CLAIMS

1. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley (312) for storing/releasing kinetic energy, which has a power source driving an active pulley (112,113) having a unidirectional rotating output feature, wherein ~~so~~ when a transmission belt (100) is tightened while the active pulley drives~~driving~~ a passive pulley (212,213) in periodically varied speed ratios, ~~meanwhile an~~the auxiliary pulley (312) of an auxiliary pulley assembly for storing/releasing kinetic energy (700) is ~~linked~~ arranged for storing energy to form a prestressed force and~~,~~ when the force applied by the active pulley to the passive pulley through the transmission belt is zero or relatively smaller, the auxiliary pulley (312) is enabled to release energy ~~for recovering~~ so as to apply force to the transmission belt, because the active pulley that the transmission belt (100) is coupled to, is restrained by the unidirectional transmission feature, the transmission belt is enabled to ~~link~~drive the passive pulley to operate in the original revolving direction for feeding back the kinetic energy, wherein ~~it mainly consists of:~~

The transmission wheel series includes the following features; ~~with periodically varied speed ratio and having~~ reciprocally displacing auxiliary pulley for storing/releasing kinetic energy is provided with a non-releasing synchronous transmission relation between the transmission belt (100) and the transmission wheel thereby forming a non-sliding synchronous transmission wheel set, the ~~mentioned~~ wheel set ~~can be~~being composed of a chain-shaped transmission belt and a chain wheel, or a tooth-shaped pulley and a tooth-shaped transmission belt; and wherein:

--the active pulley assembly (500)~~:~~ is composed of an active wheel shaft (111)~~,~~ and the ~~an~~ active pulley, the active pulley ~~is~~being combined with the

active wheel shaft (111), the active wheel shaft (111) ~~is served~~being arranged to input the rotational kinetic energy, the active pulley ~~is~~being composed of various transmission pulleys having different transmission radius and dimensions and formed in ~~circular, or~~a circular shape if the passive pulley is not circular or else having a shape that is bimodal elliptical, or eccentric circular, or eccentric elliptical or eccentric bimodal elliptical ~~shapes~~;

the active pulley having the unidirectional rotating output feature comprising one or more than one of following arrangements, including 1) a unidirectional rotating transmission device (300) installed between the active pulley assembly (500) and the machine body; and 2) a unidirectional rotating transmission device (300) installed between the wheel shaft of the active pulley assembly (500) and the machine body; ~~and 3) the active pulley driven by a power source having unidirectional rotating output feature;~~

--a passive pulley assembly (600): ~~composed of~~comprising a passive wheel shaft (211) and the~~a~~ passive pulley, the passive pulley ~~is served~~being arranged to revolve on the passive wheel shaft (211), the passive pulley ~~is~~being composed of various transmission pulleys having different transmission radius and dimensions and formed in a circular shape if the active pulley is not circular or else having a shape that is ~~circular, or~~ bimodal elliptical, or eccentric circular, or eccentric elliptical or eccentric bimodal elliptical shapes;

~~--transmission belt (100): composed of a chain or a tooth-shaped transmission belt, a non-releasing synchronous transmission relation is formed between the transmission belt and the transmission wheel, thereby structuring a non-sliding synchronous transmission wheel set, the mentioned wheel set includes being composed of a chain-shaped transmission belt and a chain wheel, or a tooth-shaped pulley and a tooth-shaped transmission belt;~~

--an auxiliary pulley assembly for storing/releasing kinetic energy (700)~~:~~ ~~installed with an~~ comprising the auxiliary pulley (312) arranged for providing ~~,~~ ~~the mentioned auxiliary pulley (312) served for bearing~~ the prestressing force applied by a prestressing device is disposed at the portion of the transmission belt (100) defined between the location where the passive pulley and the transmission belt (100) ~~being ready to be~~are synchronously combined and the location where the active pulley ~~being~~ is released from the transmission belt (100); such that when the active pulley of the active pulley assembly (500) periodically drives the passive pulley of the passive pulley assembly (600), the tightness of the transmission belt (100) is varied correspondingly~~,~~ and when the transmission belt (100) is gradually tightened, an auxiliary wheel press helve (301) having plate-shaped spring function and/or the auxiliary pulley (312) having a prestressed energy storing/releasing spring (302) ~~and~~ installed between ~~the~~a rigid press helve and the machine body (800), the auxiliary wheel press helve (301) is displaced for storing energy, and when the transmission belt (100) is gradually loosened, ~~with~~ the energy releasing displacement ~~by~~of the auxiliary wheel press helve (301) ~~having plate-shaped spring function and/or the prestressed energy storing/releasing spring (302), and with the rotating direction restrain provided by the unidirectional rotating transmission device (300),~~acts on the transmission belt (100) which is enabled to pull the active pulley and the passive pulley ~~to be linked~~ in the original rotating direction so as to perform energy releasing drive; and with the disclosed structure, the speed ratio of driving the passive pulley is varied periodically.

2. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley for storing/releasing kinetic energy as claimed in claim 1, wherein including being adopted in a treadle-drive bicycle

or a fixed treadle-drive bicycle for exercising, and an elliptical pulley adopted as the active pulley and a circular pulley being adopted as the passive pulley, and a transmission belt and an auxiliary pulley being installed, which ~~mainly~~ consists of:

--bimodal elliptical active pulley (112): composed of a bimodal elliptical-like active pulley (112), installed with the active wheel shaft (111), one side of the active wheel shaft (111) of the bimodal elliptical active pulley (112) is driven by a first crank (101) linked by a first treadle (102) revolving on a first treadle shaft (103) for performing the revolving driving, the other side of the active wheel shaft (111) is driven by a second crank (201) linked by a second treadle (202) revolving on a second treadle shaft (203) for performing the revolving driving, thereby linking a circular passive pulley (212) having a passive wheel shaft (211) through the transmission belt (100);

--circular passive pulley (212): composed of a circular-like passive pulley (212), served to be linked by the transmission belt (100) driven by the bimodal elliptical active pulley (112);

--transmission belt (100): composed of a chain or a tooth-shaped transmission belt, a non-releasing synchronous transmission relation is formed between the transmission belt and the transmission wheel, thereby structuring a non-sliding synchronous transmission wheel set, the mentioned wheel set includes being composed of a chain-shaped transmission belt and a chain wheel, or a tooth-shaped pulley and a tooth-shaped transmission belt;

--auxiliary pulley assembly for storing/releasing kinetic energy (700): installed with an auxiliary pulley (312), the mentioned auxiliary pulley (312) served for bearing the prestressing force applied by a prestressing device is disposed at the portion of the transmission belt (100) defined between the location where the

circular passive pulley (212) and the transmission belt (100) being ready to be synchronously combined and the location where the bimodal elliptical active pulley (112) being released from the transmission belt (100); when the bimodal elliptical active pulley (112) periodically drives the circular passive pulley (212), the tightness of the transmission belt (100) is varied correspondingly, when the transmission belt (100) is gradually tightened, an auxiliary wheel press helve (301) having plate-shaped spring function and/or the auxiliary pulley (312) having a prestressed energy storing/releasing spring (302) and installed between the rigid press helve and the machine body (800) is displaced for storing energy, when the transmission belt (100) is gradually loosened, with the energy releasing displacement by the auxiliary wheel press helve (301) having plate-shaped spring function and/or the prestressed energy storing/releasing spring (302), and with the rotating direction restrain provided by the unidirectional rotating transmission device (300), the transmission belt (100) is enabled to pull the bimodal elliptical active pulley (112) to be linked in the original rotating direction so as to perform energy releasing drive;

~~With the disclosed structure~~Wherein, when the first treadle (102) and the second treadle (202) are stepped for driving, the speed ratio between the bimodal elliptical active pulley (112) and the circular passive pulley (212) is varied periodically during each period of the stepping.

3. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley for storing/releasing kinetic energy as claimed in claim 1, wherein including being adopted in a treadle-drive bicycle or a fixed treadle-drive bicycle for exercising, and a circular pulley being adopted as the active pulley and an elliptical pulley being adopted as the passive pulley, and a transmission belt and an auxiliary pulley being installed, which

~~mainly~~ consists of:

--circular active pulley (113): composed of a circular-like active pulley (113), installed with the active wheel shaft (111), one side of the active wheel shaft (111) of the circular active pulley (113) is driven by a first crank (101) linked by a first treadle (102) revolving on a first treadle shaft (103) for performing the revolving driving, the other side of the active wheel shaft (111) is driven by a second crank (201) linked by a second treadle (202) revolving on a second treadle shaft (203) for performing the revolving driving, thereby linking a bimodal elliptical passive pulley (213) having a passive wheel shaft (211) through the transmission belt (100);

--bimodal elliptical passive pulley (213): composed of a bimodal elliptical passive pulley (213) ~~(~~or a bimodal elliptical -like passive pulley~~)~~, linked by the transmission belt (100) driven by the circular active pulley (113);

--transmission belt (100): composed of a chain or a tooth-shaped transmission belt, a non-releasing synchronous transmission relation is formed between the transmission belt and the transmission wheel, thereby structuring a non-sliding synchronous transmission wheel set, the mentioned wheel set includes being composed of a chain-shaped transmission belt and a chain wheel, or a tooth-shaped pulley and a tooth-shaped transmission belt;

--auxiliary pulley assembly for storing/releasing kinetic energy (700): installed with an auxiliary pulley (312), the mentioned auxiliary pulley (312) served for bearing the prestressing force applied by a prestressing device is disposed at the portion of the transmission belt (100) defined between the location where the bimodal elliptical passive pulley (213) and the transmission belt (100) being ready to be synchronously combined and the location where the circular active pulley (113) being released from the transmission belt (100); when the circular

active pulley (113) periodically drives the bimodal elliptical passive pulley (213), the tightness of the transmission belt (100) is varied correspondingly, when the transmission belt (100) is gradually tightened, an auxiliary wheel press helve (301) having plate-shaped spring function and/or the auxiliary pulley (312) having a prestressed energy storing/releasing spring (302) and installed between the rigid press helve and the machine body (800) is displaced for storing energy, when the transmission belt (100) is gradually loosened, with the energy releasing displacement by the auxiliary wheel press helve (301) having plate-shaped spring function and/or the prestressed energy storing/releasing spring (302), and with the rotating direction restrain provided by the unidirectional rotating transmission device (300), the transmission belt (100) is enabled to pull the circular active pulley (113) and the bimodal elliptical passive pulley (213) to be linked in the original rotating direction so as to perform energy releasing drive;

~~With the disclosed structure~~Wherein, when the first treadle (102) and the second treadle (202) are stepped for driving, the speed ratio between the circular active pulley (113) and the bimodal elliptical passive pulley (213) is varied periodically during each period of the stepping.

4. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley for storing/releasing kinetic energy as claimed in claim 1, wherein including being adopted in a treadle-drive bicycle or a fixed treadle-drive bicycle for exercising, and the elliptical pulley being adopted as the active pulley and an elliptical pulley having 90 degree differentiation regarding to the active pulley being adopted as the passive pulley, and a transmission belt and an auxiliary pulley being installed, which ~~mainly~~ consists of:

--bimodal elliptical active pulley (112): composed of a bimodal elliptical-like active pulley (112), installed with the active wheel shaft (111), one side of the active wheel shaft (111) of the bimodal elliptical active pulley (112) is driven by a first crank (101) linked by a first treadle (102) revolving on a first treadle shaft (103) for performing the revolving driving, the other side of the active wheel shaft (111) is driven by a second crank (201) linked by a second treadle (202) revolving on a second treadle shaft (203) for performing the revolving driving, thereby linking a bimodal elliptical passive pulley (213) having a passive wheel shaft (211) through the transmission belt (100);

--bimodal elliptical passive pulley (213): composed of a bimodal elliptical-like passive pulley (213), linked by the transmission belt (100) driven by the circular active pulley (113);

--transmission belt (100): composed of a chain or a tooth-shaped transmission belt, a non-releasing synchronous transmission relation is formed between the transmission belt and the transmission wheel, thereby structuring a non-sliding synchronous transmission wheel set, the mentioned wheel set includes being composed of a chain-shaped transmission belt and a chain wheel, or a tooth-shaped pulley and a tooth-shaped transmission belt;

--auxiliary pulley assembly for storing/releasing kinetic energy (700): installed with an auxiliary pulley (312), the mentioned auxiliary pulley (312) served for bearing the prestressing force applied by a prestressing device is disposed at the portion of the transmission belt (100) defined between the location where the bimodal elliptical passive pulley (213) and the transmission belt (100) being ready to be synchronously combined and the location where the bimodal elliptical active pulley (112) being released from the transmission belt (100); when the bimodal elliptical active pulley (112) periodically drives the bimodal

elliptical passive pulley (213), the tightness of the transmission belt (100) is varied correspondingly, when the transmission belt (100) is gradually tightened, an auxiliary wheel press helve (301) having plate-shaped spring function and/or the auxiliary pulley (312) having a prestressed energy storing/releasing spring (302) and installed between the rigid press helve and the machine body (800) is displaced for storing energy, when the transmission belt (100) is gradually loosened, with the energy releasing displacement by the auxiliary wheel press helve (301) having plate-shaped spring function and/or the prestressed energy storing/releasing spring (302), and with the rotating direction restrain provided by the unidirectional rotating transmission device (300), the transmission belt (100) is enabled to pull the bimodal elliptical active pulley (112) and the bimodal elliptical passive pulley (213) to be linked in the original rotating direction so as to perform energy releasing drive;

~~With the disclosed structure~~Wherein, when the first treadle (102) and the second treadle (202) are stepped for driving, the speed ratio between the bimodal elliptical active pulley (112) and the bimodal elliptical passive pulley (213) is varied periodically during each period of the stepping.

5. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley for storing/releasing kinetic energy as claimed in claim 1, wherein including being adopted in a treadle-drive bicycle or a fixed treadle-drive bicycle for exercising, and the circular pulley being adopted as the active pulley and an eccentric circular pulley being adopted as the passive pulley, and a transmission belt and an auxiliary pulley being installed, which ~~mainly~~ consists of:

--circular active pulley (113): composed of a circular-like active pulley (113), installed with the active wheel shaft (111), the unidirectional rotating

transmission device (300) is installed between the active wheel shaft (111) and the machine body (800), one side of the active wheel shaft (111) of the circular active pulley (113) is driven by a first crank (101) linked by a first treadle (102) revolving on a first treadle shaft (103) for performing the revolving driving, the other side of the active wheel shaft (111) is driven by a second crank (201) linked by a second treadle (202) revolving on a second treadle shaft (203) for performing the revolving driving, thereby linking an eccentric circular passive pulley (413) having a passive wheel shaft (211) through the transmission belt (100);

--eccentric circular passive pulley (413): composed of an eccentric circular-like passive pulley (413), linked by the transmission belt (100) driven by the circular active pulley (113);

--transmission belt (100): composed of a chain or a tooth-shaped transmission belt, a non-releasing synchronous transmission relation is formed between the transmission belt and the transmission wheel, thereby structuring a non-sliding synchronous transmission wheel set, the mentioned wheel set includes being composed of a chain-shaped transmission belt and a chain wheel, or a tooth-shaped pulley and a tooth-shaped transmission belt;

--auxiliary pulley assembly for storing/releasing kinetic energy (700): installed with an auxiliary pulley (312), the mentioned auxiliary pulley (312) served for bearing the prestressing force applied by a prestressing device is disposed at the portion of the transmission belt (100) defined between the location where the eccentric circular passive pulley (413) and the transmission belt (100) being ready to be synchronously combined and the location where the circular active pulley (113) being released from the transmission belt (100); when the circular active pulley (113) periodically drives the eccentric circular passive pulley (413),

the tightness of the transmission belt (100) is varied correspondingly, when the transmission belt (100) is gradually tightened, an auxiliary wheel press helve (301) having plate-shaped spring function and/or the auxiliary pulley (312) having a prestressed energy storing/releasing spring (302) and installed between the rigid press helve and the machine body (800) is displaced for storing energy, when the transmission belt (100) is gradually loosened, with the energy releasing displacement by the auxiliary wheel press helve (301) having plate-shaped spring function and/or the prestressed energy storing/releasing spring (302), and with the rotating direction restrain provided by the unidirectional rotating transmission device (300), the transmission belt (100) is enabled to pull the circular active pulley (113) and the eccentric circular passive pulley (413) to be linked in the original rotating direction so as to perform energy releasing drive;

~~With the disclosed structure~~Wherein, when the first treadle (102) and the second treadle (202) are stepped for driving, the speed ratio between the circular active pulley (113) and the eccentric circular passive pulley (413) is varied periodically during each period of the stepping.

6. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley for storing/releasing kinetic energy as claimed in claim 1, wherein including being adopted in a treadle-drive bicycle or a fixed treadle-drive bicycle for exercising, and the bimodal elliptical active pulley (112) being adopted as the active pulley and an eccentric circular pulley being adopted as the passive pulley, which ~~mainly~~ consists of:

--bimodal elliptical active pulley (112): composed of a bimodal elliptical-like active pulley (112) for being formed as the active pulley assembly (500), installed with the active wheel shaft (111), , one side of the active wheel shaft

(111) of the bimodal elliptical active pulley (112) is driven by a first crank (101) linked by a first treadle (102) revolving on a first treadle shaft (103) for performing the revolving driving, the other side of the active wheel shaft (111) is driven by a second crank (201) linked by a second treadle (202) revolving on a second treadle shaft (203) for performing the revolving driving, thereby linking a bimodal elliptical passive pulley (213) having a passive wheel shaft (211) through the transmission belt (100); the phase angle of the periodically varied speed ratio of the bimodal elliptical active pulley (112) and the bimodal elliptical passive pulley (213) being combined with the transmission belt (100) is relevant to the phase angle of the first crank (101) and the first treadle (102) and the second crank (201) and the second treadle (202), and enabled to be selected when the bimodal elliptical active pulley (112) and the bimodal elliptical passive pulley (213) are combined with the transmission belt (100);

--unidirectional rotating transmission device (300): composed of a structural member having the unidirectional rotating transmission function, such as a single way clutch, an over running clutch or a ratchet structure having the same function;

--eccentric circular passive pulley (413): composed of an eccentric circular-like passive pulley (413) for being formed as the passive pulley assembly (600), linked by the transmission belt (100) driven by the bimodal elliptical active pulley (112);

--transmission belt (100): composed of a chain or a tooth-shaped transmission belt, a non-releasing synchronous transmission relation is formed between the transmission belt, the bimodal elliptical active pulley (112) and the eccentric circular passive pulley (413) thereby forming a non-sliding synchronous transmission wheel set, wherein the mechanical angle phase

relation of the active pulley assembly (500) and the passive pulley assembly (600) relative to the transmission belt (100) is enabled to be selected with respect to the function; the mentioned wheel set includes being composed of a chain-shaped transmission belt and a chain wheel, or a tooth-shaped pulley and a tooth-shaped transmission belt;

--auxiliary pulley assembly for storing/releasing kinetic energy (700): installed with an auxiliary pulley (312), the mentioned auxiliary pulley (312) served for bearing the prestressing force applied by a prestressing device is disposed at the portion of the transmission belt (100) defined between the location where the eccentric circular passive pulley (413) and the transmission belt (100) being ready to be synchronously combined and the location where the bimodal elliptical active pulley (112) being released from the transmission belt (100), the auxiliary pulley (312) is composed of a synchronizing transmission pulley or a non-synchronizing transmission pulley; when the bimodal elliptical active pulley (112) periodically drives the eccentric circular passive pulley (413), the tightness of the_transmission belt (100) is varied correspondingly, when the transmission belt (100) is gradually tightened, with the auxiliary wheel press helve having plate-shaped spring function and/or a prestressed spring for prestressing, the auxiliary pulley (312) is displaced for storing energy; when being loosened, with the auxiliary wheel press helve having plate-shaped spring function and/or the prestressed spring for displacing and releasing energy, and with the rotating direction restrain provided by the unidirectional rotating transmission device (300), the transmission belt (100) is enabled to pull the bimodal elliptical active pulley (112) and the eccentric circular passive pulley (413) to be linked in the original rotating direction so as to perform energy releasing drive;

With the disclosed structure, when the first treadle (102) and the second treadle (202) are stepped for driving, the speed ratio between the bimodal elliptical active pulley (112) and the eccentric circular passive pulley (413) is varied periodically during each period of the stepping.

7. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley for storing/releasing kinetic energy as claimed in any of claims 1~6, wherein the structure of the prestressing device of the auxiliary pulley assembly for storing/releasing energy (700) are as followings:

1) One end of the auxiliary wheel press helve (301) formed as a rigid and swingable support arm structure is swingably combined with the machine body (800), and an prestressed energy storing/releasing spring (302) is installed between the above two, the other end thereof is installed with an auxiliary wheel shaft (311) for being installed with the auxiliary pulley (312); or

2) One end of the auxiliary wheel press helve having plate-shaped spring function is combined with the machine body (800) for replacing the auxiliary wheel press helve (301) and the prestressed energy storing/releasing spring (302), the other end of the auxiliary wheel press helve having plate-shaped spring function is installed with the auxiliary wheel shaft (311), the auxiliary pulley (312) is enabled to receive the prestressing force applied by the auxiliary wheel press helve having plate-shaped spring function.

8. A transmission wheel series with periodically varied speed ratio and having reciprocally displacing auxiliary pulley for storing/releasing kinetic energy as claimed in any of claims 1~7, wherein the constitution means of the auxiliary

pulley assembly for storing/releasing kinetic energy (700) includes:

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to inwardly put prestressing force from the exterior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the engaging portion of the transmission belt (100) being ready to enter the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to expand the prestressing force outwardly from the interior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to expand the prestressing force outwardly from the interior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301)

capable of swinging along the machine body (800) to inwardly put prestressing force from the exterior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to inwardly put prestressing force from the exterior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312), and the engaging portion of the transmission belt (100) being ready to enter the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to expand the prestressing force outwardly from the interior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to expand the prestressing force outwardly from the interior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312), and the engaging portion of the transmission belt (100) being ready to enter the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to inwardly put prestressing force from the exterior in normal state, the prestressed energy storing/releasing spring

(302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to expand the prestressing force outwardly from the interior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312), and the engaging portion of the transmission belt (100) being ready to enter the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to expand the prestressing force outwardly from the interior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), engaged at the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600), with the function of the prestressed spring for storing/releasing energy (302), the mentioned auxiliary wheel press helve (301) is prestressed and expanded from inward towards outward, and the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a second auxiliary pulley (312), engaged at the engaging portion of the transmission belt (100) being ready to be engaged with the passive pulley assembly (600), with the function of the prestressed spring for storing/releasing energy (302), the mentioned auxiliary wheel press helve (301) is prestressed and expanded from inward towards outward, and an bidirectional inward-towards-outward-expanding prestressed spring for storing/releasing

energy (4021) is additionally installed between the two auxiliary pulleys (312) and the auxiliary wheel press helve (301); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to inwardly put prestressing force from the exterior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312), and the engaging portion of the transmission belt (100) being ready to enter the passive pulley assembly (600) is installed with the auxiliary wheel press helve (301) capable of swinging along the machine body (800) to inwardly put prestressing force from the exterior in normal state, the prestressed energy storing/releasing spring (302) and the auxiliary pulley (312); or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a first auxiliary pulley (312), engaged at the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600), with the function of the prestressed spring for storing/releasing energy (302), the mentioned auxiliary wheel press helve (301) is prestressed and pressed from outward towards inward, and at the distal end of the other auxiliary wheel press helve (301) swingably installed on the machine body (800) is installed with a second auxiliary pulley (312), engaged at the engaging portion of the transmission belt (100) being ready to be engaged with the passive pulley assembly (600), with the function of the prestressed spring for storing/releasing energy (302), the mentioned auxiliary wheel press helve (301) is prestressed and pressed from outward towards inward, and an

bidirectional outward-towards-inward-retracting prestressed spring for storing/releasing energy (4022) is additionally installed between the two auxiliary pulleys (312) and the auxiliary wheel press helve (301); or

-- the two auxiliary pulleys (312) are respectively installed at one end of the corresponding auxiliary wheel press helves (301), the other end of the individual auxiliary wheel press helves (301) is swingably combined with the machine body (800) through the swing shaft of auxiliary wheel press helve (303), prestressed springs for storing/releasing energy (302) are respectively installed between the two auxiliary wheel press helves (301) and the machine body (800), the two auxiliary pulleys (312) are engaged at the outer side of the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600), the two auxiliary pulleys (312) respectively press the transmission belt (100) inward thereby forming a concave bending angle, and with function of prestressed springs for storing/releasing energy (302), the mentioned auxiliary wheel press helves (301) are prestressed and pressed from outward towards inward; or

-- the two auxiliary pulleys (312) are respectively installed at one end of the corresponding auxiliary wheel press helves (301), the other end of the corresponding auxiliary wheel press helves (301) are swingably combined with the machine body (800) through the swing shaft of auxiliary wheel press helve (303), prestressed springs for storing/releasing energy (302) are respectively installed between the two auxiliary wheel press helves (301) and the machine body (800), the two auxiliary pulleys (312) are engaged at the inner side of the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600), the two auxiliary pulleys (312) respectively expand outward for pressing the transmission belt (100) thereby forming a convex

bending angle, and with the function of prestressed springs for storing/releasing energy (302), the mentioned auxiliary wheel press helves (301) are prestressed and expanded from inward towards outward; or

-- the distal end of the auxiliary wheel press helve (301) swingably installed on the passive wheel shaft (211) is installed with a first auxiliary pulley (312), engaged at the releasing portion of the transmission belt (100) releasing from the passive pulley assembly (600), with the function of the prestressed spring for storing/releasing energy (302), the mentioned auxiliary wheel press helve (301) is prestressed and pressed from outward towards inward, thereby the engaged transmission belt (100) is formed with a concave bending angle; and the distal end of the other auxiliary wheel press helve (301) swingably installed on the passive wheel shaft (211) is installed with a second auxiliary pulley (312), engaged at the engaging portion of the transmission belt (100) being ready to be engaged with the passive pulley assembly (600), with the function of the prestressed spring for storing/releasing energy (302), the mentioned auxiliary wheel press helve (301) is prestressed and pressed from outward towards inward, thereby the engaged transmission belt (100) is formed with a concave bending angle, and an bidirectional outward-towards-inward-retracting prestressed spring for storing/releasing energy (4022) is additionally installed between the two auxiliary pulleys (312) and the auxiliary wheel press helve (301).