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(54) **COLLAPSIBLE EXERCISE BICYCLE**

(57)

ABSTRACT

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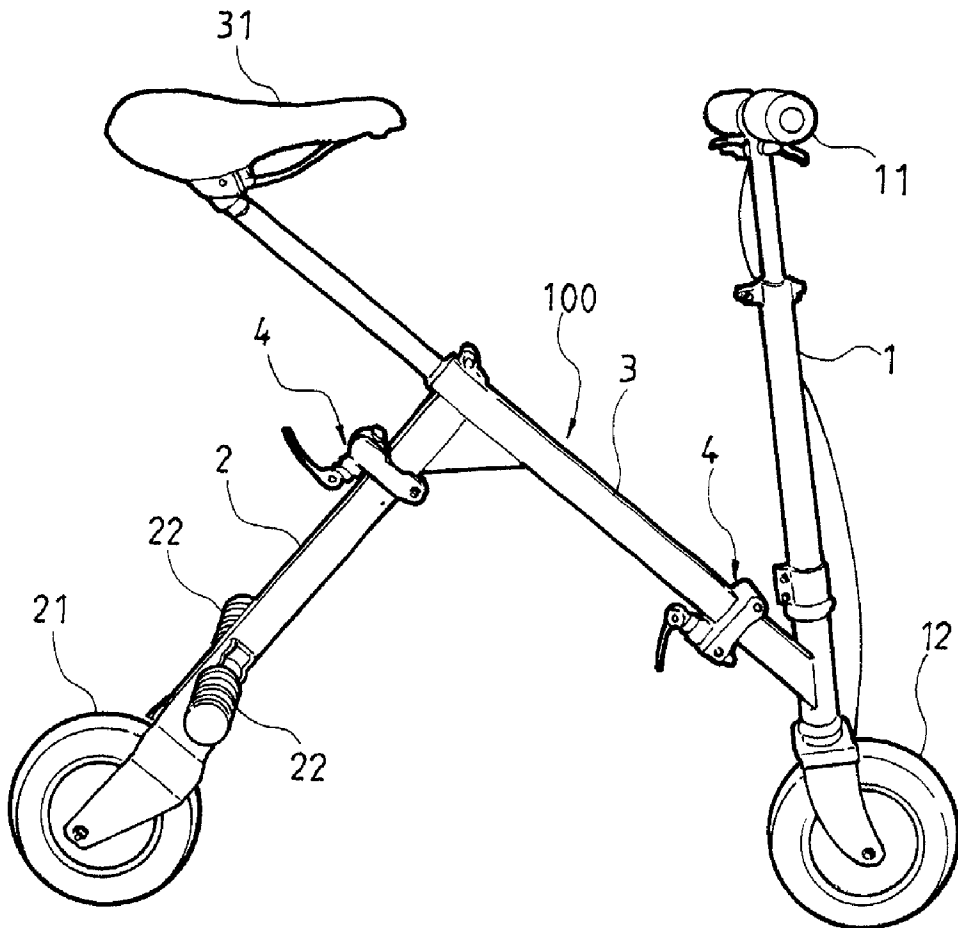
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A collapsible exercise bicycle mainly has a front wheel rod, a rear wheel rod and a diagonal rod; a handlebar is disposed at the top end of the front wheel rod and a saddle is mounted on the diagonal rod; both of the rear wheel rod and the diagonal rod are respectively connected in two segments; the connected ends thereof are disposed with retaining devices; wherein a fastening base with a rotatable moving piece is disposed on the retaining device; a press bar pivotally connects with the moving piece for coupling the fastening base; by controlling the press bar retains and detaches in a notch of the fastening base, the diagonal and the rear wheel rods can be fastened for the user to ride and made into a foldable state for folding the bicycle body into a smaller volume convenient for transportation, storage or placement in a backpack for carrying.



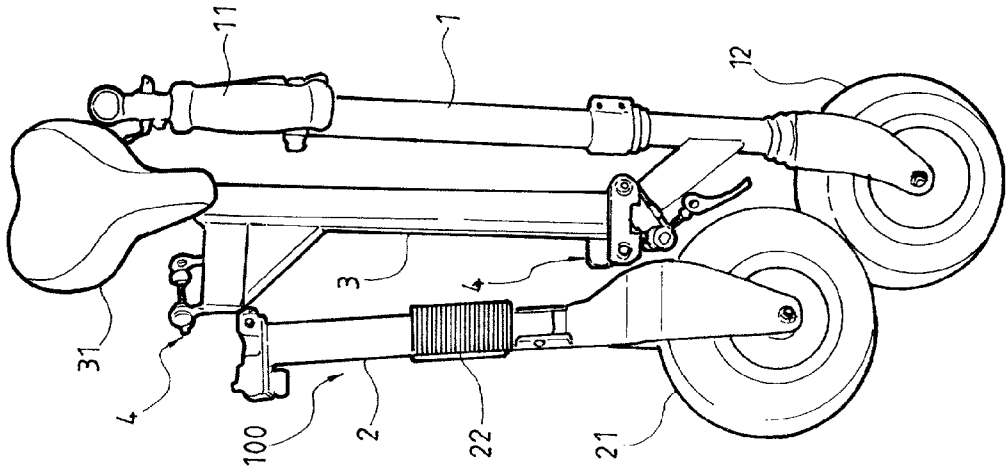


FIG. 2

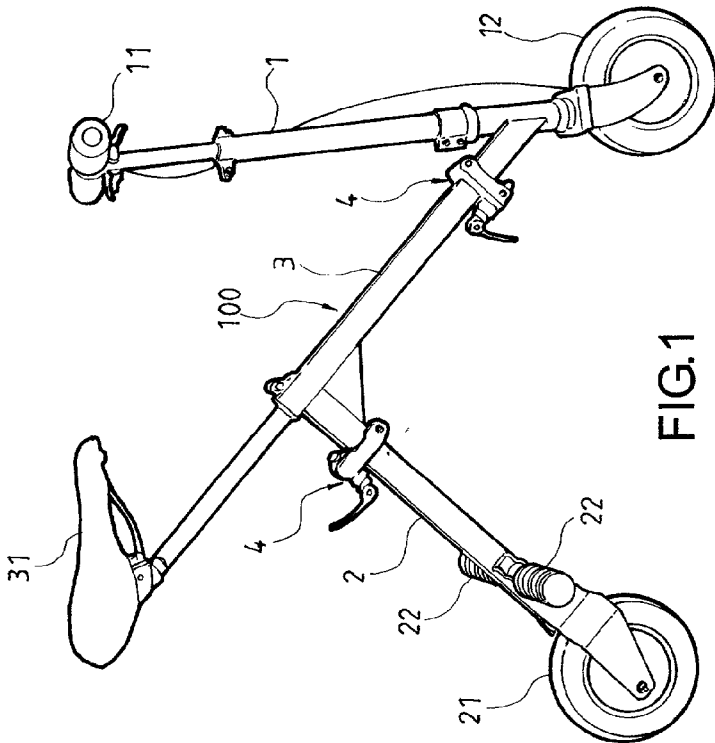


FIG. 1

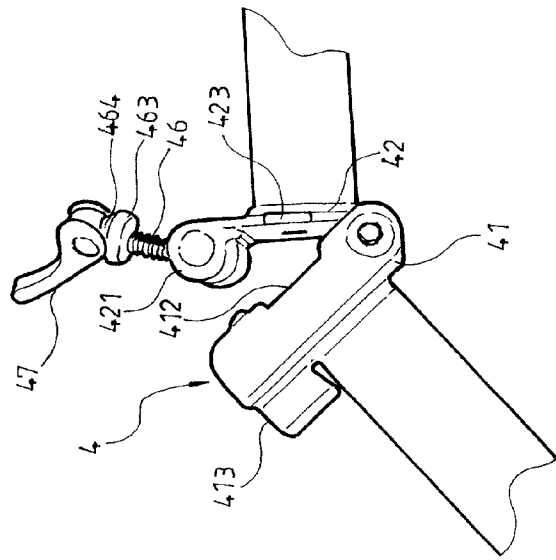


FIG. 4

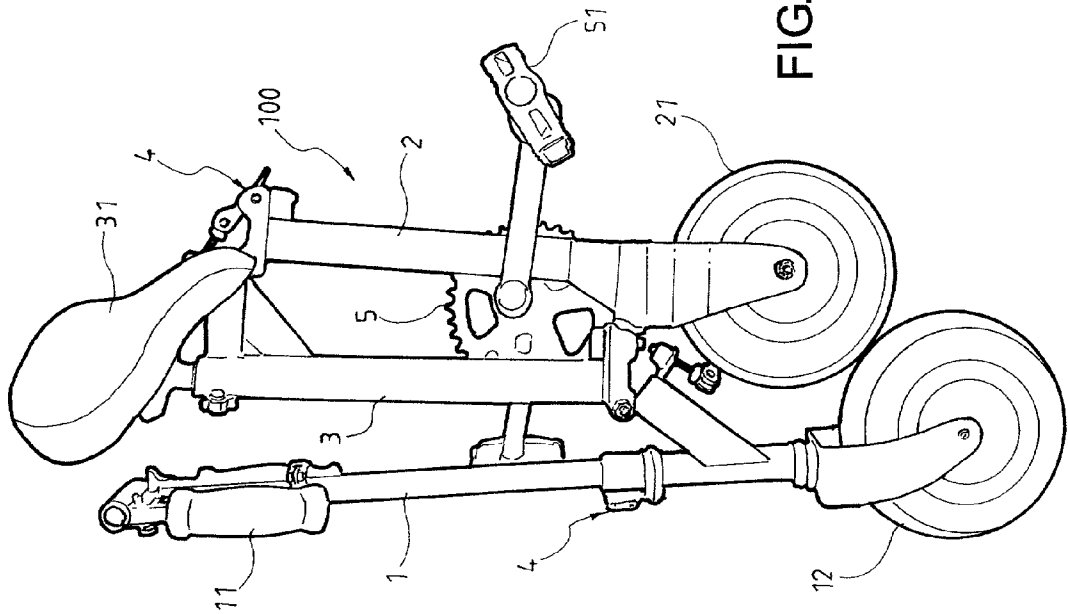


FIG. 6

COLLAPSIBLE EXERCISE BICYCLE

BACKGROUND OF THE INVENTION

[0001] 1) Field of the Invention

[0002] The present invention relates to a collapsible exercise bicycle, more particularly to a bicycle structure easy to be assembled, dismantled or folded to facilitate transportation, storage or placement in a backpack for carrying.

[0003] 2) Description of the Prior Art

[0004] Accordingly, due to the recent awareness of environmental protection and emphasis on leisure exercise; exercise bicycles capable of providing exercise and entertainment have become popular; in any kind of configurative design, to transport a huge and heavy exercise bicycle to a field is always a troublesomeness to the user; even when not in use, it occupies too much storage space and that is very undesirable; since those shortcomings have troubled and been criticized by manufacturers and consumers for a long time, to provide an improved structure of a collapsible exercise bicycle capable of increasing the efficiency and enhancing the practical value of the said product is truly necessary and is also the motive of the present invention.

SUMMARY OF THE INVENTION

[0005] Therefore the primary objective of the present invention is to provide a collapsible exercise bicycle to reduce the volume and the occupied space thereof for facilitating transportation and storage through simple folding movements.

[0006] The said exercise bicycle comprises a wheeled front wheel rod, a wheeled rear wheel rod and a diagonal rod; a handlebar is disposed at the top end of the front wheel rod and a saddle is mounted on the diagonal rod; wherein, both of the rear wheel rod and the diagonal rod are respectively connected in two segments; the connected ends thereof are disposed with retaining devices for fastening and securing the exercise bicycle for riding; the unlocking of the retaining device makes the said rear wheel and the diagonal rods to fold and reduce the volume of the bicycle.

[0007] The retaining device of the said exercise bicycle comprises a fastening base and a rotatable moving piece pivotally connected therewith; the moving piece pivotally connects with a press bar for coupling the fastening base; thereby the said press bar is retained and secured in a notch of the fastening base; the press bar detaches from the notch for unlocking and for making the rear wheel rod and the diagonal rod into a foldable state.

[0008] To enable a further understanding of the structural features and the technical contents, the brief description of the drawings below is followed by the detailed description of the preferred embodiment.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a schematic and pictorial drawing of the present invention.

[0010] FIG. 2 is a schematic drawing of an exemplary embodiment of folding the present invention.

[0011] FIG. 3 is a schematic, exploded and pictorial drawing of a retaining device of the present invention.

[0012] FIG. 4 is a schematic drawing of an exemplary embodiment of the movement of the retaining device of the present invention.

[0013] FIG. 5 is a schematic drawing of another exemplary embodiment of the present invention.

[0014] FIG. 6 is a schematic drawing of another exemplary embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0015] Referring to FIGS. 1, 2, 3 and 4, the schematic and pictorial drawing, the schematic drawing of the exemplary folding embodiment, the schematic, exploded and pictorial drawing of a retaining device as well as the schematic drawing of an exemplary embodiment of the movement of the retaining device of the present invention, the present invention mainly comprises a front wheel rod (1), a rear wheel rod (2) and a diagonal rod (3) connecting with the said front wheel and rear wheel rods (1, 2); a foldable handlebar (11) is disposed on the top rim of the said front wheel rod (1) and a front rotary wheel (12) is disposed at the bottom end thereof; a rear rotary wheel (21) is disposed at the bottom end of the said rear wheel rod (2) and a pair of opposite pedal rods (22) are disposed at the area adjacent to the said rear rotary wheel (21); a saddle (31) is mounted on the top rim of the said diagonal rod (3) to thereby comprise an exercise bicycle (100) to allow the user to sit on the saddle (31) and to hold the handlebar (11) for making forward riding and sliding movements.

[0016] Both of the area of the rear wheel rod (2) adjacent to the diagonal rod (3) and the area of the said diagonal rod (3) adjacent to the front wheel rod (1) are disposed in two segments; the connected ends thereof are respectively disposed with a retaining device (4); wherein, the said retaining device (4) is disposed with a substantially U-shaped fastening base (41); a fastening hole (411) is disposed on the rear rim of the lateral plate of the said fastening base (41); the center of the lateral plate is disposed with a concave slot (412) and a notch (413) is disposed at the front rim of the horizontal plane; a moving piece (42) is disposed with a front and a rear shaft cylinders (421, 422) as well as a wing piece (423) disposed respectively on two sides; the said front shaft cylinder (421) is disposed with a notch (43); through the rear shaft cylinder (422), the said moving piece (42) is fastened to the fastening holes (411) on the fastening base (41) by means of a transverse rod (44) into a rotary state; the notch (43) of the front shaft cylinder (421) of the moving piece (42) is inserted by a transverse rod (44) and a spring (45); furthermore, a screw rod (46) inserted by a spring (461) inserts through the said notch (43) and is then locked to a screw (462); the other end of the screw rod (46) inserted by a ring body (463) and a bushing ring (464) is then firmly locked to a press bar (47).

[0017] Through the assembly of the said members, an exercise bicycle (100) is thereby comprised; when the retaining device (4) couples with the fastening base (41) by means of the moving piece (42), the press bar (47) retains in the notch (413) to clip the wing piece (423) in the concave slot (412), an entire exercise bicycle (100) is thereby assembled for riding; when the press bar (47) detaches from the notch (413), the said rear wheel rod (2) and the diagonal rod (3) are in a foldable state ready for folding and reducing

the volume of the exercise bicycle (100) to facilitate transportation, storage or placement in a backpack for carrying.

[0018] Referring to FIGS. 5 and 6, the schematic drawing of another exemplary embodiment of the present invention, big and small gears (5, 6) can be disposed respectively on the rear wheel rod (2) and the rear wheel (21); the big and the small gears (5, 6) are connected by a driving chain (7) to comprise a exercise bicycle (100) to be pedaled on pedals (51) to move forwards; when not in use, it can be folded into a smaller volume to facilitate transportation, storage and placement in a backpack for carrying.

[0019] In summation of the abovementioned, the present invention uses the disposed retaining devices to make the exercise bicycle capable of being assembled, dismantled and folded through simple operations to facilitate transportation and eliminate too much occupied space. It is of course to be understood that the embodiment described herein is merely illustrative of the principles of the invention and that a wide variety of modifications thereto may be effected by persons skilled in the art without departing from the spirit and scope of the invention as set forth in the following claims.

1. A collapsible exercise bicycle mainly comprises a front wheel rod, a rear wheel rod and a diagonal rod connecting with the said front wheel rod and the rear wheel rod; a handlebar and a front rotary wheel are respectively disposed on the top rim and the bottom rim of the said front wheel rod; a rear rotary wheel is disposed at the bottom end of the said rear wheel rod and a pair of opposite pedal rods are disposed at the area adjacent to the said rear wheel rod; a saddle is mounted on the top rim of the said diagonal rod to thereby comprise a exercise bicycle to allow the user to make forward riding and sliding movements; the present invention is characterized that:

both of the area of the rear wheel rod adjacent to the diagonal rod and the area of the said diagonal rod

adjacent to the front wheel rod are disposed in two segments; the connected ends thereof are respectively disposed with a retaining device; wherein, the said retaining device is disposed with a substantially U-shaped fastening base; a fastening hole is disposed on the rear rim of the lateral plate of the said fastening base; a notch is disposed at the front rim of the horizontal plane; a moving piece is disposed with a front and a rear shaft cylinders; the said front shaft cylinder is disposed with a notch, thereby through the rear shaft cylinder, the said moving piece is pivotally connected to the fastening holes on the fastening base in a rotary state; through the notch, the front shaft cylinder of the moving piece is connected to a screw rod inserted by a spring; the other end of the screw rod is disposed with a press bar, thereby the moving piece couples with the fastening base to assemble an exercise bicycle for riding; the moving piece detaches from the securing base to make the said rear wheel rod and diagonal rod into a foldable state ready for folding the exercise bicycle into a reduced volume to facilitate transportation, storage or placement in a backpack for carrying.

2. A collapsible exercise bicycle according to claim 1, wherein the center of the lateral plate of the said fastening base is disposed with a pair of opposite concave slots; a pair of opposite wing pieces are disposed on the longitudinal sides of the moving piece to compose a positioning function when the said moving piece couples the fastening base.

3. A collapsible exercise bicycle according to claim 1, wherein big and small gears can be disposed respectively on the rear wheel rod and the rear wheel; the big and small gears are connected by a driving chain; the axial center of the said big gear is disposed with foot pedals to comprise a exercise bicycle.

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