An swing handle arrangement for an exercise equipment wherein a pair of the drive rods driven by the pedal-connecting rods is employed such that the pivot shaft mounted on the front support conducts a synchronous swing. Moreover, two swing handles fitted with a mating toothed member are pivotally connected to the top of the drive rods. Thereafter, toothed members are secured to the front support and meshed with the mating toothed member of the swing handles. A waist-twisting movement of the upper body can be synchronically achieved when the operator holds on the swing handles to take exercise at his feet of the lower body.
SWING HANDLE ARRANGEMENT FOR AN EXERCISE EQUIPMENT

[0001] This application is a continuation-in-part of U.S. Pat. No. 7,794,361 and entitled “SWING HANDLE ARRANGEMENT FOR AN EXERCISE EQUIPMENT”

BACKGROUND OF THE INVENTION

[0002] 1. Fields of the Invention

[0003] The invention relates to a swing handle arrangement for an exercise equipment, and more particularly, to a structure through which a leg movement of the lower body and a waist-twisting movement of the upper body can be synchronically achieved.

[0004] 2. Description of the Related Art

[0005] As well-known, the fitness apparatus used for training the legs, such as fitness bike, treadmills or elliptical cross trainers, etc. is provided with structure on which the operator’s feet stand. Some of the above-mentioned apparatuses include additional coupled handles on which both hands of the operator hold. However, they can be held by both hand of the operator only for conducting a forward and backward swing action that simulates the movement of the extremities when people walk or run. In other words, the upper body of the operator such as abdominal muscle can not be trained at the same time.

[0006] In order to resolve the above-mentioned problem, another structure disclosed in US Pat. Appl. No. 2006/0293153 aims to achieve a synchronic stretching-forward effect of both hands (like the boxing action in the boxing game) when both feet of the operators conducts a treading movement.

[0007] The stretching-forward action of the upper limbs may achieve the training effect of the arm strength. However, it is not beneficial to the waist and abdominal muscles of the operator. When the operator requires the training of his waist and abdominal muscles, another fitness apparatuses must be used to fulfill his personal needs. As a result, the conventional apparatus requires further improvement.

SUMMARY OF THE INVENTION

[0008] A primary object of the invention is to provide a swing handle arrangement for an exercise equipment that achieves the effect of training the legs at the lower body and the effect of twisting the waist and abdominal muscles of the upper body of the operator only by use of a single exercise equipment through a synchronic coupled and swing movement of his upper and lower body. In this way, an overall training and fitness effect is achieved, thereby increasing the application value and the body-building effect.

[0009] According to the invention, an swing handle arrangement for an exercise equipment wherein a pair of the drive rods driven by the pedal-connecting rods is employed such that the pivot shaft mounted on the front support conducts a synchronous swing. Moreover, two swing handles fitted with a mating toothed member are pivotally connected to the top of the drive rods. Thereafter, toothed members are secured to the front support and meshed with the mating toothed member of the swing handles. A waist-twisting movement of the upper body can be synchronically achieved when the operator holds on the swing handles to take exercise at his feet of the lower body.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The accomplishment of this and other objects of the invention will become apparent from the following description and its accompanying drawings of which:
[0011] FIG. 1 is a perspective view of a preferred embodiment of the invention;
[0012] FIG. 2 is an enlarged partial view of the preferred embodiment in FIG. 1;
[0013] FIG. 3 is a top view of the preferred embodiment of the invention in operating the swing handles;
[0014] FIG. 4 is a side view of the embodiment in FIG. 1; and
[0015] FIG. 5 is a perspective view of another embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0016] The present invention will now be described in more detail hereinafter with reference to the accompanying drawings that show various embodiments of the invention.
[0017] First of all, a preferred embodiment of the invention is shown in FIGS. 1 and 2 that is applied to an elliptical cross trainer 10. According thereto, the preferred embodiment of the invention includes a base frame 11, two drive rods 20, and two swing handles 30.
[0018] The base frame 11 includes a front ground-touching rod 12, a rear ground-touching rod 13, a front support 14, and two pedal-connecting rods 15. An electronic console (not shown) is provided at the top of the front support 14. A pivot shaft 16 is positioned near the top of the front support 14. Two toothed members 17 are provided above the pivot shaft 16.
[0019] The drive rods 20 are at the bottom thereof pivotally coupled to the front end of the pedal-connecting rods 15 to create a coupled relationship. The other end of the drive rods 20 is pivotally connected to the pivot shaft 16 of the front support 14.
[0020] The swing handles 30 are formed in a bent shape and fitted at the bottom thereof with an mating toothed member 31. The swing handles 30 are mounted at the top of the drive rods 20 such that the mating toothed members 31 are meshed with the toothed members 17.
[0021] Based on the assembly of the above-mentioned components (as shown in FIGS. 3 and 4), a synchronic movement is achieved when the operator steps on the pedal-connecting rods 15 to make a to-and-fro movement or uses his both hands to push the swing handles 30 to swing to the right and left sides. Moreover, a waist-twisting movement of the upper body can be synchronically achieved when the operator holds on the swing handles 30 to take exercise at his feet of the lower body.
[0022] The elliptical cross trainer 10 is a conventional equipment. The coupled relationship between the rear side of the pedal-connecting rods 15, cranks and the transmission unit (not shown) belongs to the prior art so that no further descriptions thereto are given hereinafter.
[0023] FIG. 5 illustrates another embodiment of the invention. This embodiment is fitted to a fitness bike 40 to achieve the same exercise effect without problem.
[0024] Many changes and modifications in the above-described embodiments of the invention can, of course, be carried out without departing from the scope thereof. Accordingly, to promote the progress in science and the useful arts,
the invention is disclosed and is intended to be limited only by
the scope of the appended claims.

What is claimed is:

1. A swing handle arrangement for an exercise equipment,
   comprising:
   a) a base frame having a front ground-touching rod, a rear
      ground-touching rod, a front support, and two pedal-
      connecting rods, an electronic console being provided at
      the top of the front support, a pivot shaft being posi-
      tioned near the top of the front support, two toothed
      members being provided above the pivot shaft;
   b) two drive rods at the bottom thereof pivotally coupled to
      the front end of the pedal-connecting rods to create a
      coupled relationship, the other end of the drive rods
      being pivotally connected to the corresponding pivot
      shaft; and
   c) two swing handles formed in a bent shape and fitted at
      the bottom thereof with an mating toothed member, the
      swing handles being mounted at the top of the drive rods
      such that the mating toothed members are meshed with
      the toothed members.