WAIST-TRAINING MACHINE

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Abstract

A waist-training machine has a base, a track frame, an adjusting frame and a sliding kneeler. The base has a front hinge mount and a rear hinge mount. The track frame is curved, is connected to the base and has a connecting block, a rear pivot mount, two track bars, a handle frame and a front pivot mount. The adjusting frame is connected to the base and the track frame and has a lower telescopic pipe, an upper telescopic pipe and a rotating button. The lower telescopic pipe is slant connected to the front hinge mount and has an inserting chamber and a button hole. The upper telescopic pipe is slidably connected to the lower telescopic pipe and has multiple inserting holes. The sliding kneeler is slidably mounted on the track frame and has a pin mount and an inserting pin.
WAIST-TRAINING MACHINE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a training machine, and more particularly to a waist-training machine that can be operated with different angles and can be folded for being conveniently stored and carried.

2. Description of Related Art

A conventional waist-training machine has a base, a track and a sliding kneeler. The track is curved and is mounted on the base and has a handle. The sliding kneeler is slidably mounted on the track. When using the conventional waist-training machine, the legs of a user are positioned on the sliding kneeler and the hands of the user grip the handle. Then, the user can twist his waist and swing his legs to enable the sliding kneeler move along the track upwardly relative to the base and this can train the user’s waist.

Although the conventional waist-training machine can provide a waist-training effect, the structure of the conventional waist-training machine is fixed and the angle of the track cannot be adjusted. Then, the user cannot train his waist by changing the angle of the track. In addition, the fixed structure of the conventional waist-training machine cannot be folded and this is inconvenient in storage and transportation.

The invention provides a waist-training machine that mitigates or obviates the aforementioned problems.

SUMMARY OF THE INVENTION

The main objective of the present invention is to provide a waist-training machine that can be operated with different angles and can be folded to store and carry.

The waist-training machine in accordance with the present invention has a base, a track frame, an adjusting frame, a sliding kneeler and a handle frame and a front pivot mount. The adjusting frame is connected to the base and has a connecting block, a rear pivot mount, two track bars, a handle frame and a front pivot mount. The track frame is curved, is connected to the base and has a connecting block, a rear pivot mount, two track bars, a handle frame and a front pivot mount. The adjusting frame is connected to the front hinge mount and has a rotating button. The lower telescopic pipe is aslant connected to the front hinge mount and has an inserting chamber and a button hole. The upper telescopic pipe is slidably connected to the lower telescopic pipe and has multiple inserting holes. The sliding kneeler is slidably mounted on the track frame and has a pin mount and an inserting pin.

Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE Drawings

FIG. 1 is a perspective view of a waist-training machine in accordance with the present invention;
FIG. 2 is an exploded perspective view of the waist-training machine in FIG. 1;
FIG. 3 is an enlarged side view in partial section of the waist-training machine in FIG. 1;
FIG. 4 is an enlarged and exploded perspective view of a sliding kneeler of the waist-training machine in FIG. 1;
FIG. 5 is an enlarged side view in partial section of the sliding kneeler of the waist-training machine in FIG. 4;
FIG. 6 is an operational side view of the waist-training machine in FIG. 1;
FIG. 7 is an adjusting-operational side view of the waist-training machine in FIG. 1;
FIGS. 8 and 9 are folding-operational side view of the waist-training machine in FIG. 1;
FIG. 10 is an enlarged side view in partial section of the waist-training machine in FIG. 9; and
FIG. 11 is a perspective view of the waist-training machine in FIG. 9 showing being folded.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to FIGS. 1 to 5, a waist-training machine in accordance with the present invention comprises a base 10, a track frame 20, an adjusting frame 30 and a sliding kneeler 40.

The base 10 may be L-shaped and has a bottom beam 11, a front leg 12, a rear leg 13, a front hinge mount 14 and a rear hinge mount 15.

The bottom beam 11 is an elongated-rectangular beam and has a front end, a rear end, a top face and a bending segment 111. The bending segment 111 is formed on and protrudes upwardly from the rear end of the bottom beam 11.

The front leg 12 is transversally connected to the front end of the bottom beam 11. The rear leg 13 is transversally connected to the rear end of the bottom beam 11 below the bending segment 111 and parallels the front leg 12. The front hinge mount 14 is mounted on the top face of the bottom beam 11 at the front end of the bottom beam 11. The rear hinge mount 15 is mounted on the bending segment 111 of the bottom beam 11.

The track frame 20 is curved, is connected to the base 10 and has a rear end, a front end, a connecting block 21, a rear pivot mount 22, a buffering block 23, two track bars 24, a handle frame 25, a front pivot mount 26 and a counter device 27.

The connecting block 21 may be a rectangular block, is formed on the rear end of the track frame 20 and has a bottom face and a front face. The rear pivot mount 22 is pivotally connected to the rear hinge mount 15 of the base 10. The buffering block 23 is mounted on the front face of the connecting block 21. The track bars 24 are curved-cylindrical bars, are securely mounted on the connecting block 21 beside the buffering block 23 and protrude upwardly to the front end of the bottom beam 11 of the base 10, and each track bar 24 has a rear end and a front end. The rear ends of the track bars 24 are securely mounted on the front face of the connecting block 21 beside the buffering block 23. The front ends of the track bars 24 extend over the front end of the bottom beam 11.

The handle frame 25 may be U-shaped, is mounted around the front ends of the track bars 24 and has a central segment and a handle sheath 251. The handle sheath 251 is mounted around the central segment of the handle frame 25 between the front ends of the track bars 24. The front pivot mount 26 is mounted securely on the track bars 24 near the front ends of the track bars 24. The counter device 27 is securely mounted on the track bars 24 over the front pivot mount 26 and has a magnetic-induction switch 271. The magnetic-induction switch 271 is mounted on one of the track bars 24 near the connecting block 21 and is electrically connected to the counter device 27 to count the sliding times of the sliding kneeler 40.
0026. The adjusting frame 30 is connected to the base 10 and the track frame 20 and has a lower telescopic pipe 31, an upper telescopic pipe 32 and a rotating button 33.

0027. The lower telescopic pipe 31 may be a rectangular-hollow pipe, as slidable connected to the front hinge mount 14 of the base 10 and has a bottom end, a top end, a front side, an inserting chamber 311 and a button hole 312. The bottom end of the lower telescopic pipe 31 is pivotally connected to the front hinge mount 14. The inserting chamber 311 is formed in the lower telescopic pipe 31 and is formed through the top end of the lower telescopic pipe 31. The button hole 312 is formed through the front side of the lower telescopic pipe 31 near the top end and communicates with the inserting chamber 311.

0028. The upper telescopic pipe 32 may be a rectangular-hollow pipe, as slidable connected to the lower telescopic pipe 31 and has an inserting end, a connecting end, a front side, a rear side, multiple inserting holes 321 and a through hole 322. The inserting end of the upper telescopic pipe 32 is mounted in the inserting chamber 311 of the lower telescopic pipe 31. The connecting end of the upper telescopic pipe 32 extends out of the top end of the lower telescopic pipe 31 and is pivotally connected to the front pivot mount 26 of the track frame 20. The inserting holes 321 are formed through the front side of the upper telescopic pipe 32 at intervals and selectively align with the button hole 312 of the lower telescopic pipe 31, and each inserting hole 321 has a diameter. The through hole 322 is formed through the rear side of the upper telescopic pipe 32, aligns with one of the inserting holes 321 and has a diameter larger than the diameters of the inserting holes 321. The rotating button 33 is screwed in the button hole 312 of the lower telescopic pipe 31 and has an inner end mounted in one of the inserting holes 321 of the upper telescopic pipe 32 to hold the upper telescopic pipe 32 with the lower telescopic pipe 31.

0029. The sliding kneeler 40 is slidable mounted on the track frame 20 and has a sliding mount 41, two wheel axles 42, a pin mount 43, an inserting pin 44, a positioning bolt 45 and a kneeler 46.

0030. The sliding mount 41 may be a rectangular mount, is slidable mounted between the track bars 24 of the track frame 20 and has a top, two opposite sidewalls and two axle holes 411. The axle holes 411 are formed through the opposite sidewalls of the sliding mount 41 at an interval.

0031. The wheel axles 42 are respectively and rotatably mounted in the axle holes 411 of the sliding mount 41, and each wheel axle 42 has two ends and two rollers 421. The ends of the wheel axle 42 respectively extend out of the opposite sidewalls of the sliding mount 41. The rollers 421 are respectively mounted around the ends of the wheel axle 42 and are respectively and rotatably mounted on the track bars 24 of the track frame 20, and each roller 421 has an external surface and an annular groove 422. The annular groove 422 is formed around the external surface of the roller 421 and abuts the corresponding track bar 24.

0032. The pin mount 43 is mounted on the bottom of the sliding mount 41 between the track bars 24 and has a bottom, a rear side, a front side, two sidewalls, a buffering face 431, a pinhole 432 and a positioning hole 433. The bottom of the pin mount 43 extends downwardly out of the track bars 24. The buffering face 431 is formed on the rear side of the pin mount 43 and selectively abuts the buffering block 23 of the track frame 20. The pinhole 432 is formed through the sidewalls of the pin mount 43 below the track bars 24. The positioning hole 433 is formed through the front side of the pin mount 43 and communicates with the pinhole 432.

0033. The inserting pin 44 is mounted in the pinhole 432 of the pin mount 43, abuts against the track bars 24 and has a central segment, two ends and a threaded hole 441. The central segment of the inserting pin 44 is mounted in the pin mount 43 between the sidewalls. The ends of the inserting pin 44 respectively extend out of the sidewalls of the pin mount 43 below the track bars 24. The threaded hole 441 is formed in the central segment of the inserting pin 44 and aligns with the positioning hole 433 of the pin mount 43.

0034. The positioning bolt 45 is mounted through the positioning hole 433 of the pin mount 43 and is screwed in the threaded hole 441 of the inserting pin 44 to enable the inserting pin 44 to abut the track bars 24 to prevent the rollers 421 separating from the track bars 24. The kneeler 46 is securely mounted on the top of the sliding mount 41 and has two supporting rods 461 and a hassock 462. The supporting rods 461 are securely mounted on the top of the sliding mount 41 at an interval over the track bars 24 and each supporting rod 461 has a top face. The hassock 462 is securely mounted on the top faces of the supporting rods 461 and has a top and two mounting recesses 4621. The mounting recesses 4621 are formed in the top of the hassock 462 at an interval to aid positioning of the legs of the user.

0035. With further reference to FIG. 6, when using the waist-training machine in accordance with the present invention, the legs of a user are positioned in the mounting recesses 4621 of the hassock 462 and the hands of the user grip the handle sheath 251 of the handle frame 25. The user can twist his waist and swing legs to enable the sliding kneeler 40 to move relative to the base 10 along the track bars 24 of the track frame 20. During the movement of the sliding kneeler 40, the waist of the user can be compressed and trained. In addition, when the sliding kneeler 40 moves upward and returns to the rear ends of the track bars 24, the magnetic-induction switch 271 will sense the movement of the sliding kneeler 40 and send a signal to the counter device 27 to show the sliding times of the sliding kneeler 40. Furthermore, the buffering block 23 and the buffering face 431 are respectively mounted on the track frame 20 and the pin mount 43 and this can prevent the impact between the track frame 20 and the sliding kneeler 40.

0036. With reference to FIGS. 3 and 7, when a user wants to adjust the slant angle of the track frame 20 to change the degree of difficulty, the rotating button 33 is rotated to enable the inner end of the rotating button 33 to separate from the corresponding inserting hole 321 of the upper telescopic pipe 32. Then, the upper telescopic pipe 32 can be moved relative to the lower telescopic pipe 32 to change the inserting depth of the upper telescopic pipe 32 so as to adjust the slant angle of the track frame 20. When the track frame 20 has been adjusted to a desired slant angle, the rotating button 33 is rotated to insert into a corresponding inserting hole 321 of the upper telescopic pipe 32 to hold the upper telescopic pipe 32 with the lower telescopic pipe 31.

0037. With reference to FIGS. 8 to 10, when the waist-training machine in accordance with the present invention is folded, the positioning bolt 45 is separated from of the threaded hole 441 of the inserting pin 44 and the inserting pin 44 is separated from the pin mount 43. Then, the pin mount 43, the sliding mount 41 and the kneeler 46 can be removed from the track bars 24 of the track frame 20. After removing the sliding kneeler 40, the rotating button 33 is rotated to
enable the upper telescopic pipe 32 to separate from the lower telescopic pipe 31, the upper telescopic pipe 32 is pivoted relative to the track bars 24 by the front pivot mount 26 and the lower telescopic pipe 31 is pivoted relative to the bottom beam 11 by the front hinge mount 14. Then, the track frame 20 is moved downwardly to abut the base 10 and to enable the through hole 322 of the upper telescopic pipe 32 to align with the button hole 312 of the lower telescopic pipe 31 via a corresponding inserting hole 321.

When the through hole 322 of the upper telescopic pipe 32 aligns with the button hole 312 of the lower telescopic pipe 31, the inner end of the rotating button 33 is mounted through the through hole 322 of the upper telescopic pipe 32 and is screwed into the button hole 312 of the lower telescopic pipe 31 to hold the track frame 20 with the base 10 as shown in FIG. 10. Finally, with reference to FIG. 11, the sliding kneeler 40 can be mounted on the track bars 24 of the track frame 20 to reduce the volume of the waist-training machine and this is convenient in storage and transportation.

Even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and features of the invention, the disclosure is illustrative only. Changes may be made in the details, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A waist-training machine comprising
   a base having
   a top face;
   a front end;
   a rear end;
   a front hinge mount mounted on the top face of the base at the front end of the base; and
   a rear hinge mount mounted on the top face of the base at the rear end of the base;
   a track frame being curved, connected to the base and having
   a rear end;
   a front end;
   a connecting block formed on the rear end of the track frame and having a bottom face and a front face;
   a rear pivot mount pivotally connected to the rear hinge mount of the base 10;
   two track bars securely mounted on the connecting block and protruding upwardly to the front end of the base, and each track bar having
   a front end securely mounted on front face of the connecting block; and
   a front end extending over the front end of the base;
   a handle frame mounted around the front ends of the track bars; and
   a front pivot mount mounted securely on the track bars near the front ends of the track bars;
   an adjusting frame connected to the base and the track frame and having
   a lower telescopic pipe aslant connected to the front hinge mount of the base and having
   a bottom end pivotally connected to the front hinge mount;
   a top end;
   a front side;
   an inserting chamber formed in the lower telescopic pipe and formed through the top end of the lower telescopic pipe; and
   a button hole formed through the front side of the lower telescopic pipe near the top end and communicating with the inserting chamber;
   an upper telescopic pipe slidably connected to the lower telescopic pipe and having
   an inserting end mounted in the inserting chamber of the lower telescopic pipe;
   a connecting end extending out of the top end of the lower telescopic pipe and pivotally connected to the front pivot mount of the track frame;
   a front side;
   a rear side; and
   multiple inserting holes formed through the front side of the upper telescopic pipe at intervals and selectively aligning with the button hole of the lower telescopic pipe; and
   a rotating button screwed in the button hole of the lower telescopic pipe and having a inner end mounted in one of the inserting holes of the upper telescopic pipe; and
   a sliding kneeler slidably mounted on the track frame and having
   a pin mount having
   a bottom extending downwardly out of the track bars;
   a rear side;
   a front side;
   two sidewalls; and
   a pinhole formed through the sidewalls of the pin mount below the track bars; and
   an inserting pin mounted in the pinhole of the pin mount, abutting against the track bars and having two ends respectively extending out of the sidewalls of the pin mount below the track bars.

2. The waist-training machine as claimed in claim 1, wherein
   the lower telescopic pipe is a rectangular-hollow pipe;
   the upper telescopic pipe is a rectangular-hollow pipe;
   each inserting hole of the upper telescopic pipe has a diameter; and
   the upper telescopic pipe has a through hole formed through the rear side of the upper telescopic pipe, aligning with one of the inserting holes and having a diameter larger than the diameters of the inserting holes.

3. The waist-training machine as claimed in claim 2, wherein
   the track bars are curved-cylindrical bars;
   the pin mount is mounted on the bottom of the sliding mount between the track bars and has a positioning hole formed through the front side of the pin mount and communicating with the pinhole;
   the inserting pin has
   a central segment mounted in the pin mount between the sidewalls of the pin mount; and
   a threaded hole formed in the central segment of the inserting pin and aligning with the positioning hole of the pin mount; and
   the sliding kneeler has
   a sliding mount slidably mounted between the track bars of the track frame and having
   a bottom;
   a top;
   two opposite sidewalls; and
two axle holes formed through the opposite sidewalls of the sliding mount at an interval;
two wheel axles respectively and rotatably mounted in the axle holes of the sliding mount and each wheel axle having
two ends respectively extending out of the opposite sidewalls of the sliding mount; and
two rollers respectively mounted around the ends of the wheel axle, respectively and rotatably mounted on the track bars of the track frame and each roller having
an external surface; and
an annular groove formed around the external surface of the roller and abutting the corresponding track bar;
a positioning bolt mounted through the positioning hole of the pin mount and screwed in the threaded hole of the inserting pin to enable the inserting pin to abut the track bars to prevent the rollers separating from the track bars; and
a kneeler securely mounted on the top of the sliding mount.
4. The waist-training machine as claimed in claim 3,
wherein
the track frame has a buffering block mounted on the front face of the connecting block; and
the track bars are curved-cylindrical bars, are securely mounted on the connecting block beside the buffering block; and
the pin mount has a buffering face formed on the rear side of the pin mount and selectively abutting the buffering block of the track frame.
5. The waist-training machine as claimed in claim 4,
wherein the kneeler has
two supporting rods securely mounted on the top of the sliding mount at an interval over the track bars, and each supporting rod having a top face; and
a hassock securely mounted on the top faces of the supporting rods and having
a top; and
two mounting recesses formed in the top of the hassock
at an interval to aid positioning of the legs of the user.
6. The waist-training machine as claimed in claim 5,
wherein the track frame has
a counter device securely mounted on the track bars over the front pivot mount and having a magnetic-induction switch mounted on one of the track bars near the connecting block and electrically connected to the counter device to count the sliding times of the sliding kneeler.
7. The waist-training machine as claimed in claim 6,
wherein the handle frame is U-shaped and has
a central segment; and
a handle sheath mounted around the central segment of the handle frame between the front ends of the track bars.
8. The waist-training machine as claimed in claim 6,
wherein the base has
a bottom beam being an elongated-rectangular beam and having
a front end being the front end of the base;
a rear end being the rear end of the base;
a top face being the top face of the base; and
a bending segment formed on and protruding upwardly
from the rear end of the bottom beam;
a front leg transversally connected to the front end of the bottom beam; and
a rear leg transversally connected to the rear end of the bottom beam below the bending segment and paralleling the front leg.