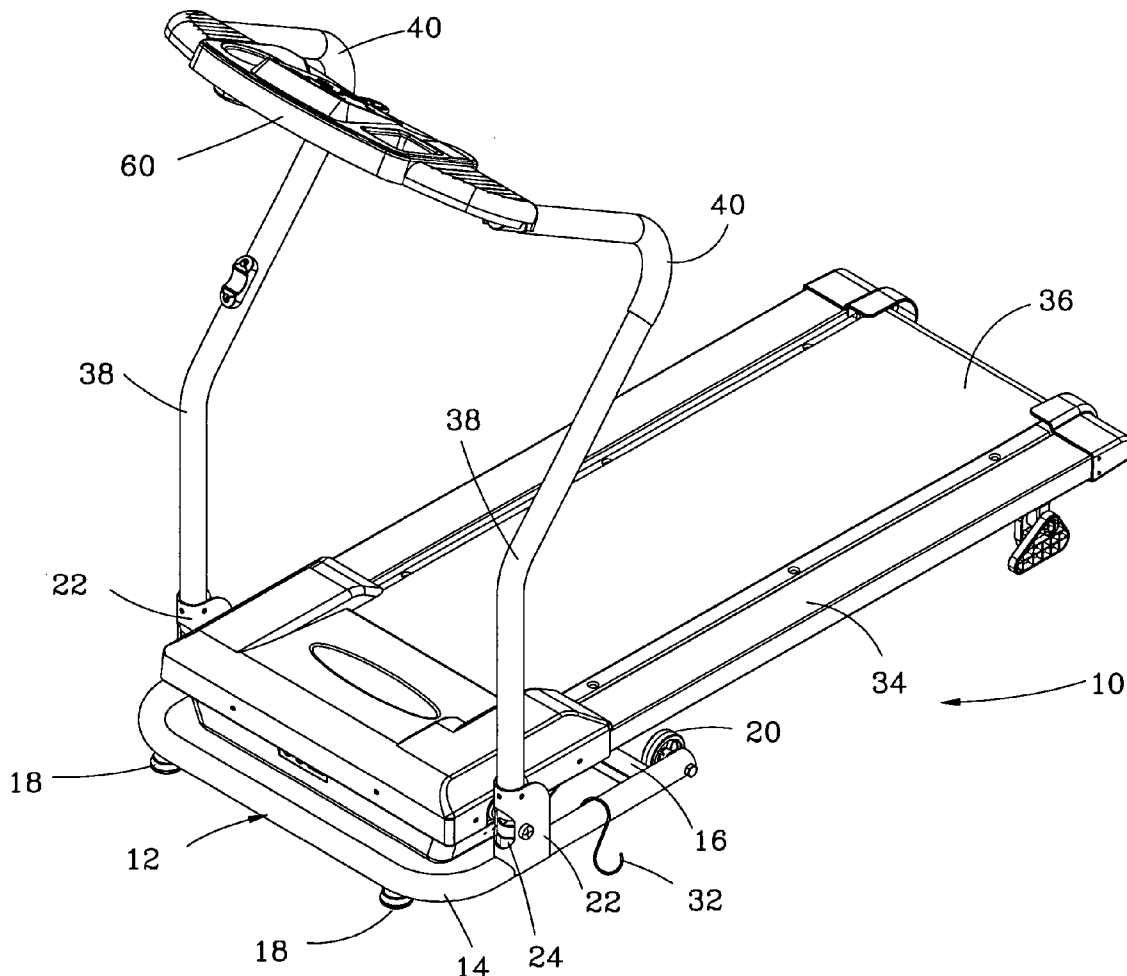
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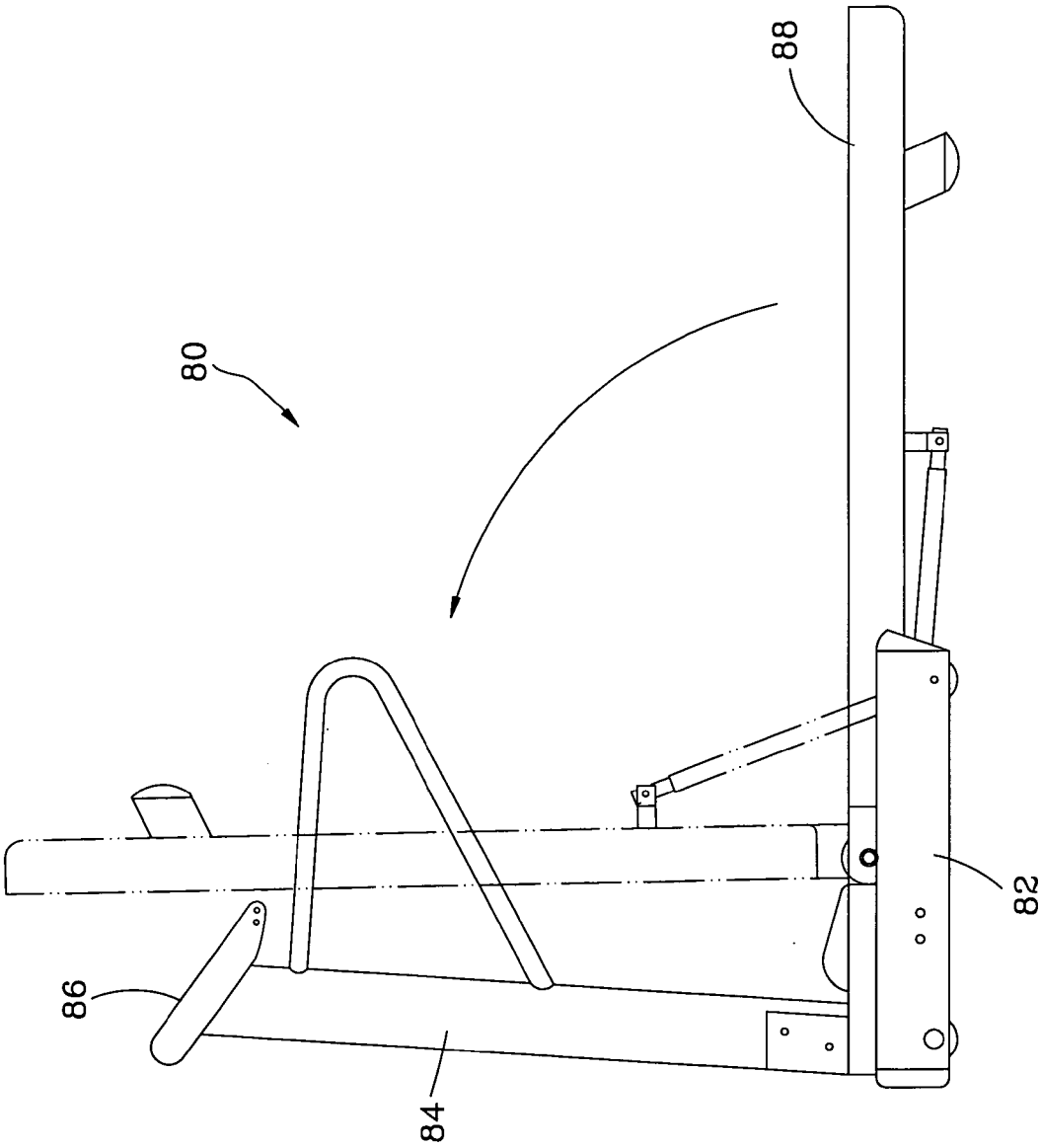


FIG. 1

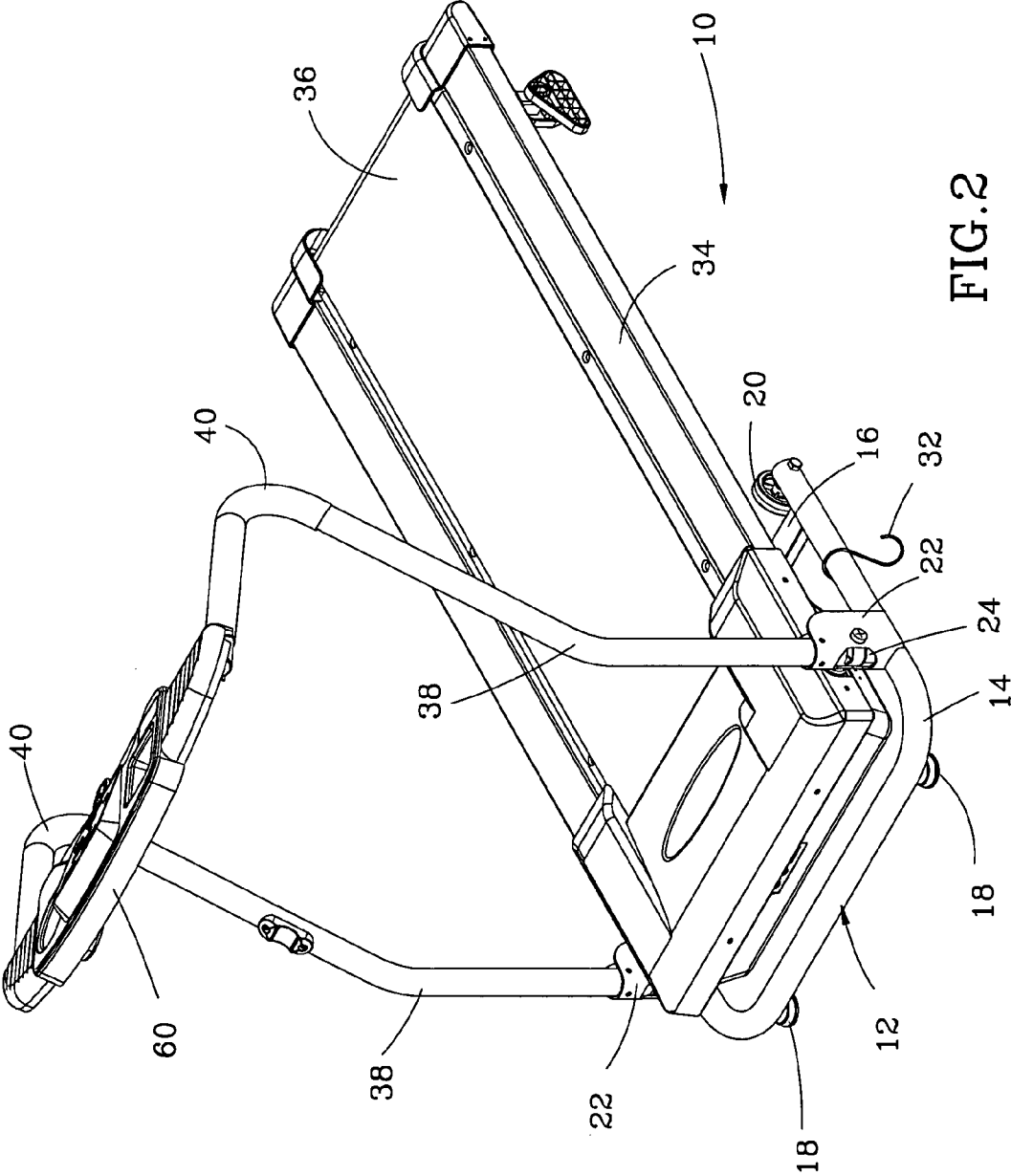


FIG. 2

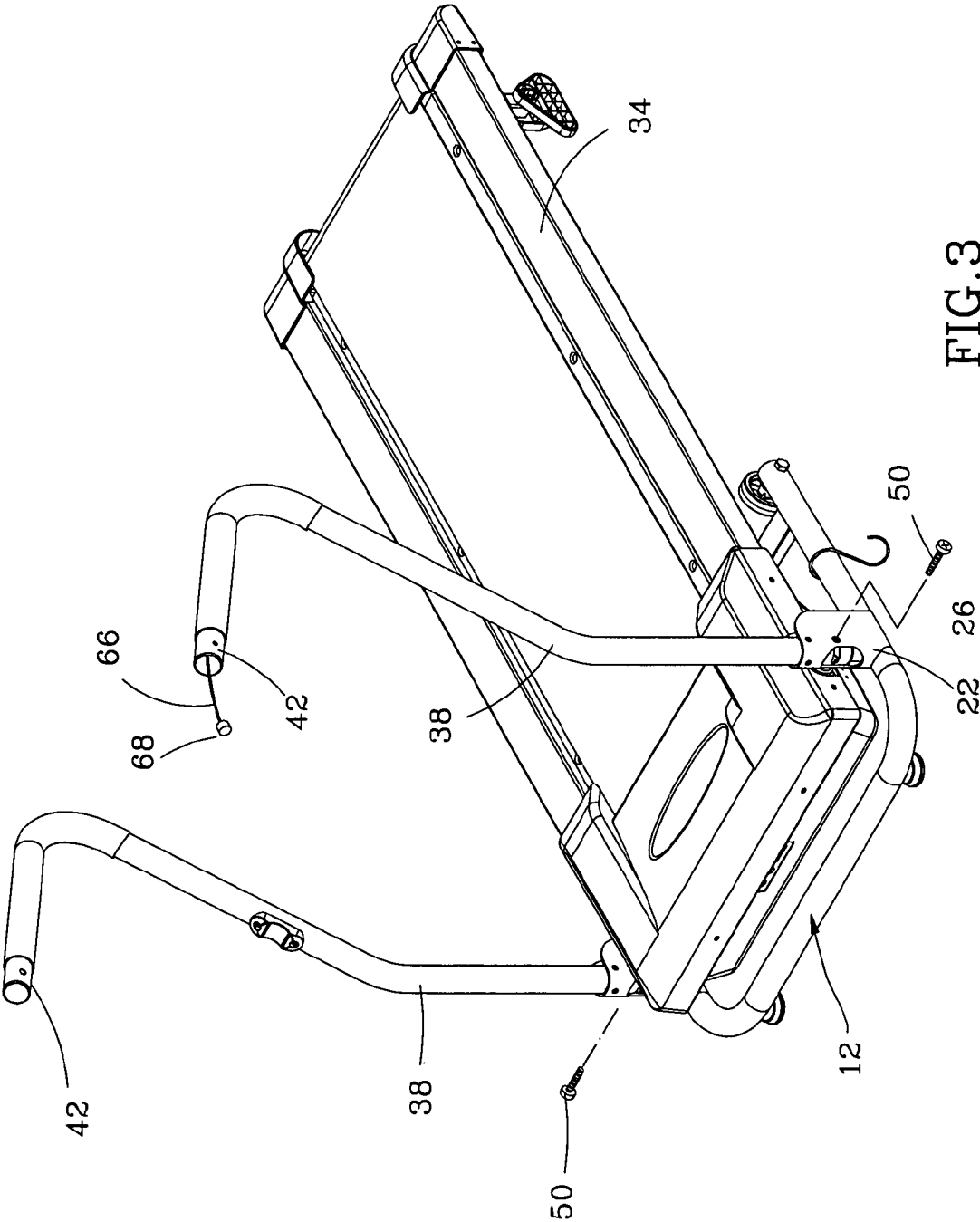


FIG.3

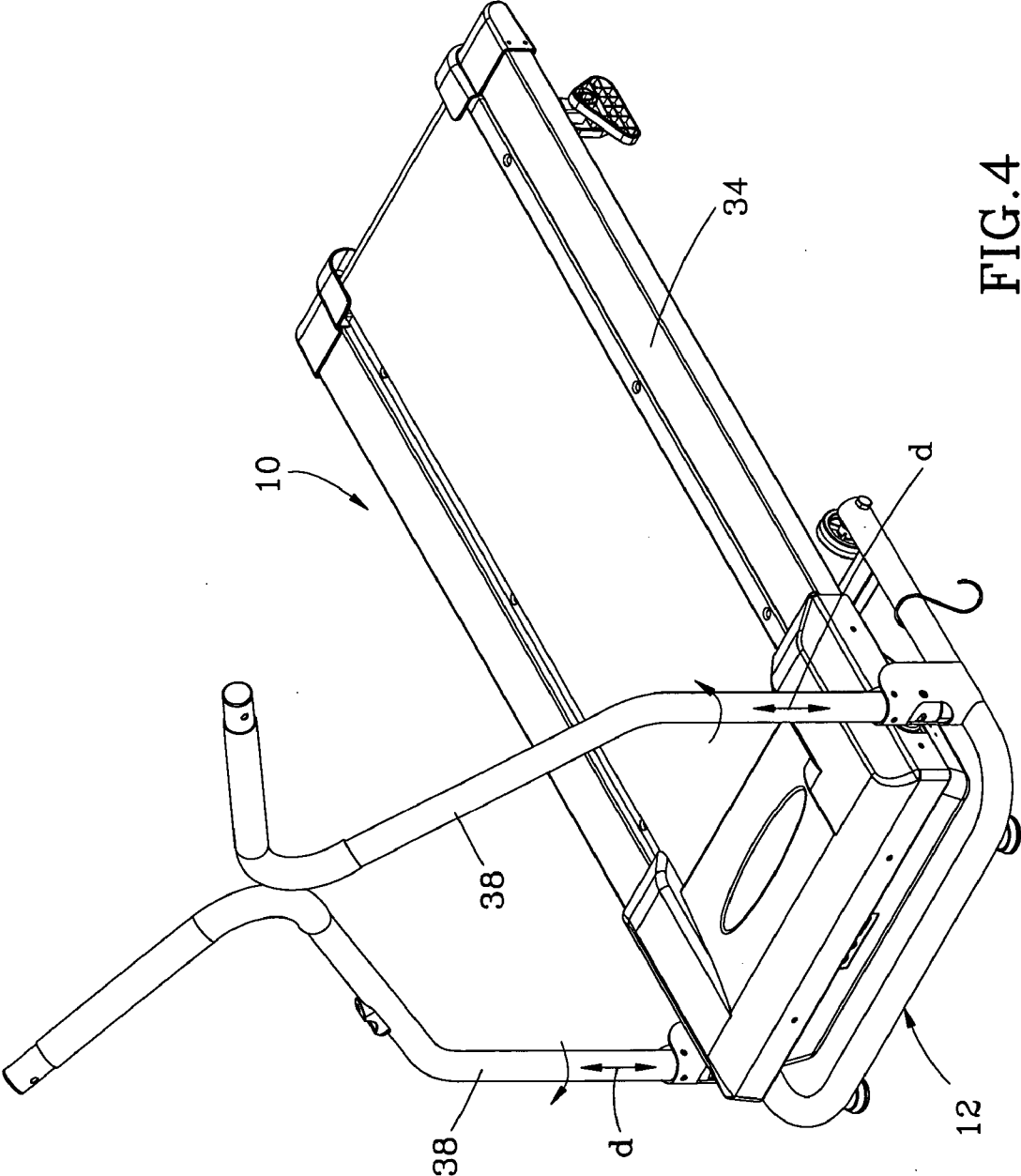


FIG.4

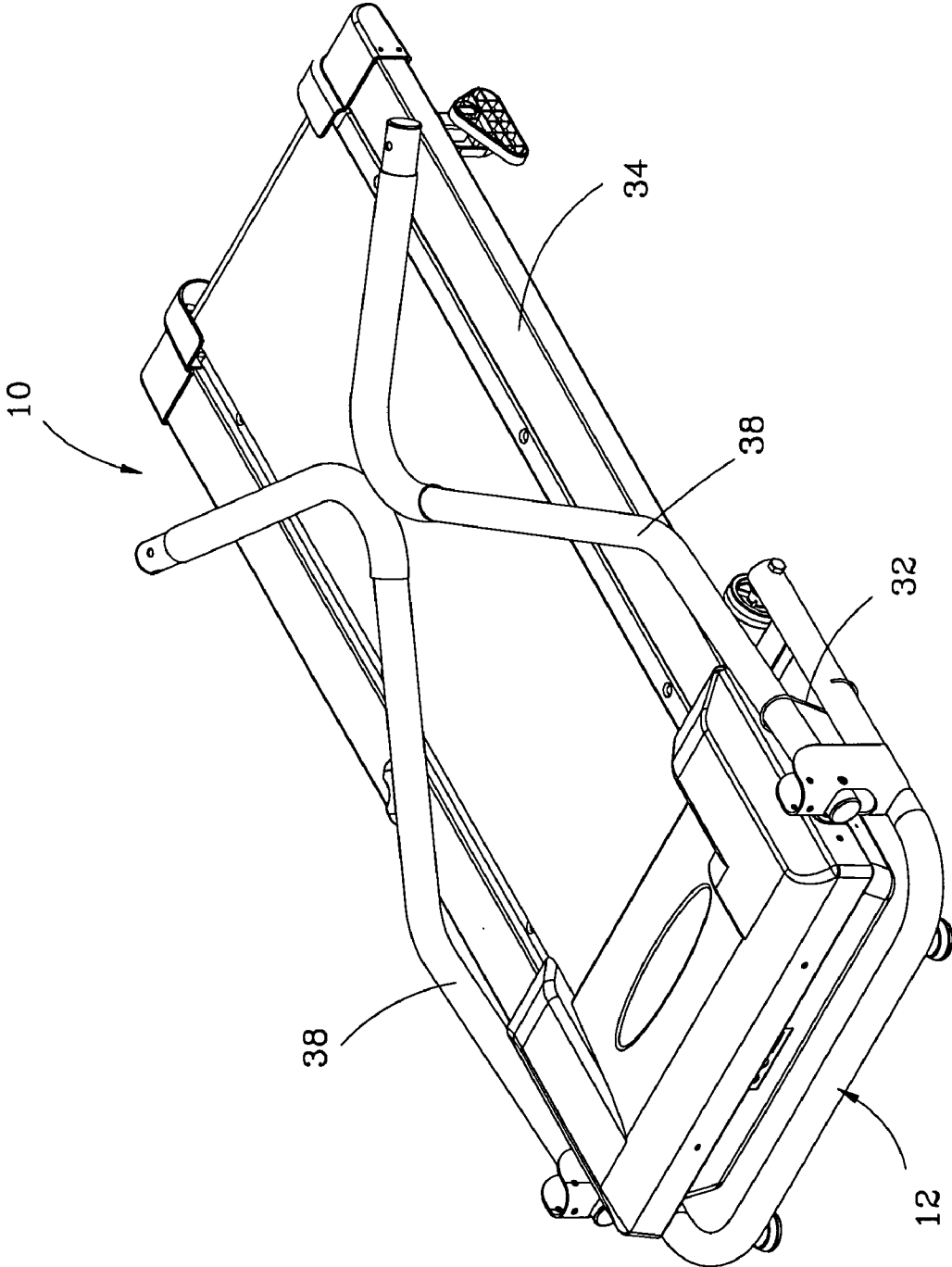


FIG. 5

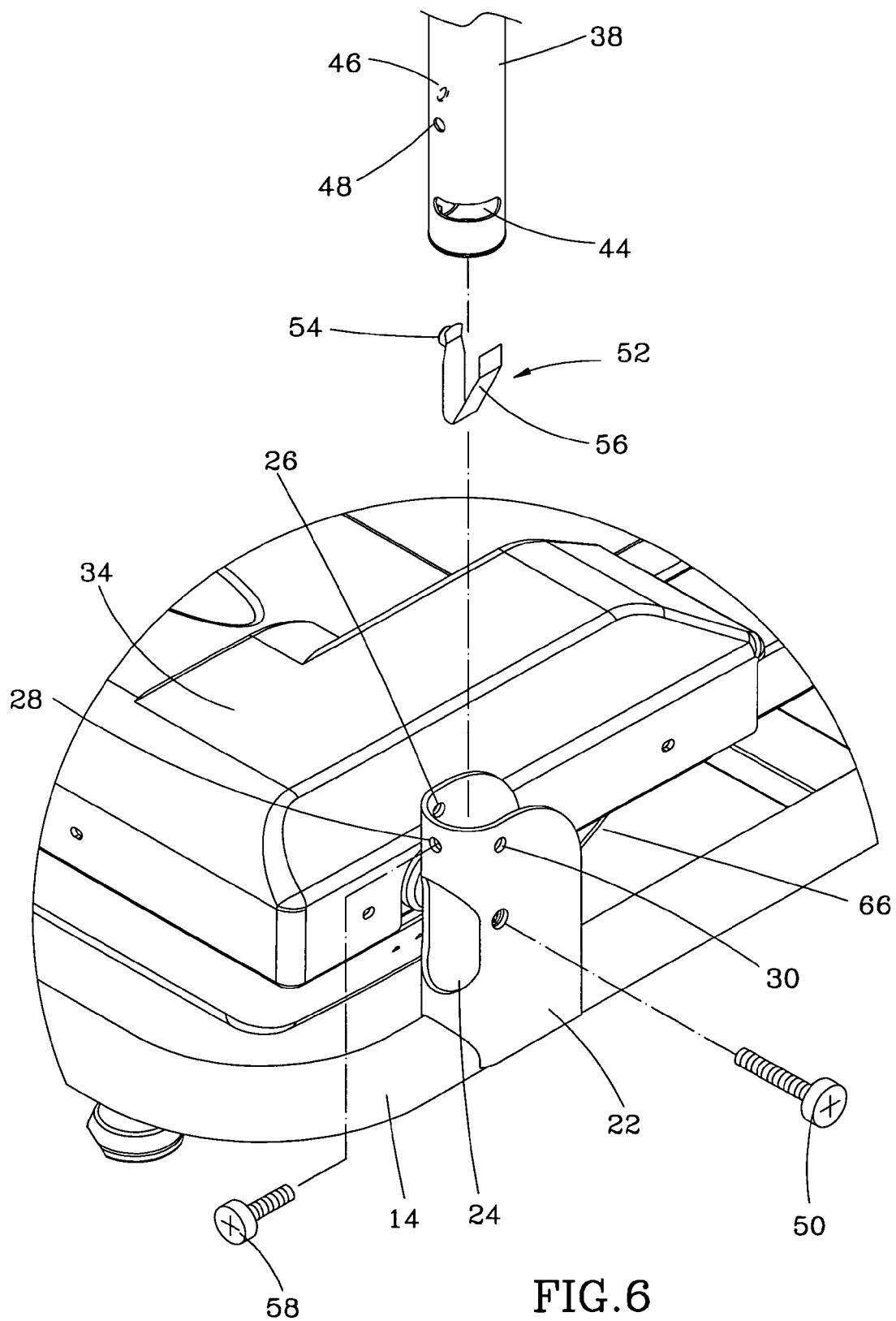


FIG. 6

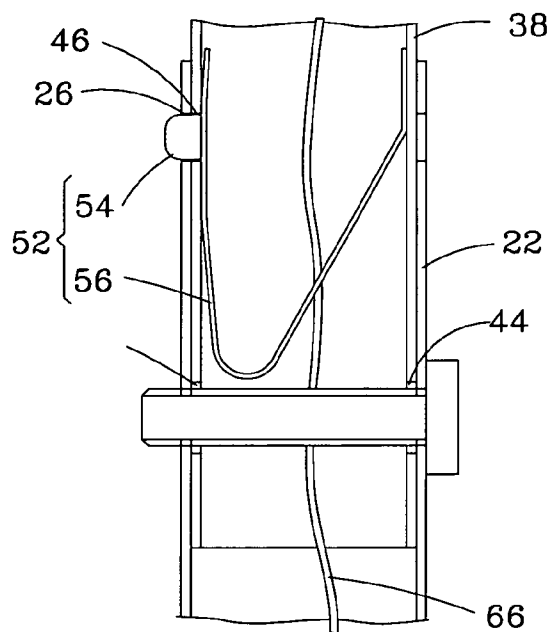


FIG. 7

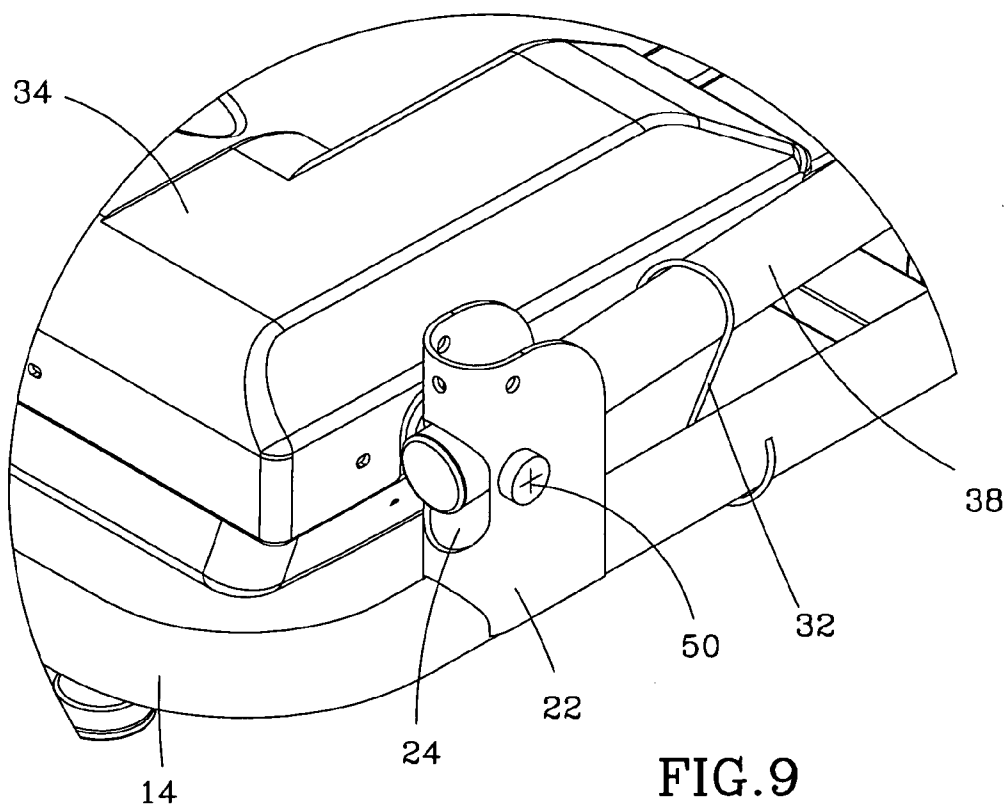


FIG. 9

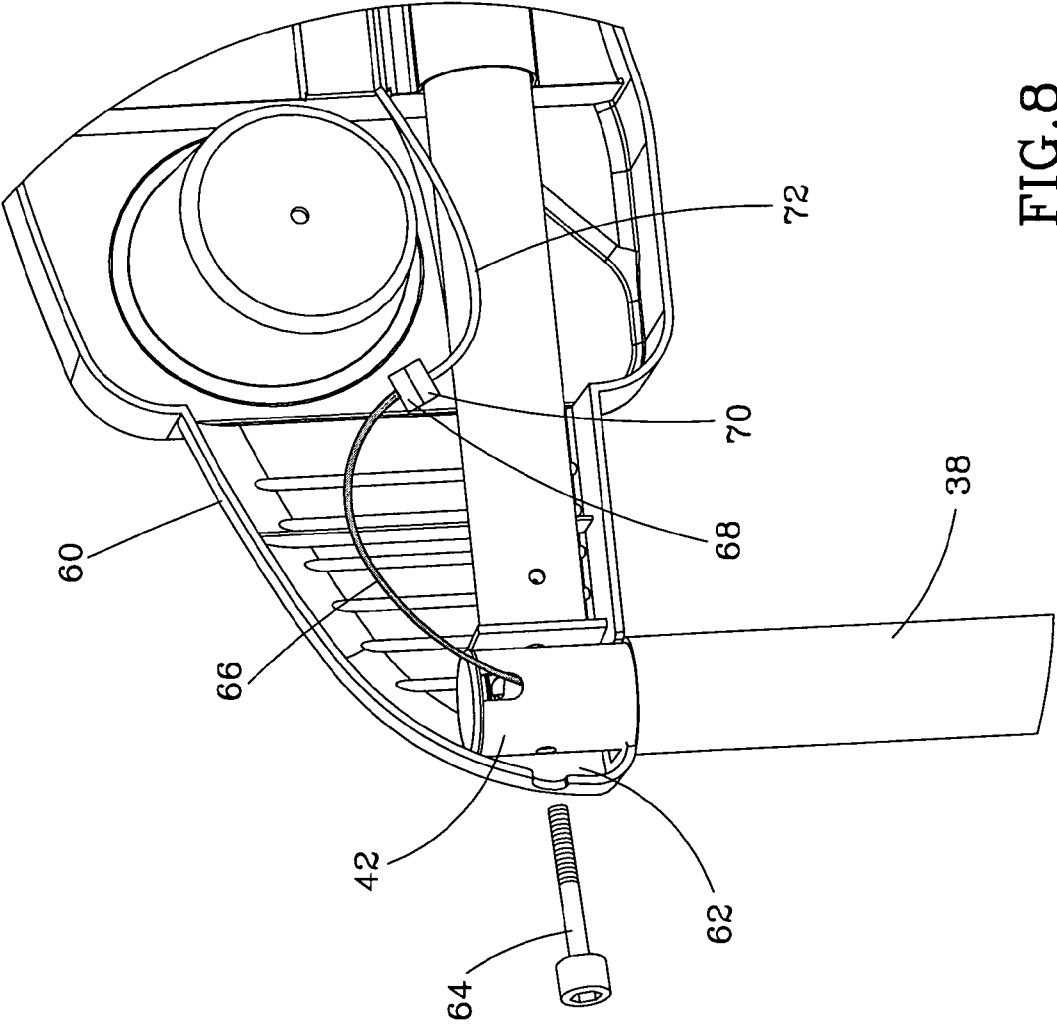


FIG. 8

FOLDABLE TREADMILL

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates generally to a treadmill, and more particularly to a foldable treadmill.

[0003] 2. Description of the Related Art

[0004] FIG. 1 shows a conventional foldable treadmill 80, which includes a base 82, two upright shafts 84 projected from a top of the base 82, a panel 86 mounted on tops of the upright shafts 84 and a deck 88. The deck 88 has its front side pivoted on the upright shafts 84 respectively, such that the deck 88 can be turned upwards (shown as the dot line in FIG. 1) to be folded.

[0005] To extend and fold the treadmill, user has to move the deck 88. The deck 88 is too heavier for some children, women or person with weak power to lift or lower it. In addition, the treadmill is upright when it is folded, so that the treadmill is easy to tip when the treadmill is exerted by external force.

[0006] U.S. Pat. Nos. 5,595,556 and 6,189,846 disclose a treadmill with two foldable handle bars. Such treadmill has no panel. U.S. Pat. Nos. 6,383,120 and 6,471,622 disclose another treadmill with two foldable handle bars and a panel pivotally mounted on tops of the handle bars. The panel has to be turned, and then the handle bars and the panel are moved toward the deck and rest the panel on the deck.

SUMMARY OF THE INVENTION

[0007] The primary objective of the present invention is to provide a foldable treadmill, which is easy to extend and fold the treadmill for children, women and person with weak power.

[0008] According to the objective of the present invention, a foldable treadmill includes a main member having a base and a deck fixed to the base, wherein the deck has a running belt and two handle bars having ends pivoted on the main member. The handle bars are turned along an axial direction between a first position and a second position, and the handle bars are also turned toward the deck to a folded position and turned away from the deck to an extended position. The handle bars are at an extended status when the handle bars are moved to the extended position and the first position, and the handle bars are at a folded status when the handle bars are moved to the folded position and the second position.

[0009] Another foldable treadmill of the present invention includes a main member have a base and a deck fixed to the base, wherein the deck has a running belt. Two handle bars having ends pivoted on the main member. The handle bars are turned toward the deck to a folded position and turned away from the deck to an extended position. A panel with at least a screen thereon is detachably mounted on the handle bars. The handle bars are at an extended status when the handle bars are moved to the extended position, and the handle bars are at a folded status when the handle bars are moved to the folded position with the panel being disassembled.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a front view of the conventional foldable treadmill;

[0011] FIG. 2 is a perspective view of preferred embodiment of the present invention, showing the extending status of the treadmill;

[0012] FIG. 3 to FIG. 5 are perspective views of the preferred embodiment of the present invention, showing the procedures of folding the treadmill;

[0013] FIG. 6 is an exploded view in parts of the preferred embodiment of the present invention;

[0014] FIG. 7 is a sectional view in parts of the preferred embodiment of the present invention, showing the layout of the adjustable gear devices;

[0015] FIG. 8 is a bottom view of a part of the panel of the preferred embodiment of the present invention, and

[0016] FIG. 9 is a perspective view in parts of the preferred embodiment of the present invention, showing the handle bar being folded.

DETAILED DESCRIPTION OF THE INVENTION

[0017] As shown in FIG., a treadmill of the preferred embodiment of the present invention comprises:

[0018] A main member 10 includes a base 12 and a deck 34. The base 12 has a U-shaped main frame 14 and a transverse frame 16 connected to the main frame 14. The main frame 14 is provided with two stands 18 and two wheels 20 on a bottom thereof and two pivot bases 22 on a top thereof. Each of the pivot bases 22 has a U-shaped plate with an opening 24 and three bores 26, 28 and 30 (seeing FIG. 6). The main frame 14 is provided with a hook 32. The deck 34 has its front side fixed to the base 12. The deck 34 is provided with a running belt 36 to be driven by a motor (not shown).

[0019] Two handle bars 38 have ends pivoted on the pivot bases 22 respectively. The handle bars 38 are rotated along an axial direction d between a first position (shown in FIG. 2 and FIG. 3) and a second position (shown in FIG. 4 and FIG. 5). The handle bars 38 also are turned between an extended position (shown in FIG. 2, FIG. 3 and FIG. 4) and a folded position (shown in FIG. 5). We define an extended status of the handle bars 39 (FIG. 2) when they are at the extended position and the first position and a folded status (FIG. 5) when they are at the folded position and the second position. Each of the handle bars 38 has an arched portion 40 for user to hold when they are at the extended status. Each of the handle bars 38 has a connector 42 at free ends thereof.

[0020] As shown in FIG. 6, each of the handle bars 38 has two holes 44 at opposite sides and a bore 46 and a threaded bore 48 above the holes 44. Two bolts 50 are inserted through the pivot bases 22 and the holes 44 of the handle bars 38, and then are screwed into the deck 34, such that the handle bars 38 can be rotated between the first position and the second position and turned between the extended position and the folded position. Each of the handle bars 38 is provided with a lock 52, as shown in FIG. 7, which has a button 54 and a U-shaped spring portion 56. The locks 52 are received in the handle bars 39 respectively with the spring portions 56 against the handle bars 39 and the distal ends of the buttons 54 extruded out of the handle bars 39 via the bores 46. When the handle bars 39 are moved to the extended position and rotated to the first position or the

second position, the buttons 54 are engaged with the bores 26 or 28 respectively to position the handle bars 38. When the handle bars 38 are moved to the extended position and rotated to the first position (the handle bars 38 are at the extended status), the threaded bores 48 of the handle bars 38 is aligned with the bores 28 of the pivot bases 22 respectively, such that user may screw bolts 58 into the bores 28 and the threaded bores 48 respectively to fix the handle bars 38 at the extended status.

[0021] A panel 60 has a screen, switches and buttons (not shown) thereon and has a circuit board (not shown) therein. The screen, switches and buttons are electrically connected to the circuit board, such that user can control the treadmill running by setting the switches and buttons and see some information on the screen. As shown in FIG. 8, the panel 60 has two holes (only show one of which in FIG. 8) at a back. The connectors 42 of the handle bars 38 can be inserted into the holes 62 and fixed by bolts to fix the panel 60 to the distal ends of the handle bars 38. A wire 66 is received in the handle bar 38 with opposite ends extruded out of the handle bar 38 via the opposite ends of the handle bar 38. The circuit board in the panel has a wire 72 to be electrically connected to the wire 66 via a plug 68 and a socket 70. The other end of the wire 66 is electrically connected to a circuit board (not shown) in the deck 34 that is electrically connected to the motor, such that user can control the motor by setting the switches and buttons on the panel 60.

[0022] FIG. 2 shows the handle bars 38 at the extended status and the panel 60 fixed on the handle bars 38. To fold the treadmill of the present invention, the panel 60 is disassembled and looses the bolts 50 first (FIG. 3). Next, rotate the handle bars 38 to the second position (FIG. 4), and then turn the handle bars 38 to the folded position and hook the handle bars 38 by the hooks 32 (FIG. 5). After above step, the treadmill of the present invention is at the folded status. When the handle bars 38 are turned to the folded positions, seeing FIG. 9, the ends of the handle bars 38 enter the openings 24 of the pivot bases 22 respectively. In practice, the handle bars 38 are moved to the second position and the folded position simultaneously. User may extend the handle bars from the folded status to the extended status by the reverse steps.

[0023] In conclusion, to extend and fold the treadmill of the present invention, user has to move the handle bars rather than the deck, such that children and women can afford the job. In addition, the deck of the treadmill of the present invention always lies on the ground when it is at extended status and at folded status, so that the treadmill has no risk of tip.

[0024] In above preferred embodiment, the treadmill is a motorized treadmill. The handle bars of the present invention may be applied to non-motorized treadmill also, which does not have the motor. Some of the non-motorized treadmill may not have the panel

What is claimed is:

1. A foldable treadmill, comprising:

a main member having a base and a deck fixed to the base, wherein the deck has a running belt, and

two handle bars having ends pivoted on the main member, wherein the handle bars are turned along an axial direction between a first position and a second position,

and the handle bars are also turned toward the deck to a folded position and turned away from the deck to an extended position;

wherein the handle bars are at an extended status when the handle bars are moved to the extended position and the first position, and the handle bars are at a folded status when the handle bars are moved to the folded position and the second position.

2. The treadmill as defined in claim 1, further comprising a panel with at least a screen thereon to be detachably mounted on the handle bars.

3. The transmission system as defined in claim 2, further comprising a wire received in the handle bar, wherein the wire has opposite ends electrically connected to a circuit board in the panel that controls the screen and a circuit board in the deck that controls a motor to drive the running belt.

4. The transmission system as defined in claim 1, wherein the base of the main member is provided with two pivot bases to pivot the handle bars respectively.

5. The transmission system as defined in claim 4, wherein each of the handle bars has two holes at opposite sides, and a shaft is inserted through the pivot base and the holes of the handle bar.

6. The transmission system as defined in claim 4, wherein the pivot bases have an opening, and ends of the handle bars enter the opening when the handle bars are at the folded position.

7. The transmission system as defined in claim 4, wherein the pivot bases have a bore respectively, and the handle bars have a threaded bore respectively, and two bolts are screwed into the bores of pivot bases and the threaded bores of the handle bars respectively when the handle bars are moved to the extended status.

8. The transmission system as defined in claim 4, wherein each of the handle bars has a lock received therein, which has a button extruded out of the handle bar and engaged with bores of the pivot base when the handle bar is rotated to the first position and the second position respectively.

9. The transmission system as defined in claim 1, wherein each of the handle bars has an arch portion.

10. The transmission system as defined in claim 1, wherein the base is provided with two hooks to hold the handle bars when they are moved to the folded status.

11. A foldable treadmill, comprising:

a main member having a base and a deck fixed to the base, wherein the deck has a running belt;

two handle bars having ends pivoted on the main member, wherein the handle bars are also turned toward the deck to a folded position and turned away from the deck to an extended position, and

a panel with at least a screen thereon to be detachably mounted on the handle bars;

wherein the handle bars are at an extended status when the handle bars are moved to the extended position, and the handle bars are at a folded status when the handle bars are moved to the folded position with the panel being disassembled.

12. The treadmill as defined in claim 11, wherein the handle bars are turned along an axial direction between a first position and a second position also.

13. The transmission system as defined in claim 11, further comprising a wire received in the handle bar, wherein

the wire has opposite ends electrically connected to a circuit board in the panel that controls the screen and a circuit board in the deck that controls a motor to drive the running belt.

14. The transmission system as defined in claim 11, wherein the base of the main member is provided with two pivot bases to pivot the handle bars respectively.

15. The transmission system as defined in claim 14, wherein each of the handle bars has two holes at opposite sides, and a shaft is inserted through the pivot base and the holes of the handle bar, such that the handle bars are further rotated along an axial direction thereof.

16. The transmission system as defined in claim 14, wherein the pivot bases have an opening, and ends of the handle bars enter the opening when the handle bars are at the folded position.

17. The transmission system as defined in claim 14, wherein the pivot bases have a bore respectively, and the

handle bars have a threaded bore respectively, and two bolts are screwed into the bores of pivot bases and the threaded bores of the handle bars respectively when the handle bars are moved to the extended status.

18. The transmission system as defined in claim 14, wherein each of the handle bars has a lock received therein, which has a button extruded out of the handle bar and engaged with bores of the pivot base when the handle bar is rotated to the first position and the second position respectively.

19. The transmission system as defined in claim 1, wherein each of the handle bars has an arch portion.

20. The transmission system as defined in claim 1, wherein the base is provided with two hooks to hold the handle bars when they are moved to the folded status.

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