TRAINING OR EXERCISE APPARATUS

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ABSTRACT

An invention for martial arts and boxing training but it can be used for many other sports as well. It addresses the problem of how to train using a multiple of suspended targets (6), without these targets getting entangled with each other, and without cumbersome devices to keep the suspension points or arms apart. Here in this portable device all this has been avoided by running suspending elastic through a tight flexible, thick walled, narrow bored tube (5). The tube is in separate pieces. The tube allows the elastic to retain all its characteristics. There is a different arrangement at the top end of the cord than at the bottom to enable disentanglement to occur. The targets can move continually around each other or around a suspended punch bag. Dynamic chaotic movement occurs on all planes without obstructive entanglement occurring.
TRAINING OR EXERCISE APPARATUS

FIELD OF THE INVENTION

[0001] This invention relates to a training or exercise apparatus having particular, but not exclusive, application to martial and like arts. The term ‘martial and like arts’ is used herein as a portmanteau term to include what are normally termed martial arts and also other personal combative arts such as boxing and wrestling. However, the apparatus may also be applied to training for sports, or simply exercise, without a combative element or even without a competitive element.

BACKGROUND

[0002] In boxing and other martial arts, it is usual to practice with a punchball (usually mounted to the top of a long, fairly stiff spring on a base standing on the ground) or a punchbag (usually suspended) or a like object adapted to be punched and resist, e.g. due to springiness and/or gravity. Particularly with martial arts, a number of attempts are known to the present inventor to make these ‘punch objects’ require, teach or induce more skill. These attempts have been impractical.

THE INVENTION

[0003] One method considered by the present inventor, in order to improve practicality, is to suspend smaller balls (or other target members) on flexible arms from the top of the punch object so that they fall around upon punching the punch object and will have to be dealt with by the user, e.g. by hitting them, blocking them, touching them or avoiding them (the meaning of the term “target” as used herein is intended to include an object which has to be avoided), which will hone his skills. A simplified aspect of the invention provides (suspendable) training or exercise apparatus comprising suspension means and target members to be contacted or avoided by the body and adapted to be suspended by the suspension means such that the target members can move around one another. However, the (suspension part of the) arms can be so flexible (e.g. being simply of string or chain) that they become entangled with one another. Again, the arms may be so stiff that they fail to move freely enough to exercise adequately the skills of the user, such that the target members cannot move around one another. The inventor considers that what is required is training with surprising rebound and moving targets, preferably without the arms twisting around each other (becoming entangled).

[0004] According to another aspect of the invention, there is provided training or exercise apparatus comprising suspension means and target members to be contacted or avoided by the body and adapted to be suspended by the suspension means, the suspension means being such that the target members can move around one another, the apparatus comprising inhibiting means to inhibit tangling of the suspension means for respective target members during use.

[0005] The apparatus need not be limited to use with a punch object (it may be suspended on its own) but, in its main application, the said suspension means will be adapted for connection to, or above, the top of a (main) punch object, e.g. to be suspended from the suspension chains of a punchbag, or bands around the top of the punchbag. The apparatus (e.g. as sold) may include the punch object. The adaptation for connection may comprise anchor means to anchor the suspension means to, or above, the top of a punch object. Thus, the suspension means comprise anchor means to effect the aforesaid connection. The anchor means may comprise loop means, hook means, and/or a collar. Preferably, the suspension means comprise a plurality of flexible arms, which may include part or all of the anchor means, or, more usually, be adapted to (depend from or otherwise) be mounted to the anchor means (if separate); i.e. the arms may comprise all of the anchor means or may be mounted to part or all of the anchor means. Usually, at least one said target member will be mounted to each arm. For example, there may be a plurality of the target members, one after another, in line, along a said arm. Normally, the target members will be remote (or away) from the anchor means.

[0006] The anchor means may be adapted to be detachably anchored to (e.g. they are adapted to be unhooked from) a point of suspension on a support, e.g. the main chain of a punchbag. Each arm independently of the other’s may be adapted to be anchored to, so as to be detachable from (e.g. it is adapted to be unhooked from), a point of suspension. Preferably, the anchor means have a ready-release feature for a plurality of the arms so that these can be readily released individually, e.g. if they have become slightly entangled they can be unhooked near the top, disentangled, and then re-anchored individually on the support, whatever it is, that has been used for the apparatus, in order to cure any entanglement that might interfere with training.

[0007] Thus, in an embodiment the target member balls will be captive on the separate arms and able to move around, above and below each other without their arms having to be disentangled, except possibly at long intervals. The balls and their arms should be able to curve around one another, substantially in all directions, and recoil, and not rapidly entangle. They require a means to inhibit entanglement.

[0008] The inhibiting means may comprise a suitable stiffening of the arms to inhibit the entanglement while still allowing the target members to move around one another.

[0009] According to another aspect of invention, there is provided a training or exercise apparatus comprising anchor means to anchor the apparatus to, or above, the top of a punch object, a plurality of flexible arms (depending from or otherwise) mounted to the anchor means, at least one target member mounted to each arm (remote) away from the anchor means, the apparatus having means for reducing or inhibiting tendency of the arms to entangle with one another. The apparatus may have particular application to martial and like arts.

[0010] A said (or each) arm may comprise a chain but preferably comprises an elastic cord. Preferably, a said (or each) arm comprises a flexible core member, e.g. said chain or elastic cord, running through a sleeve of semi-stiff material. Preferably, the sleeve comprises a relatively thick-walled material (tube) with a relatively narrow bore to receive said core member. Preferably, said material is a flexible elastomeric material, preferably spongy, e.g. a sponge rubber, more particularly a semi-stiff sponge rubber, e.g. flexible, closed-cell, elastomeric nitrile rubber. Preferably, each arm comprises a plurality of segments articulated together. Preferably, the sleeve is broken or interrupted at the, or each, articulation. The apparatus may be adapted to be suspended independently of the punch object, or adapted to be suspended from a supporting suspension of a punch object, and may have target members of differing weights and/or sizes.

[0011] In a preferred embodiment, this is a martial arts, boxing and similar disciplines training apparatus which hones the aspects of agility, balance, accuracy, power and
speed in all of the skills of striking, blocking and evading strikes, as well as helping the user to perfect his techniques. It comprises plastic balls (as targets) that are suspended from the supporting chains of a punchbag. The balls are suspended on the ends of elastic cords. The elastic cords are run through the flexible closed-cell elastomeric nitrile rubber insulation described above (effectively, sponge rubber tubes); this prevents the elastic cords from becoming entangled with each other, while allowing the elastic to retain, available for use by the user, a lot of its properties, e.g. its recoil and flexibility. The rubber tubes are not in one piece but are broken apart at intervals into segments to give more flexibility (the length of tube for each arm is made up of separate pieces). A detachable coupling is fitted at the top end of each arm and each arm is detachably attached separately to the chain of a punchbag. In one possible scenario, the user may begin by hanging two balls, one at head height, the other at calf height. Then, after a period of time (which may be during one practice session or after several practice sessions, e.g. for warm-up, for practice, or after becoming experienced), may hang a third at knee height, then again another at chest height. Thus, new parts can be added to the apparatus as the users skills improve. The balls can be punched, kneeed and/or kicked by the user, they can also be blocked anducked from when they recoil. All moves can be practised in random combinations. The central punchbag can be utilised at intervals to hone technique. Eventually, the brain and body are trained to cope with the fast-changing demands of a martial arts or boxing, sparring or ring scenario. As many as or few detachable balls as required can be attached at one time. The length of the cord (arm) depends on what part of the body the user wants to prize with or defend, e.g. long for the ball to be in the region of his legs, short for his head.

Thus, this embodiment provides a sports etc exercise apparatus that develops co-ordination and trains reflexes, which can be used by, for example, all sports trainees to develop reflexes and co-ordination but is especially useful as a martial arts or boxing training apparatus, which consists of one or more targets or balls suspended on arms such that entanglement of the balls or targets does not interfere with training. It can be suspended on its own or hung on a punchbag. Each ball or target position relates to a different part of the body.

A familiar example of said flexible dosed-cell elastomeric nitrile rubber insulation material suitable for covering the elastic cord is found as central heating pipe insulation, i.e. the ordinary dark grey tube-like soft insulation pipe covering which is used as a heat insulator on copper central heating pipes in most houses, or "pipewrap" as some call it. This actual tubing has a slit along its whole length, and each segment of it for the present apparatus is therefore preferably encircled with a reinforcement of fastening tape near each end of the segment, but it should be borne in mind that this was used for prototypes, and in a production run closed tubing may be used, although the reinforcement could still be useful. The elastic cord is ordinary elastic cord that can be bought by the metre off the roll in local hardware or d.i.y. stores; its strength and resilience characteristics and its dimensions can readily be chosen to be suitable for this apparatus. The type of coupling used to attach each arm is not described in full detail, since what is important is only that it should be detachable while firm when attached (closed, as described herein). The target members may conveniently be the same type as the children's plastic playing balls that one would find in a shop, diameter in the range 20 cm to 40 cm. However, for production, these target member balls may have to be manufactured with an attachment coupling to fasten the elastic cord directly to the ball. The balls used in prototypes did not have this direct attachment, so this difficulty was overcome by putting each ball in a cover (e.g. net, pouch or bag) and attaching the cover to the elastic arm. Similarly, if an upstanding punchball is used as a support for the apparatus, this can be anchored to the top of a cover (e.g. net, pouch or bag) fixed to the punchball and surrounding the ball thereof. In any of these embodiments, the target members may be of differing weights, apes and sizes; or all of them could be quite light or, as an alternative, all of them could be chosen quite weighty; the choices would depend upon the type of training required.

Thus, embodiments of the invention may be considered as follows: Conventional kinds of apparatus known to the inventor do not cater for the ever-changing demands of the martial arts or boxing ring, or they attempt to make use of stands and rods in a effort to keep the moving targets apart, whereas a trainee would benefit from a number of moving targets that have the ability to rebound and move in an chaotic fashion, without any suspended targets quickly becoming entangled with one another. Embodiments of the invention provide, in use, a number of suspended readily-moving targets which can be used to develop reflexes and co-ordination in all sports but are especially useful in martial arts and boxing training where they simulate an opponent. To minimize or avoid entanglement, the present embodiments provide any number of balls suspended on elastic cord with the elastic cord running through a soft resilient stuffing material, e.g. pipe insulation. The pipe insulation of each arm is in separate pieces, articulated together so as to allow for movement in all planes. Various properties of the pipe insulation are important: The pipe insulation is a wide very light durable pipe. It has the ability to return to its shape after being crushed by a kick for example. It has a thick wall but has a narrow bore. The thick wall gives stiffness to prevent the arms coiling around each other; this coiling would occur if the pipe had thin walls. The bore of the pipe is wide enough to allow adequate movement of the elastic cord inside. This pipe also has some flexibility. Another important property that the pipe has is that it is soft so it does not hurt if it strikes the user. Properties of the elastic cord such as flexibility and elasticity and rebound are retained while the surrounding pipe-insulation tubing prevents entanglement from interfering with the training. Any entanglement occurs at the top of the apparatus and is slight and can be released by unhooking the arms at the top, for example at the end of each training session. The balls can be hung at any height and in any number. Balls can be suspended at different heights to train different parts of the body, e.g. knees, feet, hands. They allow punching, kicking, use of knees, blocking and evasive movements. They also rebound and provide the element of surprise. The balls move in all planes. Entanglement of the apparatus does not occur so as to interfere with training. More balls can be added as the level of skill increases. As many balls as deemed necessary may be applied. It is a very light and easy-to-install opponent simulator. It can be hung on a punchbag and conventional strikes to the punch-bag can be done in conjunction with this ball training. It can be made very robust and inexpensive, yet safe to use. It reacts to the level of intensity at which it is being used: that is to say, as the user increases his speed the speed of
the bails increases, so the level of skill can be increased further, therefore the user controls the levels of speed and skill applied.  

[0015] In accordance with embodiments of the invention, there can be provided a training device or apparatus which is, or may be, suspended:

[0016] which consists of suspended balls or targets where the entanglement of the balls or targets does not interfere with training;

[0017] which may be unhooked at the point of suspension;

[0018] where each arm may be unhooked independently;

[0019] where the arms consist of balls or targets suspended on elastic cord running through sections of a narrow-bored wide-walled pipe;

[0020] which can be suspended on its own or on the chains of a punchbag;

[0021] which can have balls or targets of different weights and sizes;

[0022] which can have one or more balls or targets in line on any one arm;

[0023] with an easy-release system where the arms are unhooked near the top, disentangled, and then relocated individually again on the apparatus to prevent any entanglement interfering with training;

[0024] where individual arms may be fixed to the secondary chain or bands of a punchbag;

[0025] In the event that an arm (e.g. only one or two of the suspension means, the target member and/or the inhibiting means of the arm) becomes damaged, replacement arms will be available on sale. According to another aspect of the invention, there is provided, for use in any such training or exercise apparatus, a combination of a target member and suspension means for the same such that the target member and the target member of a similar combination can move around one another when the combinations are suspended from a common point. According to another aspect of the invention, there is provided, for use in training or exercise apparatus, a combination of a target member and suspension means for the same such that the target member and the target member of a similar combination can move around one another when the combinations are suspended from a common point, the first-mentioned combination comprising inhibiting means to inhibit tangling of the suspension means for the target members during use.

[0026] According to another aspect of the invention, there is provided a method of training or exercise in which there is used any such apparatus embodying the invention. In an improved method, target members are added to the apparatus as exercise or training progresses.

DESCRIPTION OF DRAWINGS

[0027] Reference is now made by way of example to the accompanying drawings. In these:

[0028] FIG. 1 is a front view of an apparatus 21 (e.g. see FIG. 3) embodying the invention, showing a user 14 training on the apparatus 21 as it hangs on a punchbag 7;

[0029] FIG. 2 is a front view of the apparatus 21 in close-up, showing the anchor means 3 comprising a ring 3 (and loops 4) more clearly;

[0030] FIG. 3 is a front view of the apparatus 21, separated from the punchbag 7, showing the anchor ring 3 open and the apparatus 21 with inhibiting means 5 as it may look after a long training session, with arms 16 entangled but only at the top. The ring 3 can then be readily opened and loops 4 (forming part of the anchor means 3) at the tops of individual arms 16 can be removed for disentanglement;

[0031] FIG. 4 is a view like FIG. 3 after the individual arms 16 have been removed from the ring 3 and disentangled, and their loops 4 relocated on the ring 3 for another training session;

[0032] FIG. 5 is a schematic front view of one arm 16, with the elastic cord shown (for the sake of clarity) much longer than it is in reality, so that the individual segments 18 of the sleeve 5 enclosing the arm 16 appear to be spaced apart on the elastic cord 8, whereas in reality they are contiguous, and therefore articulated to one another where they touch at the points 15, as shown in FIGS. 1 to 4;

[0033] FIG. 6 corresponds to FIG. 2 but shows an alternative anchorage means 3, with individual arms 16 hanging directly from secondary chains 2 of a punchbag 7. The Figure also shows two target member balls 6 connected in line in a single arm 16.

[0034] FIGS. 7 and 8 are schematic explanatory front views of the apparatus 21, before training (untangled cords 8) and after training with consequent rapid tangling (tangled cords 9), if the apparatus 21 is provided without the inhibiting means 5, i.e. with the target balls 6 simply suspended on elastic cords 8;

[0035] FIGS. 9 and 10 are similar views to FIGS. 7 and 8 if the apparatus 21 is provided with the inhibiting means 5, i.e. with the cords 8 running through pipe insulator-type sleeves 5. This shows how, despite the balls 6 moving and swinging around each other, the cords 8 do not become entangled;

[0036] FIG. 11 is similar to FIG. 2, but shows the arms 16 suspended directly by their anchor loops 4 from the main, central supporting chain 1 of a punchbag 7;

[0037] FIG. 12 is a perspective view, close up, of a segment 18 of an arm 16; and

[0038] FIG. 13 is a close-up of part of the FIG. 11 apparatus 21, for clarity showing only two arms 16 and these flung out in use, and showing how the arms 16 are connected directly to the central chain 1 of the bag 7, though they could equally be coupled to the bag 7 anywhere near, or on, its chain 1.

[0039] regarding the embodiment shown in FIGS. 14, 15, 16, 17 and 18.

[0040] FIG. 14 Here the eye of the suspension cord may be large enough to extend into the top of the tube thus forming a double layer when entanglement begins.

[0041] FIG. 15 Here the cord is overlapped at the area of possible entanglement 23.

[0042] FIG. 16 Here the suspension cord is thicker at the area of possible entanglement than in the lower part of the suspension cord. This thicker area extends down a little inside the top of pipe 5,

[0043] FIG. 17 Shows the apparatus with the much thicker cord at entanglement area 23,

[0044] FIG. 18 Here the elastic cord is shown much longer for clarity and shows how entanglement would occur during training with a punch bag.

[0045] Any one of the modifications shown in FIG. 14, 15 or 16 would enable the apparatus to automatically untangle this type of entanglement (in FIGS. 17 and 18) without the trainee stopping to untangle it manually.

[0046] The arrangement at the top of the cord helps to untangle while the lower section of the elastic cord retains its thinner and therefore better rebound characteristics.

[0047] In the drawings, the items shown have the following references:
1—main chain or main suspension belt of punch bag 7
2—secondary chains of punchbag 7
3—anchor ring in the form of a collar 3 surrounding main suspension chain 1 of punchbag 7. A ring is used here for clarity, a rope tethers may be used in reality
4—loop of elastic cord 8 of arm 16
5—pipe-insulation-type stiffening (entanglement-inhibiting) tubing (sleeve)
6—target ball
7—punchbag
8—elastic cord
9—entangled cords
10—thick (wide) wall
11—narrow bore
12—direct attachment anchor ring of individual arm 16 (similar to collar 3 but smaller)
13—arm with two target balls 6 in line
14—trainee or user
15—articulation points of the arms 16 where the pipe-insulation-type stiffening (entanglement-inhibiting) tube 5 is broken or interrupted, or articulated to balls 6, or where the arm 16 is articulated to the anchor means 3, 12
16—arm
17—net pouch to hold ball 6 to elastic cord 8
18—segments of tubing 5
19—slit in tubing 5
20—reinforcement tape around tubing 5
21—the apparatus, which may (FIG. 2) or may not (FIG. 3) include the punchbag 7
22—suspension bands around the top of the punchbag 7.
23—Area of possible entanglement

Thus, susceptible training or exercise apparatus 21 comprises suspension means 3, 8 and target members 6 to be contacted or avoided by the body and adapted to be suspended by the suspension means 3, 8, the suspension means 3, 8 being such that the target members 6 can move around one another, the apparatus 21 comprising inhibiting means 5 to inhibit tangling of the suspension means 3, 8 for respective target members 6 during use.

The suspension means 3, 8 are adapted for connection to, or above, the top of a (main) punch object 7, e.g. being suspended from the suspension chains 1, 2 of a punchbag 7 or bands 22 around the top of the punchbag. The adaptation for connection comprises anchor means 3, 4 to anchor the suspension means 3, 4, 8, to, or above, the top of the punch object 7. The anchor means comprise loop means 4, FIG. 2, hook means (not shown), and/or a collar 3. The suspension means 3, 8 comprise a plurality of flexible arms 16, and include the anchor means 3, 4, or may be considered to depend from the anchor means 3 considered as a separate ring 3. At least one said target member 6 is mounted to each arm 16. In the embodiment shown in FIG. 6, there is a plurality of the target members 6, one after another, in line, along a said arm 13; these target members 6 are remote (or away) from the anchor means 12.

As shown in FIG. 2, anchor means 3, 12 are adapted to be detachably anchored to a point of suspension (the bottom of chain 1) on a support (here the main chain 1 of a punchbag 7). Each arm 16 independently of the others is adapted to be anchored to, so as to be detachable from, the said point of suspension. The anchor means 3 have a ready-release feature (in the form of a latched-opening ring 3) for a plurality of the arms 16 so that these can be readily released individually, for the reasons described above with reference to FIGS. 3 and 4.

Thus, the target member balls 6 are captive on the separate arms 16 and able to move around, above and below each other without their arms 16 having to be disentangled, except possibly at long intervals. This is achieved by using a means 5 to inhibit entanglement, which comprises a suitable stiffening 5 of the arms 16 to inhibit the entanglement while still allowing the target members to move around one another.

Thus, this training apparatus 21 comprises anchor means 3 to anchor the apparatus 21 to, or above, the top of a punch object 7, a plurality of flexible arms 16 mounted to the anchor means 3, at least one target member 6 mounted to each arm 16 (remote) away from the anchor means 3, the apparatus 21 having means 5 for reducing or inhibiting tendency of the arms 16 to entangle with one another.

Each arm 16 comprises an elastic cord 8, which is a flexible core member 8 running through a sleeve 5 of semi-stiff material, which is a relatively thick-walled material (wall 10) with a relatively narrow bore 11 to receive said core member 8, that is a flexible, closed-cell, elastomeric nitride semi-stiff sponge rubber. Each arm 16 comprises a plurality of segments 18 articulated together at points 15, where the sleeve 5 is broken or interrupted.

The apparatus 21 comprises plastic balls 6 (as targets 6) that are suspended from the supporting chains 1, 2 of a punchbag 7 on the ends of elastic cords 8 of arms 16. The elastic cords 8 are run through the flexible closed-cell elastomeric nitride rubber insulation 5 described above, effectively, sponge rubber tubes 5 with a reinforcement 20 of fastening tape 20 near each end of each segment 18 thereof; this prevents the elastic cords 8 from becoming entangled with each other, while allowing the elastic 8 to retain, available for use by the user, a lot of its properties, e.g., its recoil and flexibility. The rubber tubes 5 are not in one piece but are broken apart at intervals, i.e. at points 15 into segments 18 to give more flexibility; thus, the length of tube 5 for each arm 16 is made up of separate pieces 18. A detachable coupling 3 is fitted at the top end of each arm 16 and each arm 16 is detachably attached separately to the chain 1, 2 of a punchbag 7. In one possible scenario, the user may begin by hanging two balls 6, one at head height, the other at calf height, and then (as described above) a third at knee height, then again another at chest height. Thus, new parts (arms 16 including balls 6) can be added to the apparatus as the users skills improve. The length of the cord (arm 16) depends on what part of the body the user 14 wants to practise with or defend, e.g. a long cord 8 for the balls 6 to be in the region of his legs, short for his head.

The apparatus 21 can be suspended on its own or hung on a punchbag 7. Each ball 6 thus provides a target position relating to a different part of the body, i.e. the user’s body and the theoretical opponent’s body.

Details have been discussed above of tubing 5, elastic cord 8, types of coupling 3 used to attach each arm 16, and target members 6 (and their covers 17).

The apparatus 21 provides a number of suspended readily-moving ball targets 6 that have the ability to rebound and move in a chaotic fashion, without any suspended targets 6 quickly becoming entangled with one another. Any number of the balls 6 are suspended on elastic cord 8 running through a soft, resilient stiffening material 5, possibly made from pipe insulation 5, in separate pieces 18, articulated together at points 15 so as to allow for movement in all planes. Various important properties of the pipe insulation 5 have been discussed above, as also properties of the elastic cord 8, methods
of dealing with any slight entanglement, and methods of hanging and suspending balls 6 in different ways and adding to their number. The apparatus 21 can be hung on a punchbag 7.

The embodiments provide a training device or apparatus 21 which is, or may be, suspended:
[0080] which consists of suspended balls 6 or targets 6 where the entanglement of the balls or targets 6 does not interfere with training;
[0081] which may be unhooked at the point of suspension 3;
[0082] where each arm 16 may be unhooked independently;
[0083] where the arms 16 consist of balls 6 or targets 6 suspended on elastic cord 8 running through sections of a narrow-walled pipe 5;
[0084] which can be suspended on its own or on the chains 1, 2 of a punchbag 7;
[0085] which can have balls 6 or targets 6 of different weights and sizes;
[0086] which can have one or more balls 6 or targets 6 in line on any one arm 16;
[0087] with an easy-release system where the arms 16 are unhooked (from opened ring 3) near the top, disentangled, and then relocated individually again on ring 3 of the apparatus to prevent any entanglement interfering with training;
[0088] where individual arms 16 are fixed to the secondary chain 2 or bands of a punchbag 7.

And also regarding the embodiment shown in FIG. 14, FIG. 15, and FIG. 16 (the tube 5, is drawn transparent here apart from outline to enable the suspension cord to be seen).

The apparatus may have a suspension cord that is thicker at the area of possible entanglement 23, than at the lower part of the suspension cord (FIG. 16), or the cord may be overlapped in this area (FIG. 15), or the eye of the suspension cord may be large enough to extend into the top of the tube (FIG. 14), or the material of the suspension cord may be different (made of a more suitable material to enable disentanglement) in this area 23, than in the rest of the cord.

These modifications enable the apparatus to automatically untangle itself during training without the trainee stopping to untangle it when its entangled as in FIG. 17 and FIG. 18.

[0089] It will be apparent to one skilled in the art, that features of the different embodiments disclosed herein may be omitted, selected, combined or exchanged and the invention is considered to extend to any new and inventive combination thus formed. Where a preference or particularisation is stated, there is implied the possibility of its negative, i.e. a case in which that preference or particularisation is absent.
[0090] Many variations of the invention and embodiments hereinbefore described will be apparent to people skilled in the art and all such variations are to be considered as falling within the scope of the invention.

1-58. (canceled)
59. An apparatus for training or exercise comprising:
(a) suspension means;
(b) target members configured to be suspended by the suspension means such that the target members can move around one another upon a target member being contacted by a person; and,
(c) inhibiting means configured to inhibit tangling of the target members on the suspension means upon a target member being contacted by a person.

60. The apparatus of claim 1 further comprising a punch object having a top and bottom and wherein the suspension means are adapted for connection to, or above, the top of the punch object.

61. The apparatus of claim 2 further comprising anchor means to effect the connection.

62. The apparatus of claim 3 in which the anchor means is selected from a group consisting of loop means, hook means, and a collar.

63. The apparatus of claim 3 in which the target members are remote from the anchor means.

64. The apparatus of claim 3 in which the anchor means are adapted to be detachably anchored to the suspension means.

65. The apparatus of claim 3 in which the suspension means comprise a cord and the inhibiting means comprise a sleeve on a core of comprising the cord, wherein the cord extends through the sleeve and is configured to attach to the anchor means.

66. The apparatus of claim 7 in which the sleeve is selected from a group consisting of a tube and pipe-wrap.

67. The apparatus of claim 7 in which the sleeve has a longitudinal split.

68. The apparatus of claim 7 in which the sleeve is configured with fastening means.

69. The apparatus of claim 7 in which the cord is overlapped at the anchor means such that the overlap extends into the sleeve.

70. The apparatus of claim 7 in which the cord comprises a thicker section at the anchor means such that the thicker section extends into the sleeve.

71. The apparatus of claim 1 in which the suspension means comprise a plurality of flexible arms.

72. The apparatus of claim 13 in which each arm independently of any other flexible arm is adapted to be anchored to, so as to be detachable from the suspension means.

73. The apparatus of claim 13 in which a target member is mounted to a flexible arm.

74. The apparatus of claim 13 in which an arm comprises an elastic cord.

75. The apparatus of claim 16 in which the target member is suspended on the elastic cord.

76. The apparatus of claim 13 wherein the inhibiting means comprises a sleeve and wherein each flexible arm in the plurality of flexible arms comprises a core member running through one or more sleeves wherein the core member is selected from a group consisting of an elastic cord and a chain.

77. An apparatus for training or exercise comprising:
(a) a plurality of tubes;
(b) a plurality of cords, each configured to extend through one or more tubes and the plurality of cords configured to connect together at a point of suspension; and,
(c) a target member attached to each cord wherein each target member is configured to be contacted by a person and is constrained to move around any other target member.

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