CLAIMS:

1. A lockable or releasable ~~gear train with~~ bidirectional input and one-way output device for a bicycle comprising:~~, wherein the lockable or releasable gear train is released through operation of a lockable or releasable mechanism when a bidirectional input shaft is driven in a reverse rotary direction by a reverse driving force on the output shaft, to prevent the lockable or releasable gear train from becoming locked, and wherein:~~

a lockable or releasable transmission (13) having:

~~—the~~a bidirectional input ~~shaft of the lockable or releasable gear train has a first rotary direction and a reverse rotary direction opposite the first rotary direction~~;

a one-way output;

a gear train installed between the bidirectional input and the one-way output~~—if the bidirectional input shaft is driven in the first rotary direction, a first rotary direction output is by a first driving gear train driving the output shaft~~;

~~—if the bidirectional input shaft is driven in the reverse rotary direction, the first rotary direction output is by a second driving gear train driving the output shaft;~~

—a first one-way transmission ~~is~~ installed between the bidirectional input and the one-way output to transmit forward rotation of the bidirectional input to the one-way output ~~first driving gear train and the second driving gear train to avoid interference from the second driving gear train when the first driving gear train is driven by the bidirectional input shaft in the first rotary direction to produce the first rotary direction output~~;

—a second one-way transmission ~~is~~ installed between the gear train and the one-way output ~~second driving gear train and the first driving gear train to avoid interference from the first driving gear train when the second driving gear train is driven by the bidirectional input shaft in the reverse rotary direction to produce the first rotary direction output~~;

a shell (500); and

a releasable locking mechanism (90) installed between the gear train or the shell (500) and a fixed body of the bicycle;

wherein:

when the bidirectional input is driven forward, the one-way output is driven forward; and when the releasable locking mechanism (90) is in a locked position, the gear train and the second one-way transmission transmit the reverse rotation of the bidirectional input to the one-way output in a forward direction; and

when the releasable locking mechanism (90) is in a released position, reverse rotation of the bidirectional input is not transmitted to the one-way output.

~~the bidirectional input shaft is connected to at least one input power source for rotating the bidirectional input shaft in the first or reverse rotary directions.~~

~~2. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 1, wherein the lockable or releasable mechanism (900) is installed between a machine body and a rotatable shell of the lockable or releasable gear train with bidirectional input and one-way output.~~

~~3. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 1, wherein the lockable or releasable mechanism (900) is installed between a fixed shell and a rotating part of the lockable or releasable gear train with bidirectional input and one-way output.~~

24. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim 1, wherein the bidirectional input ~~shaft~~ and the one-way output ~~shaft~~ are coaxially installed in series.

35. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim 1, wherein the bidirectional input ~~shaft~~ and the one-way output ~~shaft~~ are coaxial.

46. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim 1, further comprising a~~wherein the at least one input~~ power ~~source~~unit (12) for driving the lockable or releasable transmission (13) ~~comprises a human power source~~.

57. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~1~~4, wherein the ~~at least one input~~ power ~~source~~unit (12) is driven by human power or ~~comprises a~~ machine power ~~source~~.

6~~8~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~1~~5, wherein the ~~at least one input~~machine power ~~source~~ unit (12) is driven by ~~comprises~~ a fluid power ~~fluid power~~ source.

7~~9~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~1~~5, wherein the ~~at least one input~~machine power ~~source~~ unit (12) is driven by~~comprises a source of~~ electric power.

8~~10~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~1~~5, wherein the ~~at least one input~~ power ~~source~~unit (12) is driven by ~~comprises~~ two or more different ~~driving~~ power sources selected from a human, machine, fluid, and electric power sources.

9~~11~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim 1, wherein the gear train comprises a planetary gear train.

10~~12~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim 1, wherein the gear train comprises an epicyclic gear train.

11~~13~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim 1, wherein the gear train comprises integrated transmissions with different transmission rotary directions.

12~~14~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim 1, wherein the lockable or releasable mechanism (90~~900~~) is driven to be locked or released by human power, or machine power, or aerodynamic force, or fluid power, or electromagnetic force.

13~~15~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~1~~9, wherein the bidirectional input ~~shaft~~ and the one-way output ~~shaft~~ are coaxial~~ly~~ shafts installed in series, and ~~further wherein:~~

-- one end of the input shaft (2000) is installed at one side of ~~a~~the shell (500) via a bearing structure, another end of the input shaft (2000) and ~~an~~the output shaft (3000) are coaxially installed in series via ~~the~~a one-way transmission (302), and a bearing is installed between the output shaft (3000) and a second side of the shell (500);

~~-- the input shaft (2000) is integrated with~~ the gear train includes a sun wheel (102) connected to the input shaft;

-- a planetary wheel (103) is installed between an outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about a planetary wheel shaft (201), and one end of the planetary wheel shaft (201) being fixed at the shell (500);

-- the lockable or releasable mechanism (90~~900~~) is installed between the shell (500) and the ~~machine~~fixed body (600);

- the second one-way transmission (301) is installed between the ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the ~~first rotary~~forward direction, the first one-way transmission (302) drives the output shaft (3000) to produce the ~~first rotary~~forward direction output and to constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (90~~900~~) is locked, when the input shaft (2000) is driven in the ~~second rotary~~reverse direction through the sun wheel (102) for further driving the planetary wheel (103) and the outer wheel (104), the ring structure of the outer wheel (104) and the second one-way transmission (301) drive the output shaft (3000) to produce the ~~first rotary~~forward direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (90~~900~~) is released, resulting in idling between the shell (500) and the ~~machine~~fixed body (600), thus prevent~~ing~~ locking of the first driving gear train and the second driving gear train.

1416. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~11~~13, wherein ~~the planetary gear train with the input shaft and the output shaft coaxially installed in series, and further wherein:~~

~~-- one end of the input shaft (2000) is installed at one side of a shell (500) via bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);~~

-- the input shaft (2000) is coupled with a sun wheel (102) through a third one-way transmission (305)~~;~~

~~-- a planetary wheel (103) is installed between an outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about a planetary wheel shaft (201), and one end of the planetary wheel shaft (201) fixed to the shell (500);~~

~~-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);~~

~~-- the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);~~

~~-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;~~

~~-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio for acceleration, deceleration, or constant velocity;~~

~~-- the outer wheel (104) is driven by the planetary wheel (103), with a transmission ratio for acceleration, deceleration, or constant velocity;~~

~~-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;~~

~~-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the third one-way transmission (305) drives the sun wheel (102), the planetary wheel (103), and the outer wheel (104), and through the ring structure of the outer wheel (104) and the second one-way transmission (301), drives the output shaft (3000) to produce the first rotary direction output and constitute the second driving gear train; and~~

~~-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.~~

15~~17~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~11~~13, wherein ~~the input shaft and the output shaft are coaxially installed in series, and further wherein:~~

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a rotational structure of a planetary wheel support arm ring frame (200) and the second one-way transmission (303)~~, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500)~~; and

-- input shaft (2000) is integrated with a sun wheel (102);

~~-- a planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) about a planetary wheel shaft (201),~~ one end of the planetary wheel shaft (201) ~~integrated with~~extends from the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) ~~rotating~~rotates between the input shaft (2000) and the one-way transmission (303)~~;~~

~~-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);~~

~~-- the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);~~

~~-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;~~

~~-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;~~

~~-- the outer wheel (104) driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;~~

~~-- by way of the above structure, the input shaft (2000) driven at the first rotary direction, through the one-way transmission (302) for driving the output shaft (3000) to produce the first rotary direction output to constitute the first driving gear train;~~

~~-- by way of the above structure, if the lockable or releasable mechanism (900) is locked, the input shaft (2000) is driven at the second rotary direction, through the sun wheel (102) for further driving the planetary wheel (103) and the outer wheel (104), and through the ring structure of the outer wheel (104) and the one-way transmission (301), for driving the output shaft (3000) to produce the first rotary direction output to constitute the second driving gear train; and~~

~~-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.~~

18. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxially installed in series, and further wherein:

-- one end of the input shaft (2000) through installed at one side of the shell (500), another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of the planetary wheel shaft (201) integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) input shaft (2000) between the shell (500) and the sun wheel (102) via the one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction for driving the sun wheel (102) and for further driving the planetary wheel (103) and the outer wheel (104), the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward moion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

19. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft coaxially installed in series, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), the planetary wheel shaft (201) is integrated with a planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the input shaft (2000) between the first one-way transmission (302) and the sun wheel (102) via a one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) drives the planetary wheel (103) and the outer wheel (104), and the output shaft 3000) is driven through the ring structure of the outer wheel (104) and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

1620. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~11~~13, wherein ~~the planetary gear train with the input shaft and the output shaft coaxially installed in series, and further wherein:~~

~~-- one end of the input shaft (2000) is installed at one side of the shell (500) via bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing installed between the output shaft (3000) and the shell (500);~~

~~-- input shaft (2000) is integrated with a sun wheel (102);~~

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201),

one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the input shaft (2000) between the second one-way transmission (301) and the first one-way transmission (302) via a third one-way transmission (303);

~~the lockable or releasable mechanism (900) is installed between the shell (500) the machine body (600);~~

~~the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);~~

~~the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;~~

~~the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;~~

~~the outer wheel (104) driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;~~

~~by way of the above structure, when the input shaft (2000) is driven at the first rotary direction, the one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;~~

~~by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and~~

~~when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.~~

~~21. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft coaxially installed in series, and further wherein:~~

-- one end of the input shaft (2000) is installed at one side of the shell (500) via bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about a ring structure of the outer wheel (104) surrounding the second one-way transmission (301) via a third one-way transmission (303), and the second one-way transmission (301) rotates about the output shaft (3000);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500)

and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

22. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) installed between the outer wheel (104) and the sun wheel (102); the center of the planetary wheel (103) planetary wheel shaft (201), one end of the planetary wheel shaft (201) fixed at the shell (500);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the one-way transmission (302) drives the output shaft (3000) to produce a first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

23. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) through the first one-way transmission (302) and the planetary wheel support arm ring frame (200), which are coaxial, and the second one-way transmission (301), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to the sun wheel (102) through a third one-way transmission (305);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates between the second one-way transmission (301) and the first one-way transmission (302);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the output shaft (3000) is driven through the first one-way transmission (302), the

planetary wheel support arm ring frame (200), and the second one-way transmission (301) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the third one-way transmission (305) and the sun wheel (102) further drive the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) to produce a first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

24. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a rotational structure of the planetary wheel support arm ring frame (200) and a third one-way transmission (303), another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates between the input shaft (2000) and the one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the output shaft (3000) is driven through the first one-way transmission (302) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) further drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through a ring structure of the outer wheel (104) and the second one-way transmission (301) to produce a first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

25. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the

input shaft (2000) between the sun wheel (102) and the shell (500) via a one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the second one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) further drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

26. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500), another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the input shaft (2000) between the sun wheel (102) and the first one-way transmission (302) via a third one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the one-way transmission (301) is installed between the ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) driven by the sun wheel (102)with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103)with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the output shaft (3000) is driven through the first one-way transmission (302) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, through the sun wheel (102) for further driving the planetary wheel (103) and the outer wheel (104), and through the ring structure of the outer wheel (104) and the one-way transmission (301), for driving the output shaft (3000) to produce the first rotary direction output to constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

27. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500), another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the output shaft (3000) via a one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the one-way transmission (301) is installed between the ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) further drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

28. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500), another end of the input shaft (2000) through the output shaft (3000) via the one-way transmission (302), and a bearing installed between the output shaft (3000) and the shell (500);
-- input shaft (2000) is integrated with a sun wheel (102);
-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the ring structure of the outer wheel (104) via a third one-way transmission (303);
-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);
-- the one-way transmission (301) is installed between a ring structure of the outer wheel (104) and the output shaft (3000);
-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;
-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the one-way transmission (302), drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;
-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) further drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500)

and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

29. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing installed between the output shaft (3000) and the shell (500);

-- input shaft (2000) is integrated with a sun wheel (102);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the input shaft (2000) installed between the sun wheel (102) and the shell (500) via a third one-way transmission (303), and the lockable or releasable mechanism (900) is installed between the planetary wheel support arm ring frame (200) and the shell (500);

-- the shell (500) is fixed at in the machine body (600);

-- the one-way transmission (301) is installed between the ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the sun wheel (102) for further driving the planetary wheel (103) and the outer

wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the planetary wheel support arm ring frame (200), preventing locking of the first driving gear train and the second driving gear train.

30. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to the sun wheel (102) through a third one-way transmission (305);

-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the input shaft (2000) and is installed between a fourth one-way transmission (305) and the shell (500) via a third one-way transmission (303), and the lockable or releasable mechanism (900) is installed between the planetary wheel support arm ring frame (200) and the shell (500);

-- the one-way transmission (301) is installed between the ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;
-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the fourth one-way transmission (305) drives the sun wheel (102), and further drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the planetary wheel support arm ring frame (200), preventing locking of the first driving gear train and the second driving gear train.

31. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 11, wherein the input shaft and the output shaft are coaxial, and further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);
-- input shaft (2000) is integrated with a sun wheel (102);
-- the planetary wheel (103) is installed between the outer wheel (104) and the sun wheel (102); a center of the planetary wheel (103) rotating about the planetary wheel shaft (201), one end of a planetary wheel shaft (201) is integrated with the planetary wheel support arm ring frame (200), and the planetary wheel support arm ring frame (200) rotates about the input shaft (2000) and is installed between the sun wheel (102) and the shell (500) via a third one-way transmission (303), and the lockable or releasable mechanism (900) is installed between the planetary wheel support arm ring frame (200) and the shell (500);
-- the second one-way transmission (301) is installed between the ring structure of the outer wheel (104) and the output shaft (3000);

-- the sun wheel (102), the planetary wheel (103), and the outer wheel (104) are constituted by gears or friction wheels;

-- the planetary wheel (103) is driven by the sun wheel (102) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outer wheel (104) is driven by the planetary wheel (103) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the sun wheel (102) further drives the planetary wheel (103) and the outer wheel (104), and the output shaft (3000) is driven through the ring structure of the outer wheel (104) and the one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the planetary wheel support arm ring frame (200), preventing locking of the first driving gear train and the second driving gear train.

1732. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~12~~10, wherein the bidirectional input ~~shaft~~ and the one-way output ~~shaft~~ are coaxial~~ly~~ shafts installed in series, and ~~further wherein~~:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is integrated with an inward oblique wheel (402);

-- the epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); the center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401); and one end of the epicyclic gear shaft (401) fixed at the shell (500);

-- the lockable or releasable mechanism (90~~900~~) is installed between the shell (500) and the ~~machine~~fixed body (600);

-- the one-way transmission (301) is installed between the outward oblique wheel (404) and the output shaft (3000);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) driven in the ~~first rotary~~forward direction, the one-way transmission (302) drives the output shaft (3000) to produce the ~~first rotary~~forward direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (90~~900~~) is locked and the input shaft (2000) is driven in the ~~second rotary~~reverse direction, the inward oblique wheel (402) further drives the epicyclic gear (403) and the outward oblique wheel (404), and the output shaft (3000) is driven through the outward oblique wheel (404) and the second one-way transmission (301) to produce the ~~first rotary~~forward direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (90~~900~~) is released, resulting in idling between the shell (500) and the ~~machine~~fixed body (600), thus preven~~t~~ting locking of the first driving gear train and the second driving gear train.

18~~33~~. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~12~~17, wherein ~~the input shaft and the output shaft are coaxially installed in series, and further wherein:~~

~~--one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);~~

-- the input shaft (2000) is coupled to an inward oblique wheel (402) through a third one-way transmission (305)~~.~~;

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); the center of the epicyclic gear (403) epicyclic gear shaft (401), and one end of the epicyclic gear shaft (401) fixed at the shell (500);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the second one-way transmission (301) is installed between the outward oblique wheel (404) and the output shaft (3000);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the third one-way transmission (305) drives the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and the output shaft is driven through the outward oblique wheel (404) and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

1934. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~12~~17, wherein ~~the input shaft and the output shaft are coaxially installed in series, and further wherein:~~

-- one end of the input shaft (2000) is installed at an epicyclic gear support arm ring frame (400) via a bearing structure, the epicyclic gear support arm ring frame (400) are integrated

with one side of the shell (500) via a third one-way transmission (303), another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

~~-- input shaft (2000) integrated with inward oblique wheel (402);~~

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) epicyclic gear shaft (401), one end of the epicyclic gear shaft (401) being integrated with an epicyclic gear support arm ring frame (400) and rotating between the input shaft (2000) and the third one-way transmission (303);

~~-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);~~

~~-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);~~

~~-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;~~

~~-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;~~

~~-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;~~

~~-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;~~

~~-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the input shaft (2000) drives the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and the output shaft (3000) is driven through the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and~~

~~-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500)~~

~~and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.~~

35. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxially installed in series, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is integrated with an inward oblique wheel (402);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) epicyclic gear shaft (401), one end of the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400), and the epicyclic gear support arm ring frame (400) input shaft (2000) between the shell (500) and the inward oblique wheel (402) via a third one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the one-way transmission (301);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward

oblique wheel (404), and then through the second one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

36. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxially installed in series, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is integrated with an inward oblique wheel (402);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400) installed between the inward oblique wheel (402) and the one-way first transmission (302), and a third one-way transmission (303) is installed between the epicyclic gear support arm ring frame (400) and the input shaft (2000);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;
-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and then through the one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

37. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxially installed in series, and further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);
-- the input shaft (2000) is integrated with an inward oblique wheel (402);
-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with a epicyclic gear support arm ring frame (400) installed at the output shaft (3000), and a third one-way transmission (303) installed between the epicyclic gear support arm ring frame (400) and the output shaft (3000);
-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);
-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);
-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;
-- by way of the above structure, when the lockable or releasable mechanism (900) is locked, and the input shaft (2000) is driven at the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and then through the one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

38. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxially installed in series, further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);
-- the input shaft (2000) is integrated with an inward oblique wheel (402);
-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400), and a third one-way transmission (303) installed between the epicyclic gear support arm ring frame (400) and the outward oblique wheel (404);
-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);
-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;
-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;
-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and then through the second one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

39. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial, and further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);
-- the input shaft (2000) is integrated with an inward oblique wheel (402);
-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), one end of the epicyclic gear shaft (401) integrated with an epicyclic gear support arm

ring frame (400), the epicyclic gear support arm ring frame (400) fixed at the shell (500), and the shell (500) fixed at the machine body (600);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the second one-way transmission (301) is installed between the outward oblique wheel (404) and the output shaft (3000);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), the outward oblique wheel (404), and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

40. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), an epicyclic gear support arm ring frame (400) and the

second one-way transmission (301), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to an inward oblique wheel (402) a third one-way transmission (305);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) installed at the epicyclic gear support arm ring frame (400), and the epicyclic gear support arm ring frame (400) coaxially installed between the second one-way transmission (301) and the first one-way transmission (302);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the one-way transmission (301) installed between the outward oblique wheel (404) and the epicyclic gear support arm ring frame (400);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) and the second one-way transmission (301) drive the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, and the output shaft (3000) is driven through the third one-way transmission (305), the epicyclic gear (403), and the outward oblique wheel (404) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

41. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial, and further wherein:

-- one end of the input shaft (2000) is installed at an epicyclic gear support arm ring frame (400) via a bearing structure, the epicyclic gear support arm ring frame (400) is integrated with one side of the shell (500) via a third one-way transmission (303), another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is integrated with an inward oblique wheel (402);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with the epicyclic gear support arm ring frame (400), and the epicyclic gear support arm ring frame (400) rotating between the input shaft (2000) and the third one-way transmission (303);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward

oblique wheel (404), and then through the second one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

42. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is integrated with an inward oblique wheel (402);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400) near the shell (500), and a third one-way transmission (303) is installed between the epicyclic gear support arm ring frame (400) and the input shaft (2000);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- an outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and then through the one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

43. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial, and further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);
-- the input shaft (2000) is integrated with an inward oblique wheel (402);
-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400) installed between the inward oblique wheel (402) and the first one-way transmission (302), and a third one-way transmission (303) is installed between the epicyclic gear support arm ring frame (400) and the input shaft (2000);
-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);
-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the one-way transmission (301);
-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;
-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;
-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and then through the one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

44. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial, and further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);
-- the input shaft (2000) is integrated with an inward oblique wheel (402);
-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with a epicyclic gear support arm ring frame (400) installed at the output shaft (3000), and a third one-way transmission (303) installed between the epicyclic gear support arm ring frame (400) and the output shaft (3000);
-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);
-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;
-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;
-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;
-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and then through the one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and
-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

45. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial and further wherein:
-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);
-- the input shaft (2000) is integrated with an inward oblique wheel (402);
-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400), and a third one-way transmission (303) is installed between the epicyclic gear support arm ring frame (400) and the outward oblique wheel (404);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the outward oblique wheel (404) surrounds and is coupled to the output shaft (3000) via the second one-way transmission (301);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft is driven through the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404), and then through the one-way transmission (301), to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

46. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxially installed in series, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is integrated with an inward oblique wheel (402);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), one end of the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400), and the epicyclic gear support arm ring frame (400) is coupled to the input shaft (2000) through a third one-way transmission (303) installed between the first one-way transmission (302) and the inward oblique wheel (402);

-- the lockable or releasable mechanism (900) is installed between the epicyclic gear support arm ring frame (400) and the shell (500);

-- the shell (500) is fixed at the machine body (600);

-- the second one-way transmission (301) is installed between the outward oblique wheel (404) and the output shaft (3000);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), the outward oblique wheel (404), the outward oblique wheel (404), and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the epicyclic gear support arm ring frame (400), preventing locking of the first driving gear train and the second driving gear train.

47. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxially installed in series, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) and the output shaft (3000) are coaxially installed in series via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to an inward oblique wheel (402) through a third one-way transmission (305);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), one end of the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400), and the epicyclic gear support arm ring frame (400) being coupled to the input shaft (2000) through a fourth one-way transmission (303) positioned between the first one-way transmission (302) and the third one-way transmission (305);

-- the lockable or releasable mechanism (900) is installed between the epicyclic gear support arm ring frame (400) and the shell (500);

-- the shell (500) is fixed at the machine body (600);

-- the second one-way transmission (301) is installed between the outward oblique wheel (404) and the output shaft (3000);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the third one-way transmission (305), the inward oblique wheel (402), the

epicyclic gear (403), the outward oblique wheel (404), the outward oblique wheel (404), and the second one-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the epicyclic gear support arm ring frame (400), preventing locking of the first driving gear train and the second driving gear train.

48. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 12, wherein the input shaft and the output shaft are coaxial, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is integrated with an inward oblique wheel (402);

-- an epicyclic gear (403) is installed between an outward oblique wheel (404) and the inward oblique wheel (402); a center of the epicyclic gear (403) rotating at an epicyclic gear shaft (401), one end of the epicyclic gear shaft (401) integrated with an epicyclic gear support arm ring frame (400), and the epicyclic gear support arm ring frame (400) being coupled to the input shaft (2000) through a third one-way transmission (303) positioned between the inward oblique wheel (402) and the first one-way transmission (302);

-- the lockable or releasable mechanism (900) is installed between the epicyclic gear support arm ring frame (400) and the shell (500);

-- the shell (500) is fixed at the machine body (600);

-- the second one-way transmission (301) is installed between the outward oblique wheel (404) and the output shaft (3000);

-- the inward oblique wheel (402), the epicyclic gear (403), and the outward oblique wheel (404) are constituted by gears or friction wheels;

-- the epicyclic gear (403) is driven by the inward oblique wheel (402) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- the outward oblique wheel (404) is driven by the epicyclic gear (403) with a transmission ratio that provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the inward oblique wheel (402), the epicyclic gear (403), the outward oblique wheel (404), the outward oblique wheel (404) and the second none-way transmission (301) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the epicyclic gear support arm ring frame (400), preventing locking of the first driving gear train and the second driving gear train.

2049. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~13~~11, wherein the bidirectional input ~~shaft~~ and the one-way output ~~shaft~~ are coaxial shafts, and ~~further wherein:~~

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (301), a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to a first driving wheel (602) through the second one-way transmission (305);

-- a rotary direction of the first driving wheel (602) is different from that of a second driving wheel (603), the second driving wheel (603) and a third driving wheel (616) is integrated with a first revolving shaft (604), and a bearing is installed between the revolving shaft (604) and the shell (500);

-- the third driving wheel (616) is coupled to a fourth driving wheel (617) rotatable about or integrated with a second revolving shaft (618), and then drives a fifth driving wheel (615) to constitute a driving wheel set with a same rotary direction;

-- the second revolving shaft (618) is integrated with the shell (500), and a bearing is installed between the second revolving shaft (618) and the shell (500);

-- the fifth driving wheel (615) is integrated with the output shaft (3000);

-- the lockable or releasable mechanism (90~~900~~) is installed between the shell (500) and the ~~machine~~fixed body (600);

-- the first, second, fifth, third, and fourth driving wheels (602), (603), (615), (616), and (617) are constituted by gears, friction wheels, pulleys, or sprockets;

-- a transmission ratio of the driving wheel set with different rotary directions provides acceleration, deceleration, or constant velocity;

-- a transmission ratio of the driving wheel set with same rotary directions provides acceleration, deceleration, or constant velocity;

-- the driving wheel set with same rotary direction constituted by internal gear set or internal friction wheel set;

-- by way of the above structure, when the input shaft (2000) is driven at the ~~first rotary~~forward direction, the first one-way transmission (301) drives the output shaft (3000) to produce the ~~first rotary~~forwsard direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (90900) is locked and the input shaft (2000) is driven in the ~~second rotary~~reverse direction, the output shaft (3000) is driven through the second one-way transmission (305), the first driving wheel (602), the second driving wheel (603), the third driving wheel (616), the fourth driving wheel (617) and the fifth driving wheel (615) to produce the ~~first rotary~~forward direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (90900) is released, resulting in idling between the shell (500) and the machine body (600), thus preventing locking of the first driving gear train and the second driving gear train.

50. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 13, wherein the input shaft and the output shaft are coaxial, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (301), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to a first driving wheel (615) through the second one-way transmission (305);

-- the first driving wheel (615) is coupled to a second driving wheel (617) rotatable about or integrated with a first revolving shaft (618), which is coupled to a third driving wheel (616), the third driving wheel (616) and a fourth driving wheel (603) being integrated with a second revolving shaft (604), and a bearing being installed between the second revolving shaft (604) and the shell (500);

-- the revolving shaft (618) is integrated with the shell (500), and a bearing is installed between the first revolving shaft (618) and the shell (500);

-- the fourth driving wheel (603) and a fifth driving wheel (602) are integrated to form a driving wheel set with different rotary directions;

-- the fifth driving wheel (602) is integrated with the output shaft (3000);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the fifth, fourth, first, third, and second driving wheels (602), (603), (615), (616), and (617) are constituted by gears, friction wheels, pulleys, or sprockets;

-- a transmission ratio of the driving wheel set with different rotary directions provides acceleration, deceleration, or constant velocity;

-- a transmission ratio of the driving wheel set with same rotary directions provides acceleration, deceleration, or constant velocity;

-- the driving wheel set with same rotary directions is constituted by an internal gear set or internal friction wheel set;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (301) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the second one-way transmission (305), first driving wheel (615), the second driving wheel (616), the fourth driving wheel (603) via the third driving wheel (617), and the fifth driving wheel (602) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

2154. The lockable or releasable ~~gear train with bidirectional input and one-way output~~device as claimed in Claim ~~13~~11, wherein the bidirectional input ~~shaft~~ and the one-way output ~~shaft~~ are coaxial shafts, and ~~further wherein:~~

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (301), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to a first driving wheel (602) via the second one-way transmission (305);

-- the first driving wheel (602) is coupled to a second driving wheel (603) to form a driving wheel set having different rotary directions, the second driving wheel (603) and a third driving wheel (606) being integrated with a revolving shaft (604), and a bearing being installed between the revolving shaft (604) and the shell (500);

-- the first and second driving wheels (602) and (603) are constituted by gears or friction wheels;

-- a fourth driving wheel (605) and the third driving wheel (606) coupled therewith are constituted by pulleys or sprockets;

-- the third driving wheel (606) and fourth the driving wheel (605) are integrated with a driving belt, chain, or internal gear 607, to form a transmission driving wheel set with a same rotary direction;

-- the fourth driving wheel (605) is integrated with the output shaft (3000);

-- the lockable or releasable mechanism (90900) is installed between the shell (500) and the machine body (600);

-- a transmission ratio of the driving wheel set with different rotary directions provides acceleration, deceleration, or constant velocity;

-- a transmission ratio of the driving wheel set with same rotary direction provides acceleration, deceleration, or constant velocity;

-- by way of the above structure, when the input shaft (2000) is driven in the ~~first rotary~~ forward direction, the first one-way transmission (301) drives the output shaft (3000) to produce the ~~first rotary~~forward direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (90900) is locked and the input shaft (2000) is driven in the ~~second rotary~~reverse direction, the output shaft (3000) is driven through the second one-way transmission (305), the first driving wheel (602), the second driving wheel (603), the third driving wheel (606), and the fourth driving wheel (605) to produce the ~~first rotary~~forward direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (90900) is released, resulting in idling between the shell (500) and the machine body (600), thus preventing locking of the first driving gear train and the second driving gear train.

52. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 13, wherein the input shaft and the output shaft are coaxial, and further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, another end of the input shaft (2000) is coupled to the output shaft (3000) via the first one-way transmission (301), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) is coupled to a first driving wheel (605) through the second one-way transmission (305);

-- the first driving wheel (602) and a second driving wheel (603) coupled to the first driving wheel are constituted by gears or friction wheels;

-- a third driving wheel (605) and a fourth driving wheel (606) are constituted by pulleys or sprockets;

-- the fourth driving wheel (606) and the third driving wheel (605) are integrated with a driving belt, chain, or internal gear 607 to form a transmission constituting a driving wheel set with same rotary direction, a second driving wheel (603) and the fourth driving wheel (606) being integrated with a revolving shaft (604), and a bearing being installed between the revolving shaft (604) and the shell (500);

-- the second driving wheel (603) and a first driving wheel (602) coupled to the fifth driving wheel (603) form a driving wheel set with different rotary directions;

-- the fifth driving wheel (602) is integrated with the output shaft (3000);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- a transmission ratio of the driving wheel set with different rotary directions provides acceleration, deceleration, or constant velocity;

-- a transmission ratio of the driving wheel set with same rotary direction provides acceleration, deceleration, or constant velocity; -- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the second one-way transmission (301) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is

driven through the third one-way transmission (305), the fourth driving wheel (605), the third driving wheel (606), the second driving wheel (603), and the first driving wheel (602) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

53. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 13, wherein the input shaft and the output shaft are coaxially integrated in series, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, the input shaft (2000) being coupled in series with the output shaft (3000) by the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500), and the shell (500) fixed at the machine body (600);

-- the input shaft (2000) is coupled to a first driving wheel (602) through the second one-way transmission (305);

-- the first driving wheel (602) is coupled to a second driving wheel (603) to form a driving wheel set with different rotary directions, the second driving wheel (603) and a third driving wheel (616) being integrated with a first revolving shaft (604), and a bearing being installed between the first revolving shaft (604) and the shell (500);

-- the third driving wheel (616) being coupled to a fourth driving wheel (617) rotatable about or integrated with a second revolving shaft (618), and the fourth driving wheel (617) being coupled with a fifth driving wheel (615) to form a driving wheel set with a same rotary direction;

-- the second revolving shaft (618) is integrated with the shell (500), and a bearing is installed between the second revolving shaft (618) and the shell (500);

-- the fifth driving wheel (615) is integrated with the output shaft (3000);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the first, second, fifth, third, and fourth driving wheels (602), (603), (615), (616), and (617) being constituted by gears or friction wheels;

-- a transmission ratio of the driving wheel set with different rotary directions providing acceleration, deceleration, or constant velocity;

-- a transmission ratio of the driving wheel set with same rotary direction providing acceleration, deceleration, or constant velocity;

-- the driving wheel set with same rotary direction being constituted by an internal gear set or an internal friction wheel set;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the second one-way transmission (305), the first driving wheel (602), the second driving wheel (603), the third driving wheel (616), the fourth driving wheel (617), and the fifth driving wheel (615) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

54. The lockable or releasable gear train with bidirectional input and one-way output as claimed in Claim 13, wherein the input shaft and the output shaft are coaxially integrated in series, further wherein:

-- one end of the input shaft (2000) is installed at one side of the shell (500) via a bearing structure, the input shaft (2000) being coupled in series with the output shaft (3000) through the first one-way transmission (302), and a bearing is installed between the output shaft (3000) and the shell (500);

-- the input shaft (2000) being coupled with a first driving wheel (615) via the second one-way transmission (305);

-- the first driving wheel (615) rotating a second driving wheel (617) rotatable about or integrated with a revolving shaft (618), the second driving wheel (617) being coupled with a third driving wheel (616), the third driving wheel (616) and a fourth driving wheel (603)

being integrated with a first revolving shaft (604), and a bearing being installed between the first revolving shaft (604) and the shell (500);

-- the second revolving shaft (618) is integrated with the shell (500), and a bearing is installed between the second revolving shaft (618) and the shell (500);

-- the fourth driving wheel (603) is coupled to a fifth driving wheel (602) to form a driving wheel set with different rotary directions;

-- the fifth driving wheel (602) is integrated with the output shaft (3000);

-- the lockable or releasable mechanism (900) is installed between the shell (500) and the machine body (600);

-- the fifth, fourth, second, third, and first driving wheels (602), (603), (615), (616), and (617) are constituted by gears or friction wheels;

-- a transmission ratio of the driving wheel set with different rotary directions providing acceleration, deceleration, or constant velocity;

-- a transmission ratio of the driving wheel set with same rotary direction providing acceleration, deceleration, or constant velocity;

-- the driving wheel set with same rotary direction being constituted by an internal gear set or internal friction wheel set;

-- by way of the above structure, when the input shaft (2000) is driven in the first rotary direction, the first one-way transmission (302) drives the output shaft (3000) to produce the first rotary direction output and constitute the first driving gear train;

-- by way of the above structure, when the lockable or releasable mechanism (900) is locked and the input shaft (2000) is driven in the second rotary direction, the output shaft (3000) is driven through the second one-way transmission (305), the first driving wheel (615), the second driving wheel (616), the third driving wheel (603), the fourth driving wheel (617), and the fifth driving wheel (602) to produce the first rotary direction output and constitute the second driving gear train; and

-- when a reverse drive caused by backward motion occurs at the output shaft (3000), the lockable or releasable mechanism (900) is released, resulting in idling between the shell (500) and the machine body (600), preventing locking of the first driving gear train and the second driving gear train.

22. A lockable or releasable bidirectional input and one-way output device according to any one of the preceding claims, further comprises a posterior transmission (14) and a load wheel group (15), with the posterior transmission being installed between the lockable or releasable transmission (13) and the load wheel group (15) and the posterior trasmission (14) being constituted by one or more of the following rotary transmissions type: gear, belt and friction; wherein the speed ratio is constant or variable, and an output is operable to directly drive the load wheel group (15), with the load wheel group (15) forming part of a vehicle.