

2017



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Bogotá, D.C., República de Colombia
Nit. 830 026 910 -1

Señores
Superintendencia de Industria y Comercio
Nuevas Creaciones
E. S. D.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 06-101794- -00002-0000

Fecha: 2008-08-22 15:58:46 Dep: 2020 NUECREACION
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Act: 593 IMPULSOPROCESAL Folios: 1

Expediente: 6-101794
Referencia: Patente Modelo de Utilidad: **GUIA AUTOCENTRANTE PARA BICICLETAS**
Solicitante: **LUIS ALBERTO CARVAJAL GOMEZ.**

IMPULSO

JORGE E VERA VARGAS obrando como apoderado del solicitante el señor **LUIS ALBERTO CARVAJAL GOMEZ**, atentamente solicito a su Despacho, continuar con el trámite en el proceso en referencia, ya que fue publicada en gaceta No. 575 de abril 30 de 2007 y a la fecha no hay pronunciamiento por parte de la división de nuevas creaciones sobre este asunto.

Bogotá D. C., agosto 2008.

Señor Jefe,

JORGE E VERA VARGAS
C.C. No. 17.150.455
T.P. No. 12.122 CSJ

HERMES ESPITIA/04

2780

DIVISION DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No 06-101794

EXTRACTO DE LA PRESENTE SOLICITUD DE **MODELO DE UTILIDAD**

NUMERO FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No

575 DE FECHA **30 DE ABRIL DE 2007** EL TERMINO HABIL SEÑALADO POR

LA LEY EXPIRA EL **14 DE JUNIO DE 2007.**

NOTA: Dentro del plazo de los tres (3) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el Artículo 44 y en concordancia con el artículo 85 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____

NO X



US006500098B1

22 21

(12) **United States Patent**
Werner

(10) **Patent No.:** **US 6,500,098 B1**
(45) **Date of Patent:** **Dec. 31, 2002**

(54) **BICYCLE TRAINING APPARATUS**

Primary Examiner—Stephen R. Crow

(76) **Inventor:** **Todd R. Werner**, 75 Fortier Dr.,
Williston, VT (US) 05495

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** **09/557,588**

(22) **Filed:** **Apr. 22, 2000**

(51) **Int. Cl.⁷** **A63B 21/00**

(52) **U.S. Cl.** **482/57; 482/61**

(58) **Field of Search** **482/57-63**

(56) **References Cited**

U.S. PATENT DOCUMENTS

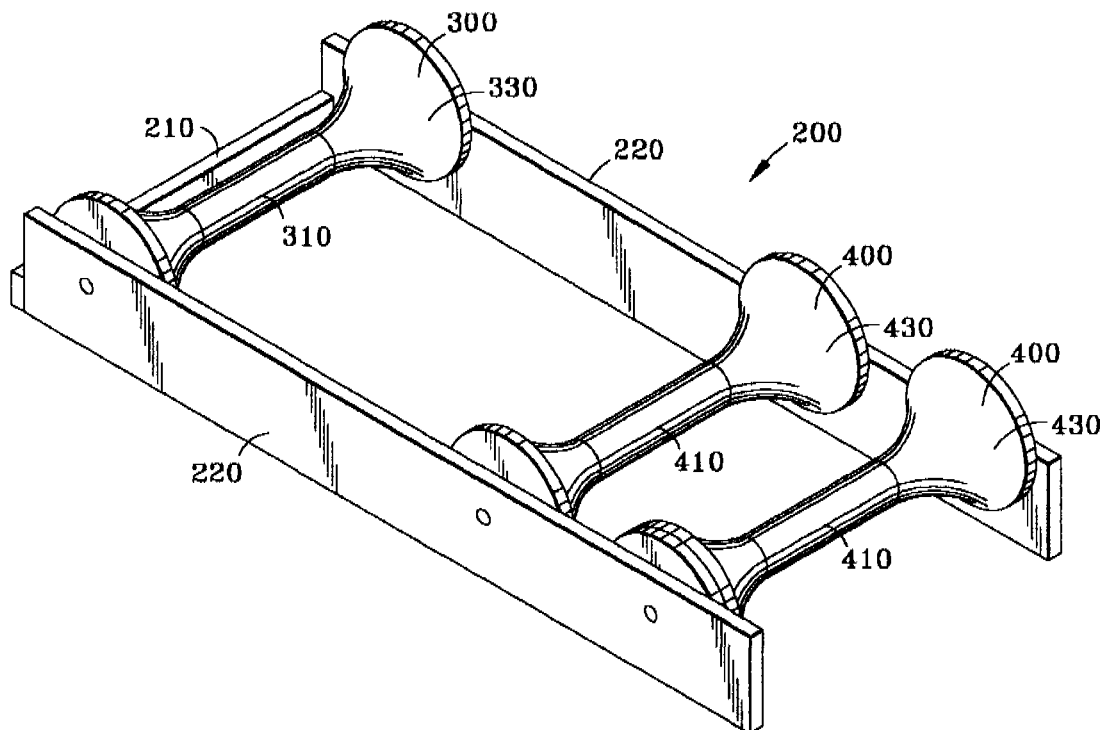
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(57) **ABSTRACT**

A bicycle roller training system of the type having three rollers for supporting a freestanding bicycle uses rollers of a novel design. The rollers comprise a cylindrical middle portion of a uniform first diameter, two end portions of a second diameter larger than the first diameter, and two transitional portions between the middle portion and the end portions. The length of the middle portion is greater than the tread width of a tire of a bicycle with which the apparatus is used. The transitional portions increase in diameter from the cylindrical middle portion toward the ends of the roller. The transitional portions preferably have a curvilinear profile, and the preferred profile of the transitional portions is a parabolic curve. Thus the transitional portions preferably comprise paraboloids of revolution. The rollers also have disk-shaped weights mounted at one or more ends for increased angular momentum. Axles of the rollers are rotatably mounted to a frame. One or more steps may be provided on the frame for convenience in mounting the bicycle.

33 Claims, 7 Drawing Sheets



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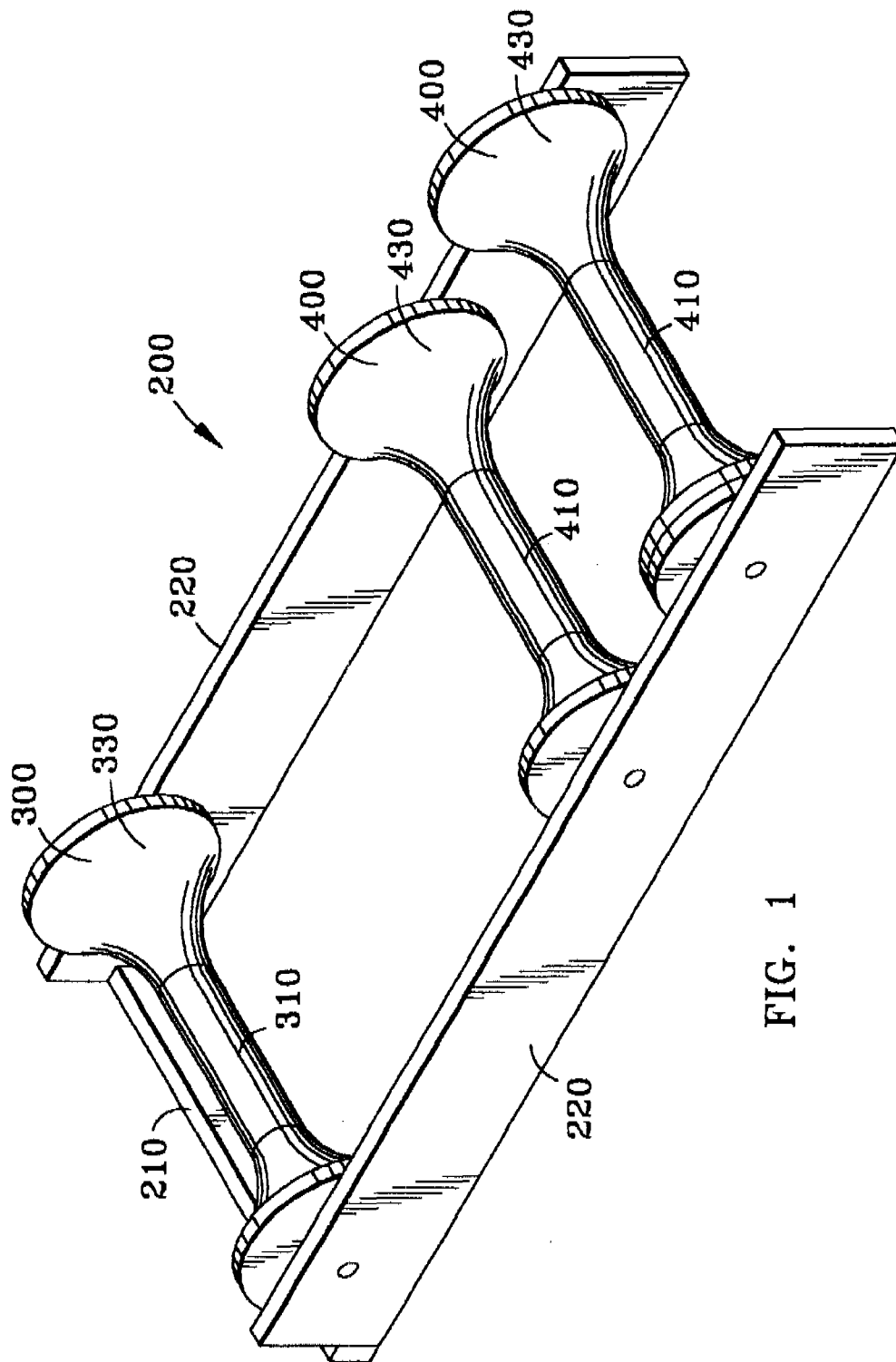


FIG. 1

24 23

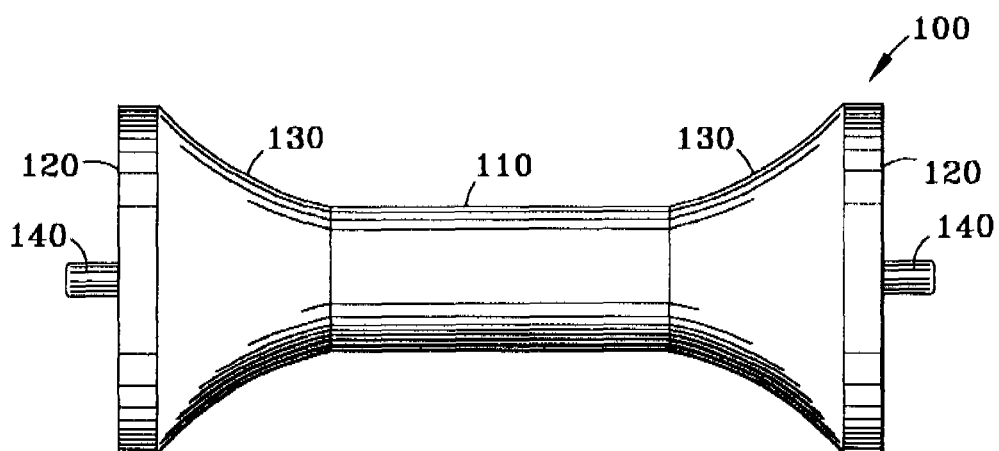


FIG. 2

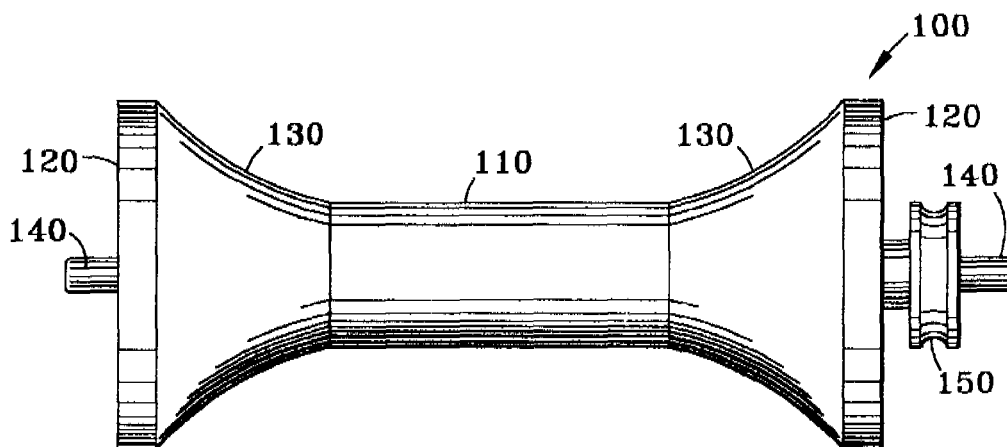


FIG. 3

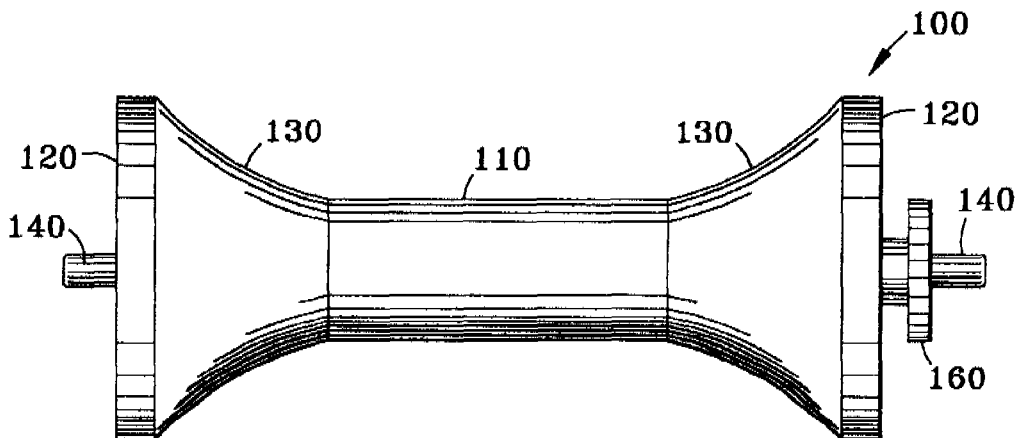


FIG. 4

25 2d

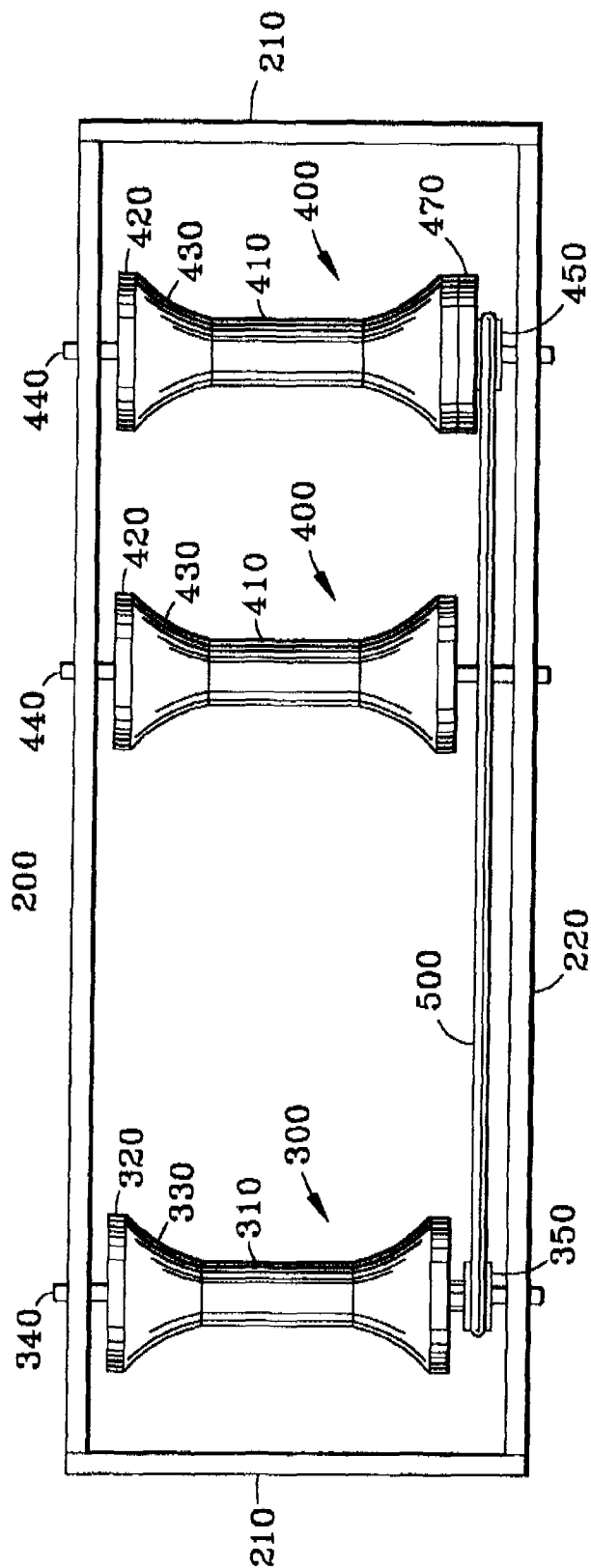


FIG. 10

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FIG. 8 is a cross-sectional elevation view of a roller of the bicycle trainer of the present invention having a disk-shaped weight affixed thereto;

FIG. 9 is a cross-sectional elevation view of a roller of the bicycle trainer of the present invention having a peripherally weighted disk affixed thereto;

FIG. 10 is a top plan view of the bicycle trainer of the present invention; and

FIG. 11 is a cutaway side elevation view of the bicycle trainer of the present invention.

FIG. 12 is a graph illustrating a geometric relationship of the present invention.

FIG. 13 is an exploded perspective view of a preferred embodiment of a roller of the bicycle trainer.

FIG. 14 is a cross-sectional elevation view of the roller of FIG. 13 as assembled.

MODES FOR CARRYING OUT THE INVENTION

FIG. 1 shows a perspective view of a bicycle trainer made in accordance with the present invention. FIG. 2 shows a front view of a roller of the bicycle trainer of FIG. 1. Roller 100 comprises a "flat" middle portion 110 of a first diameter, uniform along the length of the middle portion 110, two ends 120 of a second diameter larger than the first, and two transitional portions 130 between ends 120 and middle portion 110. Throughout this description, the term "flat," referring to middle portion 110 of roller 100, means having the form of a right substantially circular cylinder of substantially uniform diameter. That diameter may be about the same as in conventional bicycle roller trainers. The length of middle portion 110 (i.e., the distance between the two transitional portions 130) should be greater than the tread width of the bicycle tire, and preferably between about 5 times and about 20 times the tread width of the bicycle tire. Transitional portions 130 increase in diameter from the diameter of middle portion 110 to the diameter of outer portion 120 at a gradual rate, curved or linear. The preferred cross-sectional shape is curvilinear and the preferred rate of change is a parabolic rate, i.e., the diameter increases as a parabolic function of distance along a direction parallel to the roller axis. Thus, the surface of transitional portions 130 is preferably a paraboloid of revolution. The surface of transitional portion 130 is preferably tangent to the surface of middle portion 110 where the two portions meet, to provide a smooth transition with no "corner." Thus, FIG. 12 illustrates this geometric relationship on conventional X-Y coordinate axes: the profile shape of a cross section through portions 110, 120, and 130 is plotted in FIG. 12, where the profile curve of 130 is parabolic, illustrating the preferred tangent relationship at the origin. While the other drawings show a line where portions 110 and 130 join for clarity in describing the various portions, no such line would actually be visible with the preferred tangent relationship.

Optionally, the surface of transitional portions 130 may be coated or formed with a smooth texture to reduce lateral friction to further increase the difficulty of riding up the side of the transitional portions 130.

Axial mounting shaft or axle 140 is inserted longitudinally through roller 100. Roller 100 may be conveniently formed by molding of an elastomer material, such as rubber, or by molding a plastic material such as glass-fiber reinforced plastic. Alternatively roller 100 may be cast, spun, or machined from a metal such as aluminum or steel, or machined from wood, etc.

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FIGS. 3 and 4 are front views of a roller of the bicycle trainer of the present invention having a pulley 150 or a toothed gear 160, respectively, affixed thereto. Pulley 150 or toothed gear 160 is affixed to shaft 140. Either the pulley or gear allows coupling of several rollers together to ensure that they turn at the same rotational rate.

FIG. 5 is a front view of a roller of the bicycle trainer of the present invention having a disk-shaped weight affixed thereto. Disk-shaped weight 170 is affixed to one end 120 of roller 100. Disk-shaped weight 170 acts as a flywheel, imparting angular momentum to roller 100 so that it will continue to spin after the rider on the bicycle stops peddling. While only one disk-shaped weight is shown, a second disk-shaped weight may be affixed on the opposite end, thus increasing the flywheel effect on roller 100.

FIGS. 6 and 7 are front views of a roller of the bicycle trainer of the present invention having a pulley or a toothed gear respectively, as well as a disk-shaped weight affixed thereto. Pulley 150 or toothed gear 160 is affixed to shaft 140 and allows coupling of several rollers together to ensure that they turn at the same rotational rate. Additionally disk-shaped weight 170 is affixed to roller 100, preferably at the same end as pulley 150 or toothed gear 160. Optionally, disk-shaped weight 170 may be affixed to the opposite end of roller 100 from that which pulley 150 or toothed gear 160 is affixed. While only one disk-shaped weight is shown, a second disk may be affixed on the opposite end from that of the first, thus increasing the flywheel effect on roller 100.

FIG. 8 is a cross-sectional view of a roller of the bicycle trainer of the present invention having a disk-shaped weight affixed thereto. Disk-shaped weight 170 is affixed to one end 120 of roller 100. Disk-shaped weight 170 is of uniform composition and may be formed from any relatively dense material such as steel or lead. While shown as having the same diameter as end 120, disk-shaped weight 170 may have a diameter greater or less than the diameter of end 120. Those skilled in the mechanical arts will recognize that angular momentum may be increased by forming disk-shaped weight 170 with a rim relatively thickened compared with its central portion, to distribute more of its weight toward its rim, to make a peripherally weighted disk having a higher moment of inertia than a disk of uniform thickness.

FIG. 9 is a cross-sectional view of a roller of the bicycle trainer of the present invention having a peripherally weighted disk affixed thereto. Peripherally weighted disk 180 differs from disk-shaped weight 170 in that it is not of uniform composition but has the denser material located along the circumference of the disk. Disk 180 comprises a central section 182 formed of a light material such as aluminum, or plastic and a denser outer ring 184 formed of a dense material such as steel or lead. Alternatively peripherally weighted disk 180 may be fabricated from a single dense material with the central section thinner than the peripheral section, as described above.

FIG. 10 is a top view of the bicycle trainer of the present invention. Bicycle trainer 200 comprises a frame having two sides 220 and two ends 210, holding and supporting front roller 300 and rear rollers 400 rotatably in place at relative positions as shown. Axles 340 and 440 of the rollers are rotatably mounted to the sides 220 of the frame. Roller 300 is constructed similarly to roller 100 described above, having a flat middle portion, two parabolic transitional portions, and two end portions. Rollers 400 are also constructed similarly to roller 100 above, each having a flat middle portion, two parabolic transitional portions, and two end portions. Affixed to one of rear rollers 400 is disk-shaped

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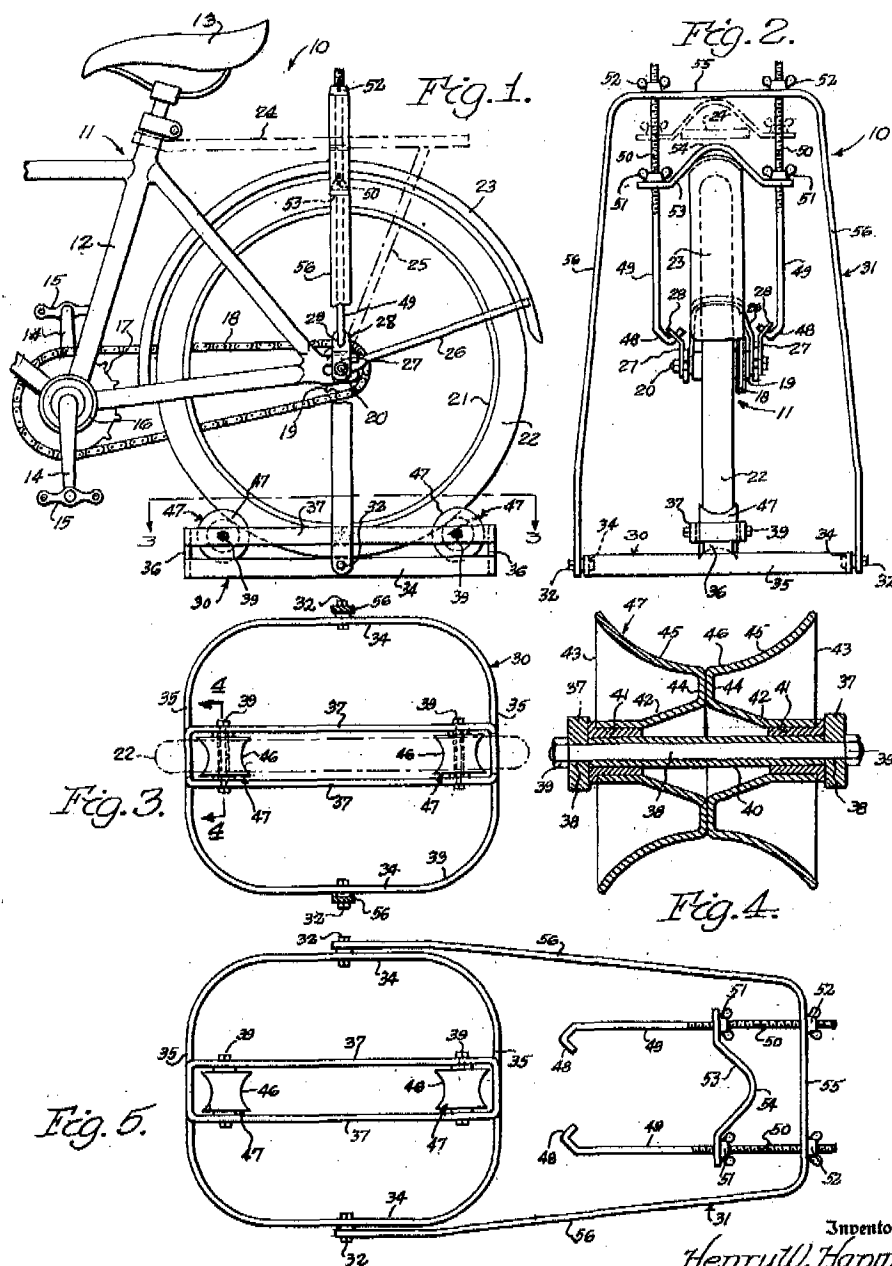
Dec. 19, 1950

H. W. HAPMAN

2,534,967

EXERCISING STAND FOR BICYCLES

Filed Aug. 14, 1948



Inventor
Henry W. Hapman
Barthel + Bugbee
Attorneys

UNITED STATES PATENT OFFICE

2,534,967

EXERCISING STAND FOR BICYCLES

Henry W. Chapman, Detroit, Mich.

Application August 14, 1948, Serial No. 44,317

2 Claims. (Cl. 272-73)

1 This invention relates to exercising devices, and in particular, to exercising stands for bicycles.

One object of this invention is to provide an exercising stand for bicycles wherein an ordinary bicycle may be quickly and easily mounted on the stand and used for exercising, after which it may be as quickly and as easily detached from the stand and used for its normal purposes without any material alteration.

Another object is to provide an exercising stand for bicycles wherein the rear wheel of the bicycle is adjustably suspended from the stand in such a manner as to exactly control the pressure which the tire exerts on a pair of spaced rollers, so that the weight of the bicycle and its rider may be counteracted to any desired extent and whereby this counteracting adjustment may be made by the rider without leaving his seat on the bicycle.

Another object is to provide an exercising stand for bicycles which is instantly foldable into a substantially flat shape so that it occupies the minimum space in storage.

Another object is to provide an exercising stand for bicycles wherein the rear wheel of the bicycle is suspended from an arch-shaped bale pivoted to a floor frame carrying a pair of spaced rollers in such a manner that the bale automatically adjusts itself to a midway position relatively to the rollers so that both rollers take an equal share of the load.

In the drawings:

Figure 1 is a side elevation of an exercising stand for bicycles according to a preferred form of the invention, with the supporting bale broken away to show the connection of the suspending rods to the rear axle of a conventional bicycle;

Figure 2 is a rear elevation of the exercising stand and bicycle shown in Figure 1;

Figure 3 is a horizontal section along the line 3-3 in Figure 1;

Figure 4 is a vertical section along the line 4-4 in Figure 3; and

Figure 5 is a top plan view of the exercising stand of Figures 1 and 2 with the bale swung down into substantially the same plane as the base frame for storage purposes.

Medical and health authorities agree that bicycle riding is one of the most healthful forms of exercising available. The riding of a bicycle under present-day conditions, however, is hazardous because of streets and highways crowded with swiftly moving motor vehicle traffic. Weather conditions, moreover, often do not permit bicycle riding at the time when the would-be exerciser is able or willing to ride. Certain indoor exercis-

ing devices utilizing the principles of the bicycle have been devised and are used to some extent in gymnasiums and health studios. Their widespread use, however, has been retarded by the fact that their specialized construction results in a high cost and, therefore, an extremely high price. Furthermore, the device is good only for indoor exercise or exercise in a stationary location out of doors, as the device cannot be ridden as an ordinary bicycle from place to place. Finally, the special exercising devices occupy a considerable amount of space and it is difficult to find sufficient storage space in the modern house.

The present invention provides a foldable exercising stand upon which an ordinary bicycle may instantly be mounted for use as an exerciser, yet from which it may be instantly detached and used for travel without difficulty. The only addition or alteration necessary to make to the bicycle is to bolt a pair of small clips to the rear axle, one on each end, these clips having holes through which the hook-like lower ends of suspension rods are inserted. These suspension rods, at their upper ends, pass through an arch-like bale which is pivoted to a floor frame and are threaded to receive wing nuts by which the suspension rods may be raised and lowered. The tire of the rear wheel of the bicycle rests on a pair of spaced rollers, but the ordinary defect of such arrangements is eliminated by the use of the suspension rods.

Hitherto, it has been found that if a bicycle is allowed to rest on rollers, an operator attempting to pedal the bicycle finds it almost impossible to apply enough force to operate the bicycle because of the friction between the tire and the rollers and because of the very slight amount of force which is actually exerted at the periphery of the tire. The present invention, by suspending the rear wheel of the bicycle from a U-shaped frame or bale by means of the suspension rods, takes the weight of both bicycle and rider off the tire to any desired extent, leaving only a slight load to be borne by the supporting rollers and hence developing only a slight amount of friction, thus making it very easy for the rider to operate the bicycle.

Referring to the drawings in detail, Figure 1 shows an exercising stand generally designated 10 according to a preferred form of the present invention, upon which a conventional bicycle, generally designated 11, is mounted in the manner described below. The bicycle 11 consists of the usual frame 12 with a saddle 13 mounted on the

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upper part thereof, a pair of cranks 14 with pedals 15 mounted thereon. The cranks 14 with their connecting shaft are rotatably supported in the usual crank bearing 16 and carry a drive sprocket 17. An endless chain 18 encircles the sprocket 17 and also a driven sprocket 19 on the rear axle 20, the sprocket 18 driving the bicycle wheel 21 with its tire 22. The bicycle may also be optionally equipped with a mud guard 23 and a luggage carrier platform 24 secured to the frame 12 beneath the saddle 13, and having struts 25 extending down to the rear axle 20. The mud guard 23 also has the usual struts 26 likewise extending to the rear axle 20.

In order to attach the bicycle 11 to the exercising stand 10, a pair of angle clips 27 (Figures 1 and 2) are bolted to the rear axle 20 at opposite ends thereof. The clips 27 remain with the bicycle at all times and offer no interference with its normal use. The upper ends of the clips 27 are bent as at 28 and provided with apertures 29 by which the bicycle 11 is suspended from the exercising stand 10 in the manner explained below.

The exercising stand 10 consists generally of a horizontal base 30 and a vertical approximately U-shaped suspension frame 31 pivoted on the pivot bolts 32 to the base 30. The base 30 includes an open frame 33 of roughly rectangular outline with rounded corners, this frame 33 being thus of orbital shape. The pivot bolts 32 are attached to the side portions 34 of this frame 33 (Figure 3) whereas from the end portions 35 rise plate-like uprights 36 welded or otherwise secured thereto. Interconnecting the uprights 36 and secured thereto as by welding are parallel side bars 37 which are bored as at 38 near their opposite ends (Figure 4) to receive axle bolts 39.

The axle bolts 39 extend between the side bars 37 and each is covered by a tubular member 40 upon the opposite ends of which flanged collars 41 are mounted, these in turn supporting the inner flanges 42 of wheel halves 43. The inner flanges 42 extend toward one another to parallel annular webs 44 from which in turn they extend outward again in cooperating arcuate portions 45 coextensive with one another so as to form grooves 46 in grooved rollers or pulleys, generally designated 47. The axle bolts 39 and consequently the grooved rollers 47 are placed at such separations along the side bars 37 as to receive the ordinary bicycle wheel 21 and tire 22 without permitting the latter to collide with the floor or ground. The tire 22 of course fits the grooves 46 in the rollers 47 in the manner shown in Figures 1 and 2.

Hooked into the apertures 29 in the bent portions 28 of the clips 27 are the hooked lower ends 48 of suspension rods 49, the upper end portions of which are threaded as at 50 to receive lower and upper wing nuts 51 and 52 respectively. Mounted beneath the lower wing nuts 51 and bored at its opposite ends to receive the suspension rods 49 is a looped bridge member 53, the central loop portion 54 of which fits either the bicycle mudguard 23 or the luggage rack 24 as shown by the solid lines and dotted lines respectively in the upper portion of Figure 2. The horizontal portion 55 of the U-shaped vertical suspension frame 31 is also bored at spaced locations for the passage of the suspension rods 49 (Figure 2) immediately beneath the upper wing nuts 52. The side portions 56 of the U-shaped frame 31 are inclined slightly inward from bottom to top so as to give it roughly the outline of a truncated triangle or trapezoid.

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In the use of the invention, the U-shaped frame 31 is swung upward from the storage position of Figure 5 to the operating position of Figures 1 and 2, and the bicycle 11 is backed into position with its rear tire 22 resting upon the rollers 47. The suspension rods 49 are then lowered by loosening the wing nuts 51 and 52 until the hook portions 48 at the lower ends thereof enter the holes 29 in the outwardly bent portions 28 of the clips 27 (Figure 2). The bridge member 54 is then lowered upon the mudguard 23 or luggage rack 24, as the case may be, and the lower wing nuts 51 tightened to firmly hold the bicycle 11 in position. The upper wing nuts 52 are then tightened to take part of the weight of the bicycle off the rollers 47 and thus to suspend the rearward portion of the bicycle 11 from the U-shaped vertical frame 31.

The rider then mounts the bicycle in the usual way and operates the pedals 15 to rotate the rear wheel 21. If the resistance is too great, he tightens down on the upper wing nuts 52, lifting the rearward portion of the bicycle 11 still further off the rollers 47 and lessening the resistance. The rider may do this without leaving the saddle 13, merely by turning around and reaching for the wing nuts 52 which are within easy access. Since the vertical frame 31 is pivoted as at 32 to the base 30, the weight of the bicycle and rider are equally distributed between the rollers 47. The rider then rides the bicycle in the usual way and obtains exercise to any desired extent without leaving his home. After he has finished his exercising, he may leave the bicycle in the position shown in Figures 1 and 2. If, on the other hand, he wishes to use the bicycle for travel, he merely loosens the wing nuts 51 and 52 to drop the hooked portions 48 of the suspension rods 49 out of the holes 29 in the clips 27, whereupon the bicycle may be ridden away. The vertical frame 31 may then be folded down into the flat position of Figure 5, if desired, so that it occupies the minimum space for storage.

In securing the bicycle to the stand by means of the bridge member 54 and wing nuts 51, it is preferable to tighten the lower wing nuts 51 before the rider mounts the bicycle. The upper wing nuts 52, however, can be tightened or loosened after the rider has mounted the bicycle, thereby lightening the load and consequently the indentations which the rollers 47 make in the bicycle tire 22, which indentations ordinarily increase the difficulty of riding the bicycle by the resistance set up by the continuous flexing of the tire required.

What I claim is:

1. An exercising stand for bicycles comprising a base adapted to rest upon a supporting surface, a pair of rollers journaled on said base in spaced relationship and separated from one another a sufficient distance to support the rear wheel of a bicycle out of contact with said supporting surface, a frame structure connected to said base on opposite sides of said wheel and extending upward therefrom, and a bicycle suspension structure depending from the upper portion of said frame structure and attachable to said bicycle adjacent said rear wheel, said suspension structure including adjusting mechanism for altering the length thereof from said frame structure.

2. An exercising stand for bicycles comprising a base adapted to rest upon a supporting surface, a pair of rollers journaled on said base in spaced relationship and separated from one another a

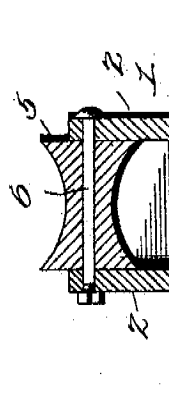
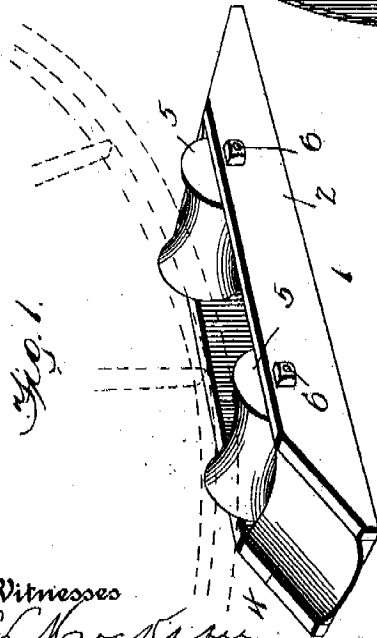
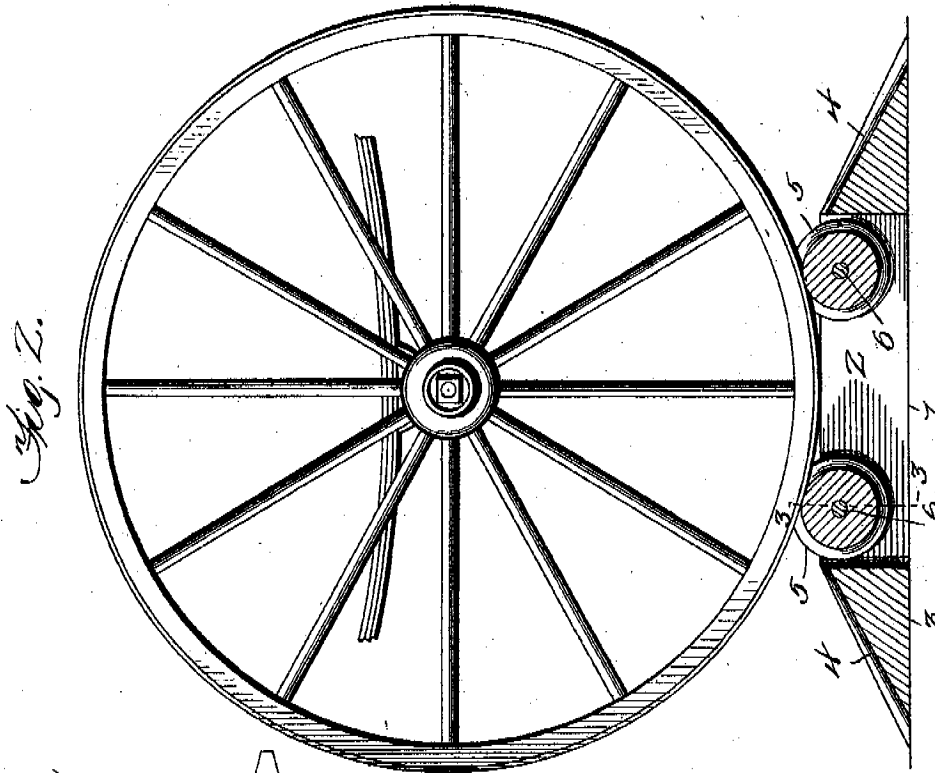
No. 698,231.

Patented Apr. 22, 1902.

C. STARZMAN.
WASHING JACK.

(Application filed Dec. 7, 1901.)

(No Model.)



Witnesses
P. H. Kerkamer
S. P. Kerkamer

Inventor
Charles Starzman
By *W. C. Kerkamer*
Attorney

UNITED STATES PATENT OFFICE.

CHARLES STARZMAN, OF YOUNGSTOWN, OHIO.

WASHING-JACK.

SPECIFICATION forming part of Letters Patent No. 698,231, dated April 22, 1902.

Application filed December 7, 1901. Serial No. 85,023. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STARZMAN, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Washing-Jacks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved washing-jack for vehicle-wheels, and is designed to provide means for supporting a vehicle-wheel off the ground during the washing thereof, while at the same time acting as a check or holder for the wheel to prevent turning thereof except when desired.

Ordinarily in the washing of vehicle-wheels a lifting-jack is employed in connection with the wheel-axle to provide for raising the axle sufficiently to lift the wheel from the ground, whereby it may be freely rotated in the scrubbing or washing operation to bring different portions of the wheel into convenient position for being cleansed. With a lifting-jack used in this the usual way the wheel has no check whatever to the free rotation thereof and frequently revolves so freely as to interfere with the expeditious washing thereof.

In contradistinction to the ordinary lifting-jack placed beneath the axle and having no connection with the wheel the present invention contemplates a very simple and practical device designed as a base-support, upon which the wheel directly rests. This base-support comprises means for not only holding the wheel off of the ground, but at the same time supporting it in such a way as to permit of it being turned to any position by hand without removing or disengaging it in any way from the support. The invention also comprehends means for conveniently guiding the vehicle-wheel on and off of the jack.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

While the invention is susceptible to modification, still a simple and preferable embodiment thereof is shown in the drawings, in which—

Figure 1 is a perspective view of a washing-jack for vehicle-wheels constructed in accordance with the present invention. Fig. 2 is a longitudinal sectional view thereof, showing the same in operative position with a vehicle-wheel supported thereon. Fig. 3 is a cross-sectional view on the line 3 3 of Fig. 2, showing a simple way of mounting the rolling supports for the wheel.

Like reference-numerals designate corresponding parts in the several figures of the drawings.

The invention in its general organization comprises a suitable base adapted to rest on the ground or floor, rolling supports carried by the base designed to revolvably support the vehicle-wheel thereon, and suitable guides or guiding members for directing the wheel onto and off of the supports. These instrumentalities may be associated together in any practical way to effect the objects of the invention; but a simple and effective construction is shown in the drawings. In this preferred construction the base of the jack is designated by the numeral 1, and essentially consists of a frame of suitable form to provide for carrying the rolling supports and also constructed so as to rest flat upon the ground or floor. The said base-frame 1 is usually of an oblong rectangular configuration and may also be of an open or skeleton form to simplify and cheapen the manufacture thereof. In its simpler form the said frame 1 comprises the oppositely-arranged frame sides 2, connected together in a suitable manner. In addition to the frame sides 2 the base-frame is provided at the opposite ends thereof with the wheel-guides 3. These guides may be in the form of blocks interposed between and connecting the frame sides, but are provided with inclined upper sides 4, leading from the plane of the frame bottom to the top thereof, and in the preferred construction the inclined upper sides 4 are longitudinally concaved or grooved to provide inclined grooved runways at the ends of the base-frame, which serve to guide the vehicle-wheel onto and off of the rolling supports 5. The rolling supports 5 are mounted

32 31

within or on the base-frame between the oppositely-located guides 3 and are adapted to constitute the supporting elements upon which the vehicle-wheel directly rests. The rolling supports 5 are preferably in the form of peripherally-grooved rollers arranged in spaced parallel relation and usually in the same horizontal plane, and each of said rollers is mounted upon its independent journal bolt or spindle 6, extending transversely across the base-frame and connected to the sides thereof. The journal bolts or spindles 6 may be detachable to provide for the removal and replacing of the rollers should this become necessary.

In using the device the base-frame is placed flat upon the ground or floor and the vehicle-wheel rolled up one of the guides 3 onto and between the oppositely-arranged rolling supports 5. In such position, as shown in Fig. 2, the wheel is held off the ground, but at the same time can be easily turned by hand. When not thus manipulated, the wheel is necessarily held against turning by its own weight and the weight of the parts sustained thereby.

From the foregoing it is thought that the construction, use, and many advantages of the herein-described washing-jack will be readily apparent without further description, and it will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. A washing-jack for vehicle-wheels comprising a portable base constructed to rest flat upon the ground or floor, rolling supports carried by the base and arranged to hold a wheel thereon in a plane elevated above the ground-level, and guides carried by the base and arranged to direct the wheel on and off the supports.

2. A washing-jack for vehicle-wheels comprising a base having oppositely-located inclined wheel-guides, and rolling supports for sustaining thereon the wheel, said supports being arranged in the interval between the opposite guides, and adapted to support the wheel in a plane above the ground-level.

3. A washing-jack for vehicle-wheels comprising a base constructed to rest flat upon the ground or floor, and a pair of wheel-supporting rollers held by the base in a plane elevated from the ground or floor and arranged in spaced parallel relation in the same horizontal plane.

4. A washing-jack for vehicle-wheels comprising a base-frame provided at the opposite ends thereof with wheel-guides having inclined grooved runways, and a pair of peripherally-grooved wheel-supporting rollers mounted in the base-frame between the opposite guides, said rollers being disposed in spaced parallel relation and in the same horizontal plane.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES STARZMAN.

Witnesses:

ELLA DAVIS,
JOHN I. WILLIAMS, Jr.

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32

**SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES**

2020
Bogotá, D.C.,

Abogado
JORGE E. VERA VARGAS

ASUNTO	Radicación	06-101794
	Trámite	003
	Evento	001
	Actuación	430
	Oficio	1 2 4 1 7
	Folios	0115

Como resultado del examen de patentabilidad de la solicitud de modelo de utilidad de la referencia, realizado según lo establece el artículo 45 de la decisión 486 de la comisión de la Comunidad Andina, se notifica el siguiente concepto técnico:

1. Documentos estudiados

Descripción: Folios: 6 a 7 como se radicó inicialmente

Reivindicaciones: Folio: 8 como se radicó inicialmente

Dibujos: Folios: 11 a 12 como se radicó inicialmente

2. Objeto de la invención

La presente solicitud se titula "GUÍA AUTOCENTRANTE PARA BICICLETAS", Folio N° 1.

El objeto de la presente solicitud de patente de modelo de utilidad se refiere a un sistema auto centrante para bicicletas que reemplaza la bicicleta estática dado que al pedalear las ruedas se deslizan sobre los rodillos de las guías sin avance alguno.

De otra parte, el pliego reclama una guía auto centrante para bicicletas y pedaleo estático relacionada en las reivindicaciones 1 a 3

El objeto de la solicitud definido anteriormente se clasificó en la IPC B62B 1/00.

3. Determinación del Estado de la Técnica

Considerando que la fecha de presentación de la solicitud de modelo de utilidad es del 09 de Octubre del 2006, se buscaron documentos del estado de la técnica relacionados, con fecha de publicación anterior a esta. Se realizó búsqueda de documentos relevantes dentro del estado de la técnica, entendiendo como estado de la técnica la definición provista en el Art. 16 D 486, y las excepciones fijadas en el Art. 17 de la misma.

Se encontró como anterioridades los documentos relacionados a continuación que afectan la patentabilidad del objeto de la presente solicitud

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N°	Documento*	Título	Fecha de publicación
D1	US6500098	BICYCLE TRAINING APPARATUS	2002-12-31
D2	US2534967	EXERCISING STAND FOR BICYCLES	1948-08-14
D3	US698231	WASHING JACK	1902-04-22

*los documentos mencionados se anexan al expediente

4. Análisis de patentabilidad (artículo 14 D486)

En cumplimiento del Art. 14 D486 se procedió a evaluar los requisitos de novedad y aplicabilidad industrial, con el fin de establecer la patentabilidad del modelo objeto de la solicitud en estudio.

4.1. Novedad (artículo 16 D486)

El requisito de novedad se evaluó por comparación entre lo solicitado y los documentos citados en el numeral 4. La novedad de la invención se ve afectada por ser el objeto de la solicitud idéntico a los documentos encontrados en el estado de la técnica

El presente de modelo de utilidad se refiere a una guía auto centrante para bicicletas y pedaleo estático o calentamiento pre-competitivo caracterizada por comprender:

- Un armazón de soporte metálico
- Un juego de rodillos instalado adelante y atrás del armazón que conforman una guía de encaje para la(s) rueda(s) de la bicicleta en rotación.
- Donde dicha armazón tiene unos apoyos de soporte al piso.
- Donde el juego de rodillos comprende un par de piezas de perfil tronco cónico con leve curvatura externa, enfrentados en su diámetro menor para conformar una acanaladura receptora del espesor de una rueda de bicicleta.
- Donde el juego de rodillos esta separado del piso y unido por un eje fijo mediante tuercas de apriete a las caras externas del armazón de soporte metálico.

La anterioridad **D1** a un sistema para entrenamiento de rodillos de bicicleta que comprende los siguientes elementos comunes a la presente solicitud:

- Unos soporte laterales **220** y un soporte transversal **210** (Fig. 1)
- Un juego de rodillos **300** y **400** colocados en los extremos de los soportes laterales **220** (Figs. 1, 4, 10) que conforman una guía de encaje para la(s) rueda(s) de la bicicleta en rotación.
- Donde dicha armazón tiene unos apoyos de soporte al piso (Fig. 1).
- Donde el juego de rodillos comprende un par de piezas **330** con leve curvatura externa, enfrentados en su diámetro menor para conformar una acanaladura receptora del espesor de una rueda de bicicleta.
- Donde el juego de rodillos esta separado del piso y unido por un eje fijo **140** mediante tuercas de apriete a las caras externas del armazón de soporte metálico (Fig. 10).

Como se puede ver, el documento D1 comprende todas las características esenciales del objeto reclamado.

La anterioridad **D2** presenta una un dispositivo para hacer ejercicio en bicicletas estáticas. Este dispositivo presenta las siguientes características comunes a la presente solicitud:

- Un armazón conformado por unas barras laterales **37** (Figs. 3 y 5)
- Un juego de rodillos **47** instalados en la parte trasera y delantera de las barras laterales **37**, los cuales conforman una guía de encaje **46** para la(s) rueda(s) de la bicicleta en rotación.
- Donde dicha armazón tiene una base **30** de apoyo al piso (Figs. 1 y 3).
- Donde el juego de rodillos comprende un par de piezas de perfil con leve curvatura externa **45**, enfrentados en su diámetro menor para conformar una acanaladura receptora **46** del espesor de una rueda de bicicleta (Fig. 4).
- Donde el juego de rodillos esta separado del piso y unido por un eje fijo **39** mediante tuercas de apriete a las caras externas de las barras laterales **37** (Fig. 3).

De lo anterior, es claro que la materia contenida en el documento D2 también afecta la novedad de la solicitud de la referencia.

Por otra parte, la anterioridad **D3** se refiere a un dispositivo mejorado para el lavado de llantas de vehículos, el cual proporciona un soporte para levantar la llanta durante el tiempo de lavado. Este documento presenta las siguientes características:

- Un armazón **1** que comprende soportes laterales **2** (Fig. 1)
- Un juego de rodillos **5** instalado adelante y atrás del armazón **1** que conforman una guía de encaje para la(s) rueda(s) en rotación.
- Donde dicha armazón tiene unos apoyos de soporte al piso (Figs. 1 a 3).
- Donde el juego de rodillos **5** comprenden una leve curvatura externa a cada lado, conformando en su interior un diámetro menor para conformar una acanaladura receptora del espesor de una rueda.
- Donde el juego de rodillos esta separado del piso y unido por un eje fijo **6** mediante tuercas de apriete (Fig. 1) a las caras externas **2** del armazón de soporte **1** (Fig. 1).

Es claro que la solicitud de modelo de utilidad no presenta ninguna ventaja o efecto novedoso con respecto al estado del arte, por consiguiente se considera que el objeto de la solicitud no tiene Novedad y no cumple con los requisitos del artículo 14 de la decisión.

5. Conclusión:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:

Nº	Documento Nº	Reivindicaciones Afectadas	Requisito que Afecta
D1	US6500098	1 a 3	Novedad
D2	US2534967	1 a 3	Novedad
D3	US698231	1 a 3	Novedad

Se recomienda, que tenga en cuenta que el replanteamiento de esos apartes NO podrá implicar una ampliación de la protección que correspondería a la divulgación contenida en la solicitud inicial, de acuerdo a lo que establece el artículo 34 de la Decisión 486.

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de treinta días contados a partir de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2 Literal e) del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



ALIX CARMENZA CÉSPEDES DE VERGEL
Directora Nuevas Creaciones (C)

El anterior requerimiento fue notificado por fijación en lista, de fecha
12 NOV. 2009

CONCEPTO TECNICO No. 3778	EXAMINADOR TECNICO Código No. 202082
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7/11/09