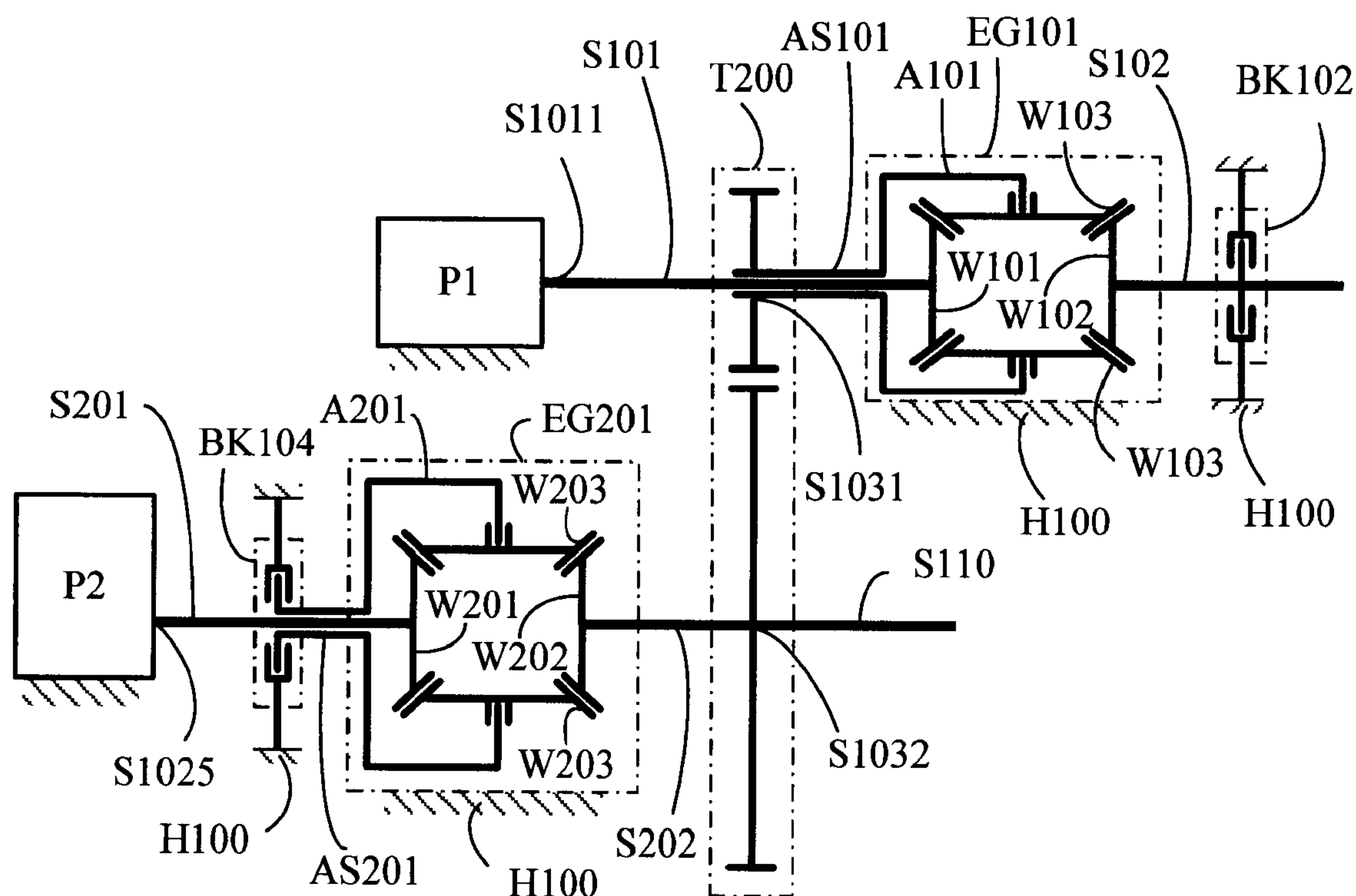




(22) Date de dépôt/Filing Date: 2012/02/23
(41) Mise à la disp. pub./Open to Public Insp.: 2012/08/24
(30) Priorités/Priorities: 2011/02/24 (US13/033,744);
2011/03/11 (US13/045,675); 2011/03/11 (US13/045,636)

(51) Cl.Int./Int.Cl. *F16H 48/00* (2012.01),
F16H 48/22 (2006.01), *F16H 48/36* (2012.01)
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(54) Titre : DISPOSITIF D'EMBRAYAGE EQUIPE D'UN JEU D'ENGRENAGES EPICYCLOIDaux REGLABLE ET
GROUPE MOTOPROPULSEUR ADAPTE
(54) Title: CLUTCH DEVICE STRUCTURED WITH CONTROLLABLE EPICYCLE GEAR SET AND APPLIED POWER
TRAIN THEREOF



(57) Abrégé/Abstract:

The present invention relates to a clutch device structured with controllable epicycle gear set and applied power train thereof, wherein the epicycle gear set (EG101) is driven by a rotary kinetic energy source and combined with a controllable brake device;

(57) **Abrégé(suite)/Abstract(continued):**

through controlling the controllable brake device to perform brake locking or releasing, the operations of transmission function of combining transmission or releasing between a rotation shaft (S101) at an output/input end, a rotation shaft (S102) at an output/input end and a sleeve type rotation shaft (AS101) of the epicycle gear set (EG101) are enabled to be controlled;

The present invention is further through an epicycle gear set (EG101) and a controllable brake device to structure the clutch function, so as to replace the conventional friction type electromagnetic clutch device, and combined with two or more than two of one or more than one types of rotary kinetic power sources to constitute a clutch device structured with controllable epicycle gear set and applied power train thereof.

ABSTRACT

The present invention relates to a clutch device structured with controllable epicycle gear set and applied power train thereof, wherein the epicycle gear set (EG101) is driven by a rotary kinetic energy source and
5 combined with a controllable brake device; through controlling the controllable brake device to perform brake locking or releasing, the operations of transmission function of combining transmission or releasing between a rotation shaft (S101) at an output/input end, a rotation shaft (S102) at an output/input end and a sleeve type rotation shaft
10 (AS101) of the epicycle gear set (EG101) are enabled to be controlled;

The present invention is further through an epicycle gear set (EG101) and a controllable brake device to structure the clutch function, so as to replace the conventional friction type electromagnetic clutch device, and combined with two or more than two of one or more than one types of
15 rotary kinetic power sources to constitute a clutch device structured with controllable epicycle gear set and applied power train thereof.

**TITLE: CLUTCH DEVICE STRUCTURED WITH
CONTROLLABLE EPICYCLE GEAR SET AND
APPLIED POWER TRAIN THEREOF**

5 **BACKGROUND OF THE INVENTION**

(a) Field of the Invention

The present invention relates to a clutch device structured with controllable epicycle gear set and applied power train thereof, wherein the epicycle gear set (EG101) is driven by a rotary kinetic energy source and
10 combined with a controllable brake device; through controlling the controllable brake device to perform brake locking or releasing, the operations of transmission function of combining transmission or releasing between a rotation shaft (S101) at an output/input end, a rotation shaft (S102) at an output/input end and a sleeve type rotation shaft
15 (AS101) of the epicycle gear set (EG101) are enabled to be controlled;

The present invention is further through an epicycle gear set (EG101) and a controllable brake device to structure the clutch function, so as to replace the conventional friction type electromagnetic clutch device, and combined with two or more than two of one or more than one types of
20 rotary kinetic power sources to constitute a clutch device structured with controllable epicycle gear set and applied power train thereof.

(b) Description of the Prior Art

Conventionally a friction type electromagnetic clutch device is often installed between the output/input end of a rotary kinetic energy source
25 and a load; and through electrically charging or breaking the friction type electromagnetic clutch device to perform operations of combining or releasing, the rotary kinetic energy source and the load are enabled to be engaged or released. One primary disadvantage of the conventional arts is that the friction type electromagnetic clutch device is often remained with
30 residual rotary torque during the releasing, which may cause the kinetic

energy loss and the ineffective operation; and a friction type electromagnetic clutch device is often installed between conventional automatic or semi-automatic power trains or hybrid power trains for performing engagement or disengagement, so that the power train is enabled to perform various functional operations; however, when the friction type electromagnetic clutch device is in a disengaged state, residual torque may remain, and thereby to cause power loss and system malfunction.

10 SUMMARY OF THE INVENTION

The present invention provides a clutch device structured with controllable epicycle gear set and the applied power train thereof, wherein a rotation shaft (S101) combined with an input wheel (W101) of an epicycle gear set (EG101) is served as an output/input end, and a rotation shaft (S102) combined with an output wheel (W102) is served as an output/input end, and a rocker arm (A101) and a sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) are served as an output/input end, so that a part or all of the three output/input ends are respectively combined to one action side of a corresponding controllable brake device, and the other action side of the controllable brake device is connected to a housing (H100); through controlling the controllable brake device to perform brake locking or releasing, the operations of transmission function of combining transmission or releasing between the rotation shaft (S101) at the output/input end, the rotation shaft (S102) at the output/input end and the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101) are enabled to be controlled;

The present invention of clutch device structured with controllable epicycle gear set and applied power train thereof further by using the controllable brake device to manipulate an epicycle gear set (EG101), in which the power train having the clutch device structured by using the

controllable brake device to manipulate the epicycle gear set (EG101) can be widely applied in a dual rotary kinetic power source or a triple rotary kinetic power source, the structural configuration includes a coaxial in-series structure or a multiple axial in-parallel structure for satisfying the
 5 requirement of applied space.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic structural view showing the input wheel (W101) and the rotation shaft (S101) of the epicycle gear set (EG101) being
 10 served as an output/input end, the output wheel (W102) and the rotation shaft (S102) being served as an output/input end, the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) being sleeved on the rotation shaft (S101) or the rotation shaft (S102), and the controllable brake device (BK101) being fastened in the
 15 housing (H100) through the rocker arm (A101) and the sleeve type rotation shaft (AS101), according to one embodiment of the present invention.

FIG.2 is a schematic structural view showing the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels
 20 (W103) being served as an output/input end, and coaxially sleeved with the rotation shaft (S101) or the rotation shaft (S102), and the controllable brake device (BK102) being combined and fastened in the housing (H100) through the rotation shaft (S102), according to one embodiment of the present invention.

25 FIG. 3 is a schematic structural view showing the rotation shaft (S102) serving to provide the output function as shown in FIG. 1 being further installed with a controllable brake device (BK102) capable of preventing reverse linkage.

FIG. 4 is a schematic structural view showing the rotation shaft (S101)
 30 as shown in FIG. 1 being further installed with a controllable brake device

(BK103).

FIG. 5 is a schematic structural view showing the rotation shaft (S101) as shown in FIG. 2 being further installed with a controllable brake device (BK103).

5 FIG. 6 is a schematic structural view showing the rotation shaft (S101) as shown in FIG. 3 being further installed with a controllable brake device (BK103).

FIG. 7 is a schematic structural view showing the output end of a first rotary kinetic power source (P1) being combined with a rotation shaft
10 (S101) combined with an input wheel (W101) of an epicycle gear set (EG101), and a rocker arm (A101) or a sleeve type rotation shaft (AS101) driven by an epicyclic wheel (W103) of the epicycle gear set (EG101) being connected to an action side of a controllable brake device (BK101) while the other action side of the controllable brake device (BK101) being
15 fixed in a housing (H100).

FIG. 8 is a schematic view showing the structure shown in FIG. 7 wherein a first transmission device (T1) being installed between the first rotary kinetic power source (P1) and the rotation shaft (S101) driven by the input wheel (W101) of the epicycle gear set (EG101), according to
20 one embodiment of the present invention.

FIG. 9 is a schematic view showing the structure shown in FIG. 7 wherein the output wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) being installed with a second transmission device (T2) and an output/input end rotation shaft
25 (S1021), according to one embodiment of the present invention.

FIG. 10 is a schematic view showing the structure shown in FIG. 7 wherein the first transmission device (T1) being installed between the first rotary kinetic power source (P1) and the rotations shaft (S101) driven by the input wheel (W101) of the epicycle gear set (EG101), and the output
30 wheel (W102) of the epicycle gear set (EG101) and the output/input end

of the rotation shaft (S102) being installed with the second transmission device (T2) and the output/input end rotation shaft (S1021), according to one embodiment of the present invention.

FIG. 11 is a schematic structural view showing the rotation shaft (S102) combined with the first rotary kinetic power source (P1) and the transmission unit (T200) and the epicycle gear set (EG101) and the output wheel (W102) of the epicycle gear set (EG101) being combined at an action side of a controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100), and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicyclic wheel (W103) of the epicycle gear set (EG101) being combined with the an input end rotation shaft (S1031) of the transmission unit (T200), and the output end of the transmission unit (T200) being installed with a rotation shaft (S110), according to one embodiment of the present invention.

FIG. 12 is a schematic view showing the structure shown in FIG. 11 wherein the first transmission device (T1) being installed between the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) and the first rotary kinetic power source (P1), according to one embodiment of the present invention.

FIG. 13 is a schematic view showing the structure shown in FIG. 11 wherein a planetary gear set (T300) being installed between the input end rotation shaft (S1031) of the transmission unit (T200) and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicyclic wheel (W103) of the epicycle gear set (EG101), according to one embodiment of the present invention.

FIG. 14 is a schematic view showing the structure shown in FIG. 11 wherein the first transmission device (T1) being installed between the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) and the first rotary kinetic power source (P1),

and the planetary gear set (T300) being installed between the input end rotation shaft (S1031) of the transmission unit (T200) and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicyclic wheel (W103) of the epicycle gear set (EG101), according to one
 5 embodiment of the present invention.

FIG. 15 is a schematic view showing the structure shown in FIG. 11 wherein the transmission unit (T200) being replaced by a differential output epicycle gear set (T400), according to one embodiment of the present invention.

10 FIG. 16 is a schematic structural view showing the transmission unit (T200) shown in FIG. 12 being replaced by the differential output epicycle gear set (T400), according to one embodiment of the present invention.

FIG. 17 is a schematic structural view showing the transmission unit (T200) shown in FIG. 13 being replaced by the differential output epicycle
 15 gear set (T400), according to one embodiment of the present invention.

FIG. 18 is a schematic structural view showing the transmission unit (T200) shown in FIG. 14 being replaced by the differential output epicycle gear set (T400), according to one embodiment of the present invention.

FIG. 19 is a schematic structural view showing a limited slip
 20 differential device (LSD401) being installed between the output/input wheel (W401) and the output/input wheel (W402) of the differential output epicycle gear set (T400), according to one embodiment of the present invention.

FIG. 20 is a schematic structural view showing a rocker arm (A101)
 25 and a sleeve type rotation shaft (AS101) driven by a first rotary kinetic power source (P1) and an epicyclic wheel (W103) of an epicycle gear set (EG101) being combined with a controllable brake device (BK101), and an input wheel (W102) of the epicycle gear set (EG101) and an output/input end of a rotation shaft (S102) being combined with a second
 30 rotary kinetic power source (P2) and an output/input end rotation shaft

(S1026), according to one embodiment of the present invention.

FIG. 21 is a schematic view showing a first transmission device (T1) being installed between the first rotary kinetic power source (P1) and the controllable brake device (BK101), and the input wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) being combined with the second rotary kinetic power source (P2) and the output/input end rotation shaft (S1026) shown in FIG. 20, according to one embodiment of the present invention.

FIG. 22 is a schematic view showing a third rotary kinetic power source (P3) being installed between the first rotary kinetic power source (P1) and the controllable brake device (BK101) shown in FIG. 20, according to one embodiment of the present invention.

FIG. 23 is a schematic view showing a third rotary kinetic power source (P3) being installed between the first transmission device (T1) and the controllable brake device (BK101) shown in FIG. 21, according to one embodiment of the present invention.

FIG. 24 is a schematic structural view showing the present invention being structured by the first rotary kinetic power source (P1) and a transmission unit (T200) and the epicycle gear set (EG101) and a controllable brake device (BK102), and the output wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) being combined with the second rotary kinetic power source (P2), the epicyclic wheel (W103) of the epicycle gear set (EG101) being provided for driving the rocker arm (A101) and the sleeve type rotation shaft (AS101), and the sleeve type rotation shaft (AS101) being provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) being installed with a rotation shaft (S110), according to one embodiment of the present invention.

FIG. 25 is a schematic view showing the structure in FIG. 24 in which

the input wheel (W101) of the epicycle gear set (EG101) being combined with the rotation shaft (S101) and combined with the rotation shaft (S1011) of the first rotary kinetic power source (P1), the rotation shaft (S101) being combined to an action side of a controllable brake device (BK103), and the other action end of the controllable brake device (BK103) being fixed in the housing (H100), a planetary gear set (300) being installed between the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) and the second rotary kinetic power source (P2), the output/input end of the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) being combined with a rocker arm (A111) of a planetary gear set (T300), an outer annular wheel (W113) of the planetary gear set (T300) being fixed in the housing (H100), a sun wheel (W111) of the planetary gear set (T300) being combined with the second rotary kinetic power source (P2), the epicyclic wheel (W103) of the epicycle gear set (EG101) being provided for driving the rocker arm (A101) and the sleeve type rotation shaft (AS101), and the sleeve type rotation shaft (AS101) being provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), according to one embodiment of the present invention.

FIG. 26 is a schematic view showing the second rotary kinetic power source (P2) shown in FIG. 24 being installed at one end of the output/input end rotation shaft (S110) of the transmission unit (T200).

FIG. 27 is a schematic view showing the structure shown in FIG. 26 in which an epicycle gear set (EG201) and a controllable brake device (BK104) being installed between one end of the output/input end rotation shaft (S110) of the transmission unit (T200) and the second rotary kinetic power source (P2).

FIG. 28 is a schematic view showing the structure shown in FIG. 26 in which the third rotary kinetic power source (P3) being installed between

the first rotary kinetic power source (P1) and the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101).

FIG. 29 is a schematic view showing the structure shown in FIG. 28 in which the epicycle gear set (EG201) and the controllable brake device (BK104) being installed between one end of the output/input end rotation shaft (S110) of the transmission unit (T200) and the second rotary kinetic power source (P2).

DESCRIPTION OF MAIN COMPONENT SYMBOLS

- 10 A101, A111, A201, A401: Rocker arm
- AS101, AS111, AS201, AS401: Sleeve type rotation shaft
- BK101, BK102, BK103, BK104: Controllable brake device
- EG101, EG201: Epicycle gear set
- H100: Housing
- 15 LSD401: Limited slip differential device
- P1: First rotary kinetic power source
- P2: Second rotary kinetic power source
- P3: Third rotary kinetic power source
- S101, S102, S110, S201, S202, S1011, S1012, S1013, S1021, S1022,
- 20 S1023, S1024, S1025, S1026, S1031, S1032, S1041, S1051, S1052:
- Rotation shaft
- S401, S402: Differential output/input end rotation shaft
- T1: First transmission device
- T2: Second transmission device
- 25 T200: Transmission unit
- T300: Planetary gear set
- T400: Differential output epicycle gear set
- W101, W201: Input wheel
- W102, W202: Output wheel
- 30 W103, W203, W403: Epicycle wheel

W300: Transmission wheel

W400: Annular input wheel

W401, W402: Output/input wheel

W111: Sun wheel

5 W112: Planetary wheel

W113: Outer annular wheel

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Conventionally a friction type electromagnetic clutch device is often
 10 installed between the output/input end of a rotary kinetic energy source
 and a load; and through electrically charging or breaking the friction type
 electromagnetic clutch device to perform operations of combining or
 releasing, the rotary kinetic energy source and the load are enabled to be
 engaged or released. One primary disadvantage of the conventional arts is
 15 that the friction type electromagnetic clutch device is often remained with
 residual rotary torque during the releasing, which may cause the kinetic
 energy loss and the ineffective operation; and a friction type
 electromagnetic clutch device is often installed between conventional
 automatic or semi-automatic power trains or hybrid power trains for
 20 performing engagement or disengagement, so that the power train is
 enabled to perform various functional operations; however, when the
 friction type electromagnetic clutch device is in a disengaged state,
 residual torque may remain, and thereby to cause power loss and system
 malfunction.

25 The present invention provides a clutch device structured with
 controllable epicycle gear set and the applied power train thereof, wherein
 a rotation shaft (S101) combined with an input wheel (W101) of an
 epicycle gear set (EG101) is served as an output/input end, and a rotation
 shaft (S102) combined with an output wheel (W102) is served as an
 30 output/input end, and a rocker arm (A101) and a sleeve type rotation shaft

(AS101) linked by the epicycle wheels (W103) are served as an output/input end, so that a part or all of the three output/input ends are respectively combined to one action side of a corresponding controllable brake device, and the other action side of the controllable brake device is
 5 connected to a housing (H100); through controlling the controllable brake device to perform brake locking or releasing, the operations of transmission function of combining transmission or releasing between the rotation shaft (S101) at the output/input end, the rotation shaft (S102) at the output/input end and the sleeve type rotation shaft (AS101) of the
 10 epicycle gear set (EG101) are enabled to be controlled;

The present invention of clutch device structured with controllable epicycle gear set and applied power train thereof further by using the controllable brake device to manipulate an epicycle gear set (EG101), in which the power train having the clutch device structured by using the
 15 controllable brake device to manipulate the epicycle gear set (EG101) can be widely applied in a dual rotary kinetic power source or a triple rotary kinetic power source, the structural configuration includes a coaxial in-series structure or a multiple axial in-parallel structure for satisfying the requirement of applied space.

20 The structure application of a clutch device structured with controllable epicycle gear set and the applied power train thereof of present invention is disclosed as following:

FIG. 1 is a schematic structural view showing the input wheel (W101) and the rotation shaft (S101) of the epicycle gear set (EG101) being
 25 served as an output/input end, the output wheel (W102) and the rotation shaft (S102) being served as an output/input end, the epicycle wheels (W103) and the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) being sleeved on the rotation shaft (S101) or the rotation shaft (S102), and through the rocker
 30 arm (A101) or the sleeve type rotation shaft (AS101) connecting to the

controllable brake device (BK101) fastened in the housing (H100), according to one embodiment of the present invention.

As show in FIG 1, it mainly consists of:

--Epicycle gear set (EG101): constituted by an input wheel (W101) and an
 5 output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type
 10 rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the speed ratios between the above two and the epicycle wheel (W103) can be
 15 the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the
 20 epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being
 25 sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or
 30 pneumatic force or electromagnetic force, and having two controllable

action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

- 5 --The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102);

A clutch device structured with controllable epicycle gear set and the applied power train thereof as shown in FIG. 1 is through controlling the
10 controllable brake device (BK101) to perform brake locking or releasing, so as to enable the operation of clutch function between the rotation shaft (S101) and the rotation shaft (S102).

FIG.2 is a schematic structural view showing the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels
15 (W103) being served as an output/input end, and coaxially sleeved with the rotation shaft (S101) or the rotation shaft (S102), and the controllable brake device (BK102) being combined and fastened in the housing (H100) through the rotation shaft (S102), according to one embodiment of the present invention.

20 As show in FIG 2, it mainly consists of:

- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the
25 epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel
30 (W102) of the mentioned epicycle gear set (EG101) are the same, and the

speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the
 5 speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle
 10 wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

15 --Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined
 20 with the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102);

25 A clutch device structured with controllable epicycle gear set and the applied power train thereof as shown in FIG. 2 is through controlling the controllable brake device (BK102) to perform brake locking or releasing, so as to enable the operation of clutch function between the rotation shaft (S101) and the sleeve type rotation shaft (AS101).

30 FIG. 3 is a schematic structural view showing the rotation shaft (S102)

serving to provide the output function as shown in FIG. 1 being further installed with a controllable brake device (BK102) capable of preventing reverse linkage.

As show in FIG 3, it mainly consists of:

- 5 --Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft
10 (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the
15 speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel
20 (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending
25 toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK101): constituted by a brake device
30 controlled by a manual force or mechanical force or hydraulic force or

pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm (A101), and
 5 the other action side is fixed in the housing (H100);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a
 10 releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set
 15 (EG101) is served to drive the rotation shaft (S102);

A clutch device structured with controllable epicycle gear set and the applied power train thereof as shown in FIG. 3 is through controlling the controllable brake device (BK101) and the controllable brake device (BK102) to generate one or more than one operation functions as
 20 following:

1. When the controllable brake device (BK101) is in a brake locking state, and the controllable brake device (BK102) is in a releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) is in a connecting relation allowing for
 25 transmission;
2. When the controllable brake device (BK101) is in the releasing state, and the controllable brake device (BK102) is in the brake locking state, the transmission relation between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) is in a connecting relation allowing
 30 for transmission;

3. When the controllable brake device (BK101) and the controllable
brake device (BK102) are both in the brake locking state, the rotation
shaft (S101) and the rotation shaft (S102) and the sleeve type rotation
shaft (AS101) are all connected in the brake locking state, thus not
5 capable of mutually driving;
4. When the controllable brake device (BK101) and the controllable
brake device (BK102) are both in the releasing state, the transmission
relation between the rotation shaft (S101) and the rotation shaft (S102)
and the sleeve type rotation shaft (AS101) is in a releasing relation
10 allowing idle rotation;

According to a clutch device structured with controllable epicycle gear
set and the applied power train thereof of present invention, the rotation
shaft (S101) can be further installed with a controllable brake device
(BK103) for increasing the controllable operation function, the disclosure
15 is as following:

FIG. 4 is a schematic structural view showing the rotation shaft (S101)
being further installed with a controllable brake device (BK103)
according to the embodiment shown in FIG. 1.

As shown in FIG. 4, the input wheel (W101) and the rotation shaft
20 (S101) of the epicycle gear set (EG101) are served as an output/input end,
the output wheel (W102) and the rotation shaft (S102) are served as an
output/input end, and the epicycle wheels (W103) and the rocker arm
(A101) and the sleeve type rotation shaft (AS101) linked by the epicycle
wheels (W103) are sleeved on the rotation shaft (S101) or the rotation
25 shaft (S102), and through the rocker arm (A101) or the sleeve type
rotation shaft (AS101) connects to the controllable brake device (BK101)
fastened in the housing (H100), and through the rotation shaft (S101)
connects to the controllable brake device (BK103) fastened in the housing
(H100), and it mainly consists of:

30 --Epicycle gear set (EG101): constituted by an input wheel (W101) and an

output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft
 5 (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the
 10 speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel
 15 (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending
 20 toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK101): constituted by a brake device
 25 controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm (A101), and
 30 the other action side is fixed in the housing (H100);

--Controllable brake device (BK103): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S101), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102);

A clutch device structured with controllable epicycle gear set and an applied power train thereof as shown in FIG. 4 is through controlling the controllable brake device (BK101) and the controllable brake device (BK103) to generate one or more than one operation functions as following:

1. When the controllable brake device (BK101) is in a brake locking state, and the controllable brake device (BK103) is in a releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) is in a connecting relation allowing for transmission;
2. When the controllable brake device (BK101) is in the releasing state, and the controllable brake device (BK103) is in the brake locking state, the transmission relation between the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is in a connecting relation allowing for transmission;
3. When the controllable brake device (BK101) and the controllable brake device (BK103) are both in the brake locking state, the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) are all connected in the brake locking state, thus not capable of mutually driving;

4. When the controllable brake device (BK101) and the controllable brake device (BK103) are both in the releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is
5 in a releasing relation allowing idle rotation;

FIG. 5 is a schematic structural view showing the rotation shaft (S101) being further installed with a controllable brake device (BK103) according to the embodiment shown in FIG. 2

As shown in FIG. 5, the input wheel (W101) and the rotation shaft
10 (S101) of the epicycle gear set (EG101) are served as an output/input end, the output wheel (W102) and the rotation shaft (S102) are served as an output/input end, and the epicycle wheels (W103) and the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle
15 wheels (W103) are sleeved on the rotation shaft (S101) or the rotation shaft (S102), and through the rotation shaft (S102) connects to the controllable brake device (BK102) fastened in the housing (H100), and through the rotation shaft (S101) connects to the controllable brake device (BK103) fastened in the housing (H100), which mainly consists of:

--Epicycle gear set (EG101): constituted by an input wheel (W101) and an
20 output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type
25 rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the speed ratios between the above two and the epicycle wheel (W103) can be
30 the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Controllable brake device (BK103): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S101), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102);

A clutch device structured with controllable epicycle gear set and the

applied power train thereof as shown in FIG. 5 is through controlling the controllable brake device (BK102) and the controllable brake device (BK103) to generate one or more than one operation functions as following:

- 5 1. When the controllable brake device (BK103) is in a brake locking state, and the controllable brake device (BK102) is in a releasing state, the transmission relation between the sleeve type rotation shaft (AS101) and the rotation shaft (S102) is in a connecting relation allowing for transmission;
- 10 2. When the controllable brake device (BK103) is in the releasing state, and the controllable brake device (BK102) is in the brake locking state, the transmission relation between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) is in a connecting relation allowing for transmission;
- 15 3. When the controllable brake device (BK101) and the controllable brake device (BK102) are both in the brake locking state, the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) are all connected in the brake locking state, thus not capable of mutually driving;
- 20 4. When the controllable brake device (BK101) and the controllable brake device (BK102) are both in the releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is in a releasing relation allowing for idle rotation;
- 25 According to a clutch device structured with controllable epicycle gear set and the applied power train thereof of the present invention, the sleeve type rotation shaft (AS101) is installed with the controllable brake device (BK101) and the rotation shaft (S102) is installed with the controllable brake device (BK102), and the rotation shaft (S101) can be further
- 30 installed with a controllable brake device (BK103) for increasing the

controllable operation function.

FIG. 6 is a schematic structural view showing the rotation shaft (S101) being further installed with a controllable brake device (BK103) according to the embodiment shown in FIG. 3.

5 As shown in FIG. 6, the input wheel (W101) and the rotation shaft (S101) of the epicycle gear set (EG101) are served as an output/input end, the output wheel (W102) and the rotation shaft (S102) are served as an output/input end, and the epicycle wheels (W103) and the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle
10 wheels (W103) are sleeved on the rotation shaft (S101) or the rotation shaft (S102), and through the rocker arm (A101) or the sleeve type rotation shaft (AS101) connects to the controllable brake device (BK101) fastened in the housing (H100), and through the rotation shaft (S102) connects to the controllable brake device (BK102) fastened in the housing
15 (H100), and through the rotation shaft (S101) connects to the controllable brake device (BK103) fastened in the housing (H100), which mainly consists of:

--Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and
20 including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for
25 being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

30 The speed ratios of the input wheel (W101) and the output wheel

(W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or
 5 different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being
 10 sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
 15 action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the
 20 housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
 25 action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Controllable brake device (BK103): constituted by a brake device
 30 controlled by a manual force or mechanical force or hydraulic force or

pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S101), and the other action side is fixed in the housing (H100);

A clutch device structured with controllable epicycle gear set and the applied power train thereof as shown in FIG. 6 is through controlling the controllable brake device (BK101), the controllable brake device (BK102) and the controllable brake device (BK103) to generate one or more than one operation functions as following:

1. When the controllable brake device (BK101) is in a brake locking state, and the controllable brake device (BK102) and the controllable brake device (BK103) are in a releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) is in a connecting relation allowing for transmission;
2. When the controllable brake device (BK101) and the controllable brake device (BK103) are in the releasing state, and the controllable brake device (BK102) is in the brake locking state, the transmission relation between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) is in a connecting relation allowing for transmission;
3. When the controllable brake device (BK103) is in the brake locking state, the controllable brake device (BK101) and the controllable brake device (BK102) are in the releasing state, the transmission relation between the sleeve type rotation shaft (AS101) and the rotation shaft (S102) is in a connecting relation allowing for transmission;
4. When two or more than two of the controllable brake device (BK101) and the controllable brake device (BK102) and the controllable brake device (BK103) are in the brake locking state, the

rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) are all connected in the brake locking state, thus not capable of mutually driving;

5. When the controllable brake device (BK101) and the controllable brake device (BK102) and the controllable brake device (BK103) are all in the releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is a releasing relation allowing for idle rotation.

The present invention relates to a clutch device structured with controllable epicycle gear set and the applied power train thereof, in which a controllable brake device (BK101) is used to control an epicycle gear set (EG101) to constitute the function of controllable epicycle type clutch device; the power train adopting the clutch device structured by the controllable brake device (BK101) controlling the epicycle gear set (EG101) can be widely applied in a power train driven by single rotary kinetic power source, and the structural type can be an in-series coaxial line structure, or multiple in-parallel axial lines for satisfying the requirements of the applied space.

The structures and embodiments of the clutch device structured with controllable epicycle gear set and the applied power train thereof are as followings:

FIG. 7 is a schematic structural view showing the output end of a first rotary kinetic power source (P1) being combined with a rotation shaft (S101) combined with an input wheel (W101) of an epicycle gear set (EG101), and a rocker arm (A101) or a sleeve type rotation shaft (AS101) driven by an epicycle wheel (W103) of the epicycle gear set (EG101) being connected to an action side of a controllable brake device (BK101) while the other action side of the controllable brake device (BK101) being fixed in a housing (H100).

As shown in FIG.7, it mainly consists of:

- First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;
- Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);
- Controllable brake device (BK101): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);
- One end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), and the other end of the rotation shaft (S101) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is served as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for combining the rocker arm (A101) and

combining the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), and the other action side of the
 5 controllable brake device (BK101) is fixed in the housing (H100); through controlling the controllable brake device (BK101) to perform brake locking or releasing, the function of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) is enabled to be controlled.

10 FIG. 8 is a schematic view showing the structure shown in FIG. 7 wherein a first transmission device (T1) being installed between the first rotary kinetic power source (P1) and the rotation shaft (S101) driven by the input wheel (W101) of the epicycle gear set (EG101), according to one embodiment of the present invention.

15 As shown in FIG.8, it mainly consists of:

--First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine,
 20 electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;

--Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or
 25 through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

30 --Controllable brake device (BK101): which is constituted by a brake

device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action

5 sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

--First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set

10 composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the

15 output/input end rotation shaft (S1012) of the first transmission device (T1), the output/input end rotation shaft (S1013) at the other end of the first transmission device (T1) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the rotation shaft (S102) combined with the output wheel (W102) of the

20 epicycle gear set (EG101) is served as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for combining the rocker arm (A101) and combining the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation

25 shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), and the other action side of the controllable brake device (BK101) is fixed in the housing (H100); through controlling the controllable brake device (BK101) to perform brake locking or releasing,

30 the function of connecting for transmission or releasing between the

rotation shaft (S101) and the rotation shaft (S102) is enabled to be controlled.

FIG. 9 is a schematic view showing the structure shown in FIG. 7 wherein the output wheel (W102) of the epicycle gear set (EG101) and
 5 the output/input end of the rotation shaft (S102) being installed with a second transmission device (T2) and an output/input end rotation shaft (S1021), according to one embodiment of the present invention.

As shown in FIG.9, it mainly consists of:

- First rotary kinetic power source (P1): which is constituted by one or
 10 more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;
- 15 --Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft
 20 (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);
- Controllable brake device (BK101): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic
 25 force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);
- 30 --Second transmission device (T2): which is constituted by the automatic,

manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

5 --The rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1022) of the second transmission device (T2), the output/input end rotation shaft (S1023) at the other end of the second transmission device (T2) is combined with the rotation shaft (S1021) for serving as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for combining the rocker arm (A101) and combining the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), and the other action side of the controllable brake device (BK101) is fixed in the housing (H100); through controlling the controllable brake device (BK101) to perform brake locking or releasing, the function of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) is enabled to be controlled.

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FIG. 10 is a schematic view showing the structure shown in FIG. 7 wherein the first transmission device (T1) being installed between the first rotary kinetic power source (P1) and the rotations shaft (S101) driven by the input wheel (W101) of the epicycle gear set (EG101), and the output wheel (W102) of the epicycle gear set (EG101) and the output/input end

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of the rotation shaft (S102) being installed with the second transmission device (T2) and the output/input end rotation shaft (S1021), according to one embodiment of the present invention.

As shown in FIG.10, it mainly consists of:

- 5 --First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power
 - 10 set, or manual power;
- Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions
 - 15 to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);
- Controllable brake device (BK101): which is constituted by a brake
 - 20 device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker
 - 25 arm (A101), and the other action side is fixed in the housing (H100);
- First transmission device (T1), Second transmission device (T2): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels,
 - 30 pulleys and pulley belts, chains and chain wheels, or a planetary type

transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the
 5 output/input end rotation shaft (S1012) of the first transmission device (T1), and the output/input end rotation shaft (S1013) at the other end of the first transmission device (T1) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the rotation shaft (S102) combined with the output wheel (W102) of the
 10 epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1022) of the second transmission device (T2), the output/input end rotation shaft (S1023) at the other end of the second transmission device (T2) is combined with the rotation shaft (S1021) for serving as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the
 15 housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for combining the rocker arm (A101) and combining the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the
 20 controllable brake device (BK101), and the other action side of the controllable brake device (BK101) is fixed in the housing (H100); through controlling the controllable brake device (BK101) to perform brake locking or releasing, the function of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) is
 25 enabled to be controlled.

FIG. 11 is a schematic structural view showing the rotation shaft (S102) combined with the first rotary kinetic power source (P1) and the transmission unit (T200) and the epicycle gear set (EG101) and the output wheel (W102) of the epicycle gear set (EG101) being combined at an
 30 action side of a controllable brake device (BK102), and the other action

side of the controllable brake device (BK102) is fixed in the housing (H100), and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicycle wheel (W103) of the epicycle gear set (EG101) being combined with the an input end rotation shaft (S1031) of the transmission unit (T200), and the output end of the transmission unit (T200) being installed with a rotation shaft (S110), according to one embodiment of the present invention.

As shown in FIG.11, it mainly consists of:

- First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;
- Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);
- Transmission unit (T200): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;
- One end of the rotation shaft (S101) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1),

and the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to one action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) drives the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the output/input end rotation shaft (S110).

FIG. 12 is a schematic view showing the structure shown in FIG. 11 wherein the first transmission device (T1) being installed between the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) and the first rotary kinetic power source (P1), according to one embodiment of the present invention.

As shown in FIG.12, it mainly consists of:

--First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;

--Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions

to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

- 5 --Controllable brake device (BK102): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action
10 sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);
- First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set
15 composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;
- Transmission unit (T200): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or
20 variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;
- The output/input end rotation shaft (S1011) of the first rotary kinetic
25 power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the output/input end rotation shaft (S1012) of the first transmission device (T1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle
30 gear set (EG101) is fixed in the housing (H100), and the output/input end

rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to one action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), the
 5 epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) drives the output/input end rotation shaft (S1031) of the transmission unit (T200),
 10 and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the output/input end rotation shaft (S110).

FIG. 13 is a schematic view showing the structure shown in FIG. 11 wherein a planetary gear set (T300) being installed between the input end rotation shaft (S1031) of the transmission unit (T200) and the rocker arm
 15 (A101) or the sleeve type rotation shaft (AS101) driven by the epicycle wheel (W103) of the epicycle gear set (EG101), according to one embodiment of the present invention.

As shown in FIG.13, it mainly consists of:

- First rotary kinetic power source (P1): which is constituted by one or
 20 more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;
- 25 --Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft
 30 (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type

rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Transmission unit (T200): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, or the CVT, or the hydraulic transmission device;

--Planetary gear set (T300): which is constituted by friction wheels or gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1031) of the transmission unit (T200), and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101);

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel

(W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device
 5 (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on
 10 the rotation shaft (S101) and drives the sun wheel (W111) of the planetary gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed on the housing (H100) through the shell of the planetary gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set
 15 (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the rotation shaft (S110).

20 FIG. 14 is a schematic view showing the structure shown in FIG. 11 wherein the first transmission device (T1) being installed between the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) and the first rotary kinetic power source (P1), and the planetary gear set (T300) being installed between the input end
 25 rotation shaft (S1031) of the transmission unit (T200) and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicycle wheel (W103) of the epicycle gear set (EG101), according to one embodiment of the present invention.

As shown in FIG.14, it mainly consists of:

30 --First rotary kinetic power source (P1): which is constituted by one or

more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;

--Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, or the CVT, or the hydraulic transmission device;

--Transmission unit (T200): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by a transmission gear set

composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, or the CVT, or the hydraulic transmission device;

5 --Planetary gear set (T300): which is constituted by friction wheels or gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel
10 (W112) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1031) of the transmission unit (T200), and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the
15 epicycle gear set (EG101);

--The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the output/input end rotation shaft (S1012) of the first transmission device (T1) is combined with the
20 rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the
25 controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on
30 the rotation shaft (S101) and drives the sun wheel (W111) of the planetary

gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed on the housing (H100) through the shell of the planetary gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set
 5 (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the rotation shaft (S110).

10 FIG. 15 is a schematic view showing the structure shown in FIG. 11 wherein the transmission unit (T200) being replaced by a differential output epicycle gear set (T400), according to one embodiment of the present invention.

As shown in FIG.15, it mainly consists of:

- 15 --First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power
 20 set, or manual power;
- Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions
 25 to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);
- Controllable brake device (BK102): which is constituted by a brake
 30 device controlled by a manual force or mechanical force or hydraulic

force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is
 5 fixed in the housing (H100);

--Differential output epicycle gear set (T400): an epicycle gear set structured including by an output/input wheel (W401), an output/input wheel (W402) and an epicycle wheel (W403), wherein the output/input wheel (W401) is combined with a differential output/input end rotation
 10 shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft
 15 (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the annular input wheel (W400) is driven by a transmission wheel (W300), and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS101);

20 The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or bevel friction wheels;

The transmission function structured by the transmission wheel (W300) and the annular input wheel (W400) includes being constituted by
 25 the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by the transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or CVT, or the hydraulic
 30 transmission device, and a shell and the bearings;

-- One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) is used to drive the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the transmission wheel (W300) drives the annular input wheel (W400) and then through the epicycle wheel (W403) drives the output/input wheel (W401) and the output/input wheel (W402), the differential output/input end rotation shaft (S401) is connected to the output/input wheel (W401) for being driven by the output/input wheel (W401), the differential output/input end rotation shaft (S402) is connected to the output/input wheel (W402) for being driven by the output/input wheel (W402), and the differential operation is enabled to be performed between the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) through the epicycle wheel (W403).

FIG. 16 is a schematic structural view showing the transmission unit (T200) shown in FIG. 12 being replaced by the differential output epicycle gear set (T400), according to one embodiment of the present invention.

As shown in FIG. 16, it mainly consists of:

--First rotary kinetic power source (P1): which is constituted by one or more than one of rotary kinetic power sources capable of generating the

output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;

5 --Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft
10 (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic
15 force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

20 --First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle
25 type transmission gear set, or the CVT, or the hydraulic transmission device;

--Differential output epicycle gear set (T400): an epicycle gear set structured including by having an output/input wheel (W401), an output/input wheel (W402) and an epicycle wheel (W403), wherein the
30 output/input wheel (W401) is combined with a differential output/input

end rotation shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the annular input wheel (W400) is driven by a transmission wheel (W300), and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS101);

The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or bevel friction wheels;

The transmission function structured by the transmission wheel (W300) and the annular input wheel (W400) includes being constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by the transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or CVT, or the hydraulic transmission device, and a shell and the bearings;

-- The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the output/input end rotation shaft (S1012) of the first transmission device (T1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the

controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) is used to drive the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the transmission wheel (W300) drives the annular input wheel (W400) and then through the epicycle wheel (W403) drives the output/input wheel (W401) and the output/input wheel (W402), the differential output/input end rotation shaft (S401) is connected to the output/input wheel (W401) for being driven by the output/input wheel (W401), the differential output/input end rotation shaft (S402) is connected to the output/input wheel (W402) for being driven by the output/input wheel (W402), and the differential operation is enabled to be performed between the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) through the epicycle wheel (W403).

FIG. 17 is a schematic structural view showing the transmission unit (T200) shown in FIG. 13 being replaced by the differential output epicycle gear set (T400), according to one embodiment of the present invention.

As shown in FIG. 17, it mainly consists of:

- First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;
- Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel

(W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being
 5 combined with the housing (H100);

--Controllable brake device (BK102): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two
 10 controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Differential output epicycle gear set (T400): an epicycle gear set
 15 structured including by having an output/input wheel (W401), an output/input wheel (W402) and an epicycle wheel (W403), wherein the output/input wheel (W401) is combined with a differential output/input end rotation shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle
 20 wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the
 25 annular input wheel (W400) is driven by a transmission wheel (W300), and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS111);

The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or
 30 bevel friction wheels;

The transmission function structured by the transmission wheel (W300) and the annular input wheel (W400) includes being constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by the transmission
 5 gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or CVT, or the hydraulic transmission device, and a shell and the bearings;

--Planetary gear set (T300): which is constituted by friction wheels or
 10 gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the
 15 sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101);

20 --One end of the rotation shaft (S101) is combined with the rotation shaft (S101) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the output/input end rotation shaft (S102)
 25 combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is
 30 combined with the rocker arm (A101) and combined with the sleeve type

rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and drives the sun wheel (W111) of the planetary gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed in the housing (H100) through the shell of the planetary gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the transmission wheel (W300) drives the annular input wheel (W400) and then through the epicycle wheel (W403) drives the output/input wheel (W401) and the output/input wheel (W402), the differential output/input end rotation shaft (S401) is connected to the output/input wheel (W401) for being driven by the output/input wheel (W401), the differential output/input end rotation shaft (S402) is connected to the output/input wheel (W402) for being driven by the output/input wheel (W402), and the differential operation is enabled to be performed between the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) through the epicycle wheel (W403).

FIG. 18 is a schematic structural view showing the transmission unit (T200) shown in FIG. 14 being replaced by the differential output epicycle gear set (T400), according to one embodiment of the present invention.

As shown in FIG. 18, it mainly consists of:

- First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;
- Epicycle gear set (EG101): which is constituted by an input wheel

(W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, or the CVT, or the hydraulic transmission device;

--Planetary gear set (T300): which is constituted by friction wheels or gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400),

and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101);

--Differential output epicycle gear set (T400): an epicycle gear set structured including by having an output/input wheel (W401), an
 5 output/input wheel (W402) and an epicycle wheel (W403), wherein the output/input wheel (W401) is combined with a differential output/input end rotation shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is
 10 combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the annular input wheel (W400) is driven by a transmission wheel (W300),
 15 and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS111);

The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or bevel friction wheels;

20 The transmission function structured by the transmission wheel (W300) and the annular input wheel (W400) includes being constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by the transmission gear set composed of gears, friction wheels, pulleys and pulley belts,
 25 chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or CVT, or the hydraulic transmission device, and a shell and the bearings;

-- The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft
 30 (S1013) of the first transmission device (T1), the output/input end rotation

shaft (S1012) of the first transmission device (T1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end
 5 rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is
 10 combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and drives the sun wheel (W111) of the planetary gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed in the housing (H100) through the shell of the planetary
 15 gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400),
 20 and the transmission wheel (W300) drives the annular input wheel (W400) and then through the epicycle wheel (W403) drives the output/input wheel (W401) and the output/input wheel (W402), the differential output/input end rotation shaft (S401) is connected to the output/input wheel (W401) for being driven by the output/input wheel (W401), the differential
 25 output/input end rotation shaft (S402) is connected to the output/input wheel (W402) for being driven by the output/input wheel (W402), and the differential operation is enabled to be performed between the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) through the epicycle wheel (W403).

30 FIG. 19 is a schematic structural view showing a limited slip

differential device (LSD401) being installed between the output/input wheel (W401) and the output/input wheel (W402) of the differential output epicycle gear set (T400), according to one embodiment of the present invention.

5 As shown in FIG. 19, in the differential output epicycle gear set (T400) of FIG. 15, FIG. 16, FIG. 17 and FIG. 18, a limited slip differential device (LSD401) can be further installed between shaft ends of the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) inside the output/input wheel (W401), the
10 output/input wheel (W402) and the epicycle wheel (W403), which mainly consists of:

--Limited slip differential device (LSD401): which is constituted by a mechanical limited slip differential device, torque sensing type limited slip differential device, viscous coupling type limited slip differential
15 device or electromagnetic coupling type limited slip differential device, and installed in the differential output epicycle gear set (T400), and disposed between shaft ends of the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) inside the output/input wheel (W401), the output/input wheel (W402) and
20 the epicycle wheel (W403), so when one of the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) slips, the other differential output/input end rotation shaft can still output the rotary torque.

The present invention relates to a clutch device structured with
25 controllable epicycle gear set and the applied power train thereof further by using the controllable brake device to manipulate an epicycle gear set (EG101), in which the power train having the clutch device structured by using the controllable brake device to manipulate the epicycle gear set (EG101) can be widely applied in a dual rotary kinetic power source or a
30 triple rotary kinetic power source, the structural configuration includes a

coaxial in-series structure or a multiple axial in-parallel structure for satisfying the requirement of applied space.

The structures and embodiments of a clutch device structured with controllable epicycle gear set and the applied power train thereof are as followings:

FIG.20 is a schematic structural view showing a rocker arm (A101) and a sleeve type rotation shaft (AS101) driven by a first rotary kinetic power source (P1) and an epicycle wheel (W103) of an epicycle gear set (EG101) being combined with a controllable brake device (BK101), and an input wheel (W102) of the epicycle gear set (EG101) and an output/input end of a rotation shaft (S102) being combined with a second rotary kinetic power source (P2) and an output/input end rotation shaft (S1026), according to one embodiment of the present invention.

As shown in FIG. 20, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the

rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

-- Controllable brake device (BK101): constituted by a brake device
 5 controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and
 10 the other action side is fixed in the housing (H100);

--One end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the other end of the rotation shaft (S101) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the rotation shaft
 15 (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is served as an output/input end for being combined with an output/input end rotation shaft (S1024) of the second rotary kinetic power source (P2), and the other output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2) is combined with a rotation shaft
 20 (S1026) for being served as an output/input end;

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the
 25 rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the controllable brake device (BK101) is fixed in a housing (H100), and through controlling the controllable brake device (BK101) to perform brake locking or releasing, the operations of connecting for transmission or releasing between the
 30 rotation shaft (S101) and the rotation shaft (S102) are enabled to be

controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026).

FIG. 21 is a schematic view showing a first transmission device (T1) being installed between the first rotary kinetic power source (P1) and the controllable brake device (BK101), and the input wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) being combined with the second rotary kinetic power source (P2) and the output/input end rotation shaft (S1026) shown in FIG. 20, according to one embodiment of the present invention.

As shown in FIG. 21, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft

(AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

-- Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or
 5 pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

10 --First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission
 15 gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1012) of the first transmission device
 20 (T1), and the output/input end rotation shaft (S1013) at the other end of the first transmission device (T1) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);

--The rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end
 25 rotation shaft (S1024) of the second rotary kinetic power source (P2), and the output/input end rotation shaft (S1025) at the other end of the second rotary kinetic power source (P2) is combined with the rotation shaft (S1026);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is
 30 combined with the rocker arm (A101) and combined with the sleeve type

rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the controllable brake device
 5 (BK101) is fixed in a housing (H100), and through controlling the controllable brake device (BK101) to perform brake locking or releasing, the operations of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) are enabled to be controlled, so as to further control the operation relation between the first
 10 rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026).

FIG. 22 is a schematic view showing a third rotary kinetic power source (P3) being installed between the first rotary kinetic power source (P1) and the controllable brake device (BK101) shown in FIG. 20, according to one embodiment of the present invention.

As shown in FIG. 22, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more
 20 than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational
 25 electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

30 --Third rotary kinetic power source (P3): constituted by a rotational

electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary
 5 kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an
 10 epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

-- Controllable brake device (BK101): constituted by a brake device
 15 controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and
 20 the other action side is fixed in the housing (H100);

--The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined to the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3);

25 --The rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1024) of the second rotary kinetic power source (P2), and the output/input end rotation shaft (S1025) at the other end of the second rotary kinetic power source (P2) is combined with the rotation shaft
 30 (S1026) for being served as an output/input end;

--The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3), and the other output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3) is combined with the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the controllable brake device (BK101) is fixed in a housing (H100), and through controlling the controllable brake device (BK101) to perform brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the rotation shaft (S102) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the third rotary kinetic power source (P3) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026), or the first rotary kinetic power source (P1) drives the third rotary kinetic power source (P3) to operate as the power generator function, or the third rotary kinetic power source (P3) is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).

FIG. 23 is a schematic view showing a third rotary kinetic power source (P3) being installed between the first transmission device (T1) and the controllable brake device (BK101) shown in FIG. 21, according to one embodiment of the present invention.

As shown in FIG. 23, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

--Third rotary kinetic power source (P3): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

-- Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a

releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

--First transmission device (T1): constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined to the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), the other output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1012) of the first transmission device (T1), and the other output/input end rotation shaft (S1013) of the first transmission device (T1) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);

--The rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1024) of the second rotary kinetic power source (P2), and the other output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2) is combined with the rotation shaft (S1026) for being served as the output/input end;

--The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the other output/input end rotation shaft (S1012) of the first transmission device (T1) is combined with the output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3), and the other output/input end rotation shaft (S1051)

of the third rotary kinetic power source (P3) is combined with rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is
 5 combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the controllable brake device
 10 (BK101) is fixed in a housing (H100), and through controlling the controllable brake device (BK101) to perform brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the rotation shaft (S102) are enabled to be controlled, so as to further control the operation relation between the
 15 first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the third rotary kinetic power source (P3) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026), or the first rotary kinetic power source
 20 (P1) drives the third rotary kinetic power source (P3) to operate as the power generator function, or the third rotary kinetic power source (P3) is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).

FIG. 24 is a schematic structural view showing the present invention
 25 being structured by the first rotary kinetic power source (P1) and a transmission unit (T200) and the epicycle gear set (EG101) and a controllable brake device (BK102), and the output wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) being combined with the second rotary kinetic power source (P2),
 30 the epicycle wheel (W103) of the epicycle gear set (EG101) being

provided for driving the rocker arm (A101) and the sleeve type rotation shaft (AS101), and the sleeve type rotation shaft (AS101) being provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) being installed with a rotation shaft (S110),
 5 according to one embodiment of the present invention.

As shown in FIG. 24, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine,
 10 external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting
 15 the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with
 20 the housing (H100);
 25

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
 30 action sides for the operations of a brake locking state for engagement or a

releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the controllable brake device (BK102) and combined with the second rotary kinetic power source (P2), and the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the output/input end rotation shaft (S110);

--Through controlling the controllable brake device (BK102) to perform brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the

rotation shaft (S110); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S110).

FIG. 25 is a schematic view showing the structure in FIG. 24 in which the input wheel (W101) of the epicycle gear set (EG101) being combined with the rotation shaft (S101) and combined with the rotation shaft (S1011) of the first rotary kinetic power source (P1), the rotation shaft (S101) being combined to an action side of a controllable brake device (BK103), and the other action end of the controllable brake device (BK103) being fixed in the housing (H100), a planetary gear set (300) being installed between the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) and the second rotary kinetic power source (P2), the output/input end of the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) being combined with a rocker arm (A111) of a planetary gear set (T300), an outer annular wheel (W113) of the planetary gear set (T300) being fixed in the housing (H100), a sun wheel (W111) of the planetary gear set (T300) being combined with the second rotary kinetic power source (P2), the epicycle wheel (W103) of the epicycle gear set (EG101) being provided for driving the rocker arm (A101) and the sleeve type rotation shaft (AS101), and the sleeve type rotation shaft (AS101) being provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), according to one embodiment of the present invention.

As shown in FIG. 25, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well
 5 as having the power generator function for reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel
 10 friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected
 15 to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Controllable brake device (BK103): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
 25 action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S101), and the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic,
 30 semi-automatic, or manual gear shifting device with fixed or variable

speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

5 -- Planetary gear set (T300): constituted by a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) composed of friction wheels or gears, and a shell fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed in the shell then fixed in the housing or directly fixed in the housing, the planetary wheel (W112) is
10 combined with the rocker arm (A111) and combined with the rotation shaft (S102), and the sun wheel (W111) is combined with the output/input end rotation shaft (S1024) of the second rotary kinetic power source (P2);

 --The output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action
15 side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), and the other end of the rotation shaft (S102) is combined with the rocker arm (A111) driven by the planetary wheel (W112) of the planetary gear set (T300);

20 --The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other
25 output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the rotation shaft (S110);

 --The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle
30 gear set (EG101), as well as connected to an action side of the

controllable brake device (BK103), and the other action side of the controllable brake device (BK103) is fixed in the housing (H100);

--Through controlling one or both of the controllable brake device (BK102) and the controllable brake device (BK103) to perform brake
 5 locking or releasing, the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S110) is enabled to be controlled; for example controlling the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft
 10 (AS101) or between the rotation shaft (S102) and the sleeve type rotation shaft (AS101), one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) is further controlled to drive the rotation shaft (S110).

FIG. 26 is a schematic view showing the second rotary kinetic power
 15 source (P2) shown in FIG. 24 being installed at one end of the output/input end rotation shaft (S110) of the transmission unit (T200).

As shown in FIG. 26, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the
 20 rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined
 25 with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101)
 30 and an output wheel (W102) and at least an epicycle wheel (W103), and

including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft
 5 (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
 10 action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable
 15 speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input
 20 end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);
 25

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type
 30 rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on

the rotation shaft (S101), the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the
 5 output/input end rotation shaft (S110);

--One end of the rotation shaft (S110) is combined with the output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2), and the other end of the rotation shaft (S110) is served as an output/input end;

10 --Through controlling the controllable brake device (BK102) to perform brake locking or releasing, the operations of connecting for transmission or releasing between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source
 15 (P1), the second rotary kinetic power source (P2) and the rotation shaft (S110); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S110).

FIG. 27 is a schematic view showing the structure shown in FIG. 26 in
 20 which an epicycle gear set (EG201) and a controllable brake device (BK104) being installed between one end of the output/input end rotation shaft (S110) of the transmission unit (T200) and the second rotary kinetic power source (P2).

As shown in FIG. 27, it mainly consists of:

25 --First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

30 --Second rotary kinetic power source (P2): constituted by a rotational

electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary
 5 kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an
 10 epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

-- Epicycle gear set (EG201): constituted by an input wheel (W201)
 15 and an output wheel (W202) and at least an epicycle wheel (W203), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S201), the rotation shaft (S202), the rocker arm (A201), the sleeve type rotation shaft
 20 (AS201) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
 25 action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

-- Controllable brake device (BK104): constituted by a brake device
 30 controlled by a manual force or mechanical force or hydraulic force or

pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS201) or the rocker arm (A201), and
 5 the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and
 10 chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with
 15 the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the
 20 transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the output/input end rotation shaft (S110);

--One end of the rotation shaft (S110) is combined with the output/input end rotation shaft (S202) combined with the output wheel
 30 (W202) of the epicycle gear set (EG201), the other output/input end

rotation shaft (S201) combined with the input wheel (W201) of the
 epicycle gear set (EG201) is combined with the output/input end rotation
 shaft (S1025) of the second rotary kinetic power source (P2), and the
 epicycle wheel (W203) of the epicycle gear set (EG201) is provided for
 5 driving the rocker arm (A201) and the sleeve type rotation shaft (AS201),
 the sleeve type rotate shaft (AS201) is capable of rotating on the rotation
 shaft (S201) and is provided for connecting to an action side of the
 controllable brake device (BK104), the other action side of the
 controllable brake device (BK104) is fixed in the housing (H100), and the
 10 other end of the rotation shaft (S110) is served as an output/input end;

--Through controlling one or both of the controllable brake device
 (BK102) and the controllable brake device (BK104) to perform brake
 locking or releasing, the operation relation between the first rotary kinetic
 power source (P1), the second rotary kinetic power source (P2) and the
 15 rotation shaft (S110) is enabled to be controlled; for example controlling
 the operations of connecting for transmission or releasing functions
 between the rotation shaft (S101) and the sleeve type rotation shaft
 (AS101) or between the rotation shaft (S201) and the rotation shaft
 (S202), one or both of the first rotary kinetic power source (P1) and the
 20 second rotary kinetic power source (P2) is controlled to drive the rotation
 shaft (S110).

FIG. 28 is a schematic view showing the structure shown in FIG. 26 in
 which the third rotary kinetic power source (P3) being installed between
 the first rotary kinetic power source (P1) and the rotation shaft (S101)
 25 combined with the input wheel (W101) of the epicycle gear set (EG101).

As shown in FIG. 28, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more
 than of one of rotary kinetic power sources capable of generating the
 rotary kinetic power output, including an internal combustion engine,
 30 external combustion engine, Sterling engine, turbine engine, wind-driven

blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting
5 the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

--Third rotary kinetic power source (P3): constituted by a rotational electric machine, or constituted by a rotational electric machine combined
10 with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101)
15 and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft
20 (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
25 action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic,
30 semi-automatic, or manual gear shifting device with fixed or variable

speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

5 --One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), the rotation shaft (S1052) at the other end of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of
10 the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed
15 in the housing (H100);

 --The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) is
20 provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the output/input end rotation shaft (S110);

 --One end of the rotation shaft (S110) is combined with the
25 output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2), and the other end of the rotation shaft (S110) is served as an output/input end;

 --The rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end
30 rotation shaft (S1051) of the third rotary kinetic power source (P3), and

the other output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);

--Through controlling the controllable brake device (BK102) to perform brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the third rotary kinetic power source (P3) and the rotation shaft (S110); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S110), or the first rotary kinetic power source (P1) drives the third rotary kinetic power source (P3) to operate as the power generator function, or the third rotary kinetic power source (P3) is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).

FIG. 29 is a schematic view showing the structure shown in FIG. 28 in which the epicycle gear set (EG201) and the controllable brake device (BK104) being installed between one end of the output/input end rotation shaft (S110) of the transmission unit (T200) and the second rotary kinetic power source (P2).

As shown in FIG. 29, it mainly consists of:

--First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

--Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined

with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

5 --Third rotary kinetic power source (P3): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary
10 kinetic energy;

 -- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an
15 epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

 -- Epicycle gear set (EG201): constituted by an input wheel (W201)
20 and an output wheel (W202) and at least an epicycle wheel (W203), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S201), the rotation shaft (S202), the rocker arm (A201), the sleeve type rotation shaft
25 (AS201) and a bearing, and installed with a shell for being combined with the housing (H100);

 --Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
30 action sides for the operations of a brake locking state for engagement or a

releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

-- Controllable brake device (BK104): constituted by a brake device
 5 controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS201) or the rocker arm (A201), and
 10 the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and
 15 chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), the rotation shaft (S1052) at the other end of the third rotary
 20 kinetic power source (P3) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101)
 25 is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type
 30 rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on

the rotation shaft (S101), the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the
 5 output/input end rotation shaft (S110);

--One end of the rotation shaft (S110) is combined with the output/input end rotation shaft (S202) combined with the output wheel (W202) of the epicycle gear set (EG201), the other output/input end rotation shaft (S201) combined with the input wheel (W201) of the
 10 epicycle gear set (EG201) is combined with the output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2), and the epicycle wheel (W203) of the epicycle gear set (EG201) is provided for driving the rocker arm (A201) and the sleeve type rotation shaft (AS201), the sleeve type rotate shaft (AS201) is capable of rotating on the rotation
 15 shaft (S201) and is provided being combined to an action side of the controllable brake device (BK104), the other action side of the controllable brake device (BK104) is fixed in the housing (H100), and the other end of the rotation shaft (S110) is served as an output/input end;

--The rotation shaft (S101) combined with the input wheel (W101) of
 20 the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), and the other output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);

--Through controlling one or both of the controllable brake device (BK102) and the controllable brake device (BK104) to perform brake locking or releasing, the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the third rotary kinetic power source (P3) and the rotation shaft (S110) are able to
 25 be controlled; for example controlling the operations of connecting for
 30

transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) or between the rotation shaft (S201) and the rotation shaft (S202), one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) is controlled
5 to drive the rotation shaft (S110), or the first rotary kinetic power source (P1) drives the third rotary kinetic power source (P3) to operate as the power generator function, or the third rotary kinetic power source (P3) is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).

10

CLAIMS

1. A clutch device structured with controllable epicycle gear set and the applied power train thereof, wherein a rotation shaft (S101) combined with an input wheel (W101) of an epicycle gear set (EG101) is served
 5 as an output/input end, and a rotation shaft (S102) combined with an output wheel (W102) is served as an output/input end, and a rocker arm (A101) and a sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) are served as an output/input end, so that a part or all of the three output/input ends are respectively combined to
 10 one action side of a corresponding controllable brake device, and the other action side of the controllable brake device is connected to a housing (H100); through controlling the controllable brake device to perform brake locking or releasing, the operations of transmission function of combining transmission or releasing between the rotation shaft (S101) at the output/input end, the rotation shaft (S102) at the
 15 output/input end and the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101) are enabled to be controlled;
 --Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103),
 20 and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed
 25 with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

- 30 The speed ratios of the input wheel (W101) and the output wheel

(W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102).

2. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 1, which is through controlling the controllable brake device (BK101) to perform brake locking or releasing, so as to enable the operation of clutch function between the rotation shaft (S101) and the rotation shaft (S102).
3. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 1, wherein the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) being served as an output/input end, and

coaxially sleeved with the rotation shaft (S101) or the rotation shaft (S102), and the controllable brake device (BK102) being combined and fastened in the housing (H100) through the rotation shaft (S102), which mainly consists of:

5 --Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation
10 shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and
15 the speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel
20 (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially
25 extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK102): constituted by a brake device
30 controlled by a manual force or mechanical force or hydraulic force or

pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102).

4. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 3, which is through controlling the controllable brake device (BK102) to perform brake locking or releasing, so as to enable the operation of clutch function between the rotation shaft (S101) and the sleeve type rotation shaft (AS101).

5. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 1, wherein the rotation shaft (S102) serving to provide the output function is further installed with a controllable brake device (BK102) capable of preventing reverse linkage, which mainly consists of:

--Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the speed ratios between the above two and the epicycle wheel (W103)

can be the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102).

6. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 5, which is through controlling the controllable brake device (BK101) and the controllable brake device (BK102) to generate one or more than one operation functions as following:
- 1) When the controllable brake device (BK101) is in a brake locking state, and the controllable brake device (BK102) is in a releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) is in a connecting relation allowing for transmission;
 - 2) When the controllable brake device (BK101) is in the releasing state, and the controllable brake device (BK102) is in the brake locking state, the transmission relation between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) is in a connecting relation allowing for transmission;
 - 3) When the controllable brake device (BK101) and the controllable brake device (BK102) are both in the brake locking state, the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) are all connected in the brake locking state, thus not capable of mutually driving;
 - 4) When the controllable brake device (BK101) and the controllable brake device (BK102) are both in the releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is in a releasing relation allowing for idle rotation.
7. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 1, wherein the rotation shaft (S101) is further installed with a controllable brake device (BK103), so that the input wheel (W101) and the rotation shaft (S101) of the epicycle gear set (EG101) are served as an output/input end, the

output wheel (W102) and the rotation shaft (S102) are served as an output/input end, and the epicycle wheels (W103) and the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) are sleeved on the rotation shaft (S101) or the rotation shaft (S102), and through the rocker arm (A101) or the sleeve type rotation shaft (AS101) connects to the controllable brake device (BK101) fastened in the housing (H100), and through the rotation shaft (S101) connects to the controllable brake device (BK103) fastened in the housing (H100), which mainly consists of:

--Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are the same, and the speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

--Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the

rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

5 --Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm
10 (A101), and the other action side is fixed in the housing (H100);

--Controllable brake device (BK103): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement
15 or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S101), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set
20 (EG101) is served to drive the rotation shaft (S102).

8. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 7, which is through controlling the controllable brake device (BK101) and the controllable brake device (BK103) to generate one or more than one operation
25 functions as following:

1) When the controllable brake device (BK101) is in a brake locking state, and the controllable brake device (BK103) is in a releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) is in a connecting relation allowing for
30 transmission;

- 2) When the controllable brake device (BK101) is in the releasing state, and the controllable brake device (BK103) is in the brake locking state, the transmission relation between the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is in a connecting relation allowing for transmission;
- 3) When the controllable brake device (BK101) and the controllable brake device (BK103) are both in the brake locking state, the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) are all connected in the brake locking state, thus not capable of mutually driving;
- 4) When the controllable brake device (BK101) and the controllable brake device (BK103) are both in the releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is in a releasing relation allowing for idle rotation.
9. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 3, wherein the rotation shaft (S101) is further installed with a controllable brake device (BK103), so that the input wheel (W101) and the rotation shaft (S101) of the epicycle gear set (EG101) are served as an output/input end, the output wheel (W102) and the rotation shaft (S102) are served as an output/input end, and the epicycle wheels (W103) and the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) are sleeved on the rotation shaft (S101) or the rotation shaft (S102), and through the rotation shaft (S102) connects to the controllable brake device (BK102) fastened in the housing (H100), and through the rotation shaft (S101) connects to the controllable brake device (BK103) fastened in the housing (H100), which mainly consists of:
- Epicycle gear set (EG101): constituted by an input wheel (W101)

and an output wheel (W102) and at least an epicycle wheel (W103),
 and including through the bevel gears engaging with each other, or the
 bevel friction wheels mutually performing friction transmissions to
 form the epicycle gear set function, and also constituted by the rotation
 shaft (S101), the rotation shaft (S102), the rocker arm (A101), the
 sleeve type rotation shaft (AS101) and a bearing, as well as installed
 with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel
 (W102) of the mentioned epicycle gear set (EG101) are the same, and
 the speed ratios between the above two and the epicycle wheel (W103)
 can be the same or different; or

The speed ratios of the input wheel (W101) and the output wheel
 (W102) of the mentioned epicycle gear set (EG101) are different, the
 speed ratios between the epicycle wheel (W103) and the output wheel
 (W102) can be the same or different, and the speed ratios between the
 epicycle wheel (W103) and the input wheel (W101) can be the same or
 different;

--Rocker arm (A101): having one end provided for allowing the
 epicycle wheel (W103) to rotate and link, and the other end axially
 extending toward one or both of the rotation shaft (S101) and the
 rotation shaft (S102), and combined to the sleeve type rotation shaft
 (AS101) for being sleeved on one or both of the rotation shaft (S101)
 and the rotation shaft (S102) and capable of rotating thereon;

--Controllable brake device (BK102): constituted by a brake device
 controlled by a manual force or mechanical force or hydraulic force or
 pneumatic force or electromagnetic force, and having two controllable
 action sides for the operations of a brake locking state for engagement
 or a releasing state for separation, wherein one of the action sides is
 combined with the rotation shaft (S102), and the other action side is
 fixed in the housing (H100);

--Controllable brake device (BK103): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement
 5 or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S101), and the other action side is fixed in the housing (H100);

--The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set
 10 (EG101) is served to drive the rotation shaft (S102).

10.A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 9, which is through controlling the controllable brake device (BK102) and the controllable brake device (BK103) to generate one or more than one operation
 15 functions as following:

- 1) When the controllable brake device (BK103) is in a brake locking state, and the controllable brake device (BK102) is in a releasing state, the transmission relation between the sleeve type rotation shaft (AS101) and the rotation shaft (S102) is in a connecting
 20 relation allowing for transmission;
- 2) When the controllable brake device (BK103) is in the releasing state, and the controllable brake device (BK102) is in the brake locking state, the transmission relation between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) is in a connecting
 25 relation allowing for transmission;
- 3) When the controllable brake device (BK101) and the controllable brake device (BK102) are both in the brake locking state, the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) are all connected in the brake locking
 30 state, thus not capable of mutually driving;

4) When the controllable brake device (BK101) and the controllable brake device (BK102) are both in the releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is in a releasing relation allowing for idle rotation.

11. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 5, wherein the rotation shaft (S101) is further installed with a controllable brake device (BK103), so that the input wheel (W101) and the rotation shaft (S101) of the epicycle gear set (EG101) are served as an output/input end, the output wheel (W102) and the rotation shaft (S102) are served as an output/input end, and the epicycle wheels (W103) and the rocker arm (A101) and the sleeve type rotation shaft (AS101) linked by the epicycle wheels (W103) are sleeved on the rotation shaft (S101) or the rotation shaft (S102), and through the rocker arm (A101) or the sleeve type rotation shaft (AS101) connects to the controllable brake device (BK101) fastened in the housing (H100), and through the rotation shaft (S102) connects to the controllable brake device (BK102) fastened in the housing (H100), and through the rotation shaft (S101) connects to the controllable brake device (BK103) fastened in the housing (H100), which mainly consists of:

--Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through the bevel gears engaging with each other, or the bevel friction wheels mutually performing friction transmissions to form the epicycle gear set function, and also constituted by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, as well as installed with a shell for being combined in the housing (H100);

The speed ratios of the input wheel (W101) and the output wheel

(W102) of the mentioned epicycle gear set (EG101) are the same, and the speed ratios between the above two and the epicycle wheel (W103) can be the same or different; or

5 The speed ratios of the input wheel (W101) and the output wheel (W102) of the mentioned epicycle gear set (EG101) are different, the speed ratios between the epicycle wheel (W103) and the output wheel (W102) can be the same or different, and the speed ratios between the epicycle wheel (W103) and the input wheel (W101) can be the same or different;

10 --Rocker arm (A101): having one end provided for allowing the epicycle wheel (W103) to rotate and link, and the other end axially extending toward one or both of the rotation shaft (S101) and the rotation shaft (S102), and combined to the sleeve type rotation shaft (AS101) for being sleeved on one or both of the rotation shaft (S101) and the rotation shaft (S102) and capable of rotating thereon;

15 --Controllable brake device (BK101): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

20 --The shell of the epicycle gear set (EG101) is also installed in the housing (H100), and the output wheel (W102) of the epicycle gear set (EG101) is served to drive the rotation shaft (S102);

25 --Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is

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combined with the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Controllable brake device (BK103): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is combined with the rotation shaft (S101), and the other action side is fixed in the housing (H100).

12.A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 11, which is through controlling the controllable brake device (BK101), the controllable brake device (BK102) and the controllable brake device (BK103) to generate one or more than one operation functions as following:

- 1) When the controllable brake device (BK101) is in a brake locking state, and the controllable brake device (BK102) and the controllable brake device (BK103) are in a releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) is in a connecting relation allowing for transmission;
- 2) When the controllable brake device (BK101) and the controllable brake device (BK103) are in the releasing state, and the controllable brake device (BK102) is in the brake locking state, the transmission relation between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) is in a connecting relation allowing for transmission;
- 3) When the controllable brake device (BK103) is in the brake locking state, the controllable brake device (BK101) and the controllable brake device (BK102) are in the releasing state, the transmission relation between the sleeve type rotation shaft (AS101) and the

rotation shaft (S102) is in a connecting relation allowing for transmission;

4) When two or more than two of the controllable brake device (BK101) and the controllable brake device (BK102) and the controllable brake device (BK103) are in the brake locking state, the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) are all connected in the brake locking state, thus not capable of mutually driving;

5) When the controllable brake device (BK101) and the controllable brake device (BK102) and the controllable brake device (BK103) are all in the releasing state, the transmission relation between the rotation shaft (S101) and the rotation shaft (S102) and the sleeve type rotation shaft (AS101) is in a releasing relation allowing for idle rotation.

13.A clutch device structured with controllable epicycle gear set and the applied power train thereof, in which a controllable brake device (BK101) is used to control an epicycle gear set (EG101) to constitute the function of controllable epicycle type clutch device; the power train adopting the clutch device structured by the controllable brake device (BK101) controlling the epicycle gear set (EG101) can be widely applied in a power train driven by single rotary kinetic power source, and the structural type can be an in-series coaxial line structure, or multiple in-parallel axial lines for satisfying the requirements of the applied space, which mainly consists of:

--First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;

--Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK101): which is constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm (A101), and the other action side is fixed in the housing (H100);

--One end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), and the other end of the rotation shaft (S101) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is served as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for combining the rocker arm (A101) and combining the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), and the other action side of the controllable brake device (BK101) is fixed in the housing (H100); through

controlling the controllable brake device (BK101) to perform brake locking or releasing, the function of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) is enabled to be controlled.

5 14. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 13, wherein a first transmission device (T1) is further installed between the first rotary kinetic power source (P1) and the rotation shaft (S101) driven by the input wheel (W101) of the epicycle gear set (EG101), and in which:

10 --First rotary kinetic power source (P1);

--Epicycle gear set (EG101);

--Controllable brake device (BK101);

15 --First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

20 --The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1012) of the first transmission device (T1), the output/input end rotation shaft (S1013) at the other end of the first transmission device (T1) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and
25 the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is served as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is
30 provided for combining the rocker arm (A101) and combining the

sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), and the other action side of the controllable brake device (BK101) is fixed in the housing (H100);
 5 through controlling the controllable brake device (BK101) to perform brake locking or releasing, the function of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) is enabled to be controlled.

10 15. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 13, wherein the output wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) is further installed with a second transmission device (T2) and an output/input end rotation shaft (S1021), and in which:

- First rotary kinetic power source (P1);
- Epicycle gear set (EG101);
- Controllable brake device (BK101);
- Second transmission device (T2): which is constituted by the
 20 automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the
 25 hydraulic transmission device;
- The rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the rotation shaft (S102) combined with the output wheel (W102) of
 30 the epicycle gear set (EG101) is combined with the output/input end

rotation shaft (S1022) of the second transmission device (T2), the output/input end rotation shaft (S1023) at the other end of the second transmission device (T2) is combined with the rotation shaft (S1021) for serving as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for combining the rocker arm (A101) and combining the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), and the other action side of the controllable brake device (BK101) is fixed in the housing (H100); through controlling the controllable brake device (BK101) to perform brake locking or releasing, the function of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) is enabled to be controlled.

16. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 13, wherein the first transmission device (T1) is further installed between the first rotary kinetic power source (P1) and the rotations shaft (S101) driven by the input wheel (W101) of the epicycle gear set (EG101), and the output wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) is installed with the second transmission device (T2) and the output/input end rotation shaft (S1021), and in which:

- First rotary kinetic power source (P1);
- Epicycle gear set (EG101);
- Controllable brake device (BK101);
- First transmission device (T1), Second transmission device (T2): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is

further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

5 --The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1012) of the first transmission device (T1), and the output/input end rotation shaft (S1013) at the other end of the first transmission device (T1) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1),
10 the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1022) of the second transmission device (T2), the output/input end rotation shaft (S1023) at the other end of the second transmission device (T2) is combined with the rotation shaft (S1021) for serving as an output/input end, the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for combining the rocker arm (A101) and combining the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101),
20 the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), and the other action side of the controllable brake device (BK101) is fixed in the housing (H100); through controlling the controllable brake device (BK101) to perform brake locking or releasing, the function of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) is enabled to be controlled.

17.A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 13, wherein the
30 rotation shaft (S102) combined with the first rotary kinetic power

source (P1) and the transmission unit (T200) and the epicycle gear set (EG101) and the output wheel (W102) of the epicycle gear set (EG101) are combined at an action side of a controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100), and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the an input end rotation shaft (S1031) of the transmission unit (T200), and the output end of the transmission unit (T200) is installed with a rotation shaft (S110), which mainly consists of:

--First rotary kinetic power source (P1): which is constituted by one or more than of one of rotary kinetic power sources capable of generating the output of rotary kinetic power, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, electric-driven engine, wind-driven blade power set, flow-driven power set, or manual power;

--Epicycle gear set (EG101): which is constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Transmission unit (T200): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic

transmission device;

--One end of the rotation shaft (S101) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) drives the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the output/input end rotation shaft (S110).

18.A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 17, wherein the first transmission device (T1) is further installed between the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) and the first rotary kinetic power source (P1), in which:

--First rotary kinetic power source (P1);
 --Epicycle gear set (EG101);
 --Controllable brake device (BK102);
 --First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts,

chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

5 --Transmission unit (T200): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic
10 transmission device;

--The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the output/input end rotation shaft (S1012) of the first transmission device (T1) is combined
15 with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to
20 an action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft
25 (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) drives the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the output/input end rotation shaft (S110).

30 19.A clutch device structured with controllable epicycle gear set and the

applied power train thereof as claimed in claim 17, wherein a planetary gear set (T300) is further installed between the input end rotation shaft (S1031) of the transmission unit (T200) and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicycle wheel (W103) of the epicycle gear set (EG101), and in which:

- First rotary kinetic power source (P1);
- Epicycle gear set (EG101);
- Controllable brake device (BK102);
- Transmission unit (T200);
- Planetary gear set (T300): which is constituted by friction wheels or gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1031) of the transmission unit (T200), and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101);
- One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);
- The epicycle wheel (W103) of the epicycle gear set (EG101) is

combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and drives the sun wheel (W111) of the planetary gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed on the housing (H100) through the shell of the planetary gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the rotation shaft (S110).

20. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 17, wherein the first transmission device (T1) is installed between the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) and the first rotary kinetic power source (P1), and the planetary gear set (T300) is installed between the input end rotation shaft (S1031) of the transmission unit (T200) and the rocker arm (A101) or the sleeve type rotation shaft (AS101) driven by the epicycle wheel (W103) of the epicycle gear set (EG101), and in which:

- First rotary kinetic power source (P1);
- Epicycle gear set (EG101);
- Controllable brake device (BK102);
- First transmission device (T1);
- Transmission unit (T200);
- Planetary gear set (T300): which is constituted by friction wheels or gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell

then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1031) of the transmission unit (T200), and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101);

--The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the output/input end rotation shaft (S1012) of the first transmission device (T1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and drives the sun wheel (W111) of the planetary gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed on the housing (H100) through the shell of the planetary gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving the output/input end rotation shaft (S1031) of the transmission unit

(T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) drives the rotation shaft (S110).

21. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 17, wherein the transmission unit (T200) is replaced by a differential output epicycle gear set (T400), and in which:

--First rotary kinetic power source (P1);

--Epicycle gear set (EG101);

--Controllable brake device (BK102);

--Differential output epicycle gear set (T400): an epicycle gear set structured including by an output/input wheel (W401), an output/input wheel (W402) and an epicycle wheel (W403), wherein the output/input wheel (W401) is combined with a differential output/input end rotation shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the annular input wheel (W400) is driven by a transmission wheel (W300), and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS101);

The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or bevel friction wheels;

The transmission function structured by the transmission wheel (W300) and the annular input wheel (W400) includes being constituted by the automatic, manumatic, semi-automatic, or manual gear shifting

device with fixed or variable speed ratios which is structured by the transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or
 5 CVT, or the hydraulic transmission device, and a shell and the bearings;

-- One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with
 10 the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), the other action side of the
 15 controllable brake device (BK102) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) is
 20 used to drive the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the transmission wheel (W300) drives the annular input wheel (W400) and then through the epicycle wheel (W403) drives the output/input wheel (W401) and the output/input wheel (W402), the differential output/input end rotation
 25 shaft (S401) is connected to the output/input wheel (W401) for being driven by the output/input wheel (W401), the differential output/input end rotation shaft (S402) is connected to the output/input wheel (W402) for being driven by the output/input wheel (W402), and the differential operation is enabled to be performed between the differential
 30 output/input end rotation shaft (S401) and the differential output/input

end rotation shaft (S402) through the epicycle wheel (W403).

22. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 18, wherein the transmission unit (T200) is replaced by the differential output epicycle gear set (T400), and in which:

5

--First rotary kinetic power source (P1);

--Epicycle gear set (EG101);

--Controllable brake device (BK102);

--First transmission device (T1);

10

--Differential output epicycle gear set (T400): an epicycle gear set structured including by having an output/input wheel (W401), an output/input wheel (W402) and an epicycle wheel (W403), wherein the output/input wheel (W401) is combined with a differential output/input end rotation shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the annular input wheel (W400) is driven by a transmission wheel (W300), and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS101);

25

The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or bevel friction wheels;

The transmission function structured by the transmission wheel (W300) and the annular input wheel (W400) includes being constituted by the automatic, manumatic, semi-automatic, or manual gear shifting

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device with fixed or variable speed ratios which is structured by the transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or
 5 CVT, or the hydraulic transmission device, and a shell and the bearings;

-- The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the output/input end
 10 rotation shaft (S1012) of the first transmission device (T1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the
 15 output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with
 20 the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) is used to drive the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the transmission wheel (W300) drives the annular input wheel (W400)
 25 and then through the epicycle wheel (W403) drives the output/input wheel (W401) and the output/input wheel (W402), the differential output/input end rotation shaft (S401) is connected to the output/input wheel (W401) for being driven by the output/input wheel (W401), the differential output/input end rotation shaft (S402) is connected to the
 30 output/input wheel (W402) for being driven by the output/input wheel

(W402), and the differential operation is enabled to be performed between the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) through the epicycle wheel (W403).

5 23. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 19, wherein the transmission unit (T200) is replaced by the differential output epicycle gear set (T400), and in which:

--First rotary kinetic power source (P1);

10 --Epicycle gear set (EG101);

--Controllable brake device (BK102)

--Differential output epicycle gear set (T400): an epicycle gear set structured including by having an output/input wheel (W401), an output/input wheel (W402) and an epicycle wheel (W403), wherein the output/input wheel (W401) is combined with a differential output/input end rotation shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the annular input wheel (W400) is driven by a transmission wheel (W300), and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS111);

The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or bevel friction wheels;

30 The transmission function structured by the transmission wheel

(W300) and the annular input wheel (W400) includes being constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by the transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or CVT, or the hydraulic transmission device, and a shell and the bearings;

--Planetary gear set (T300): which is constituted by friction wheels or gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101);

--One end of the rotation shaft (S101) is combined with the rotation shaft (S101) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is

combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and drives the sun wheel (W111) of the planetary gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed in the housing (H100) through the shell of the planetary gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the transmission wheel (W300) drives the annular input wheel (W400) and then through the epicycle wheel (W403) drives the output/input wheel (W401) and the output/input wheel (W402), the differential output/input end rotation shaft (S401) is connected to the output/input wheel (W401) for being driven by the output/input wheel (W401), the differential output/input end rotation shaft (S402) is connected to the output/input wheel (W402) for being driven by the output/input wheel (W402), and the differential operation is enabled to be performed between the differential output/input end rotation shaft (S401) and the differential output/input end rotation shaft (S402) through the epicycle wheel (W403).

24.A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 20, wherein the transmission unit (T200) is replaced by the differential output epicycle gear set (T400), and in which:

- First rotary kinetic power source (P1);
- Epicycle gear set (EG101);
- Controllable brake device (BK102);
- First transmission device (T1);
- Planetary gear set (T300): which is constituted by friction wheels or

gears, including a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) and a shell to be fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed on the shell then fixed on the housing (H100) or directly fixed on the shell, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111), the sleeve type rotation shaft (AS111) rotates on the rotation shaft (S101) and drives the output/input end rotation shaft (S1041) of the differential output epicycle gear set (T400), and the sun wheel (W111) is combined with the sleeve type rotation shaft (AS101) of the epicycle gear set (EG101);

--Differential output epicycle gear set (T400): an epicycle gear set structured including by having an output/input wheel (W401), an output/input wheel (W402) and an epicycle wheel (W403), wherein the output/input wheel (W401) is combined with a differential output/input end rotation shaft (S401), the output/input wheel (W402) is combined with a differential output/input end rotation shaft (S402), the epicycle wheel (W403) rotates on a rocker arm (A401), the rocker arm (A401) is combined with an annular input wheel (W400) for being combined with a sleeve type rotation shaft (AS401), and the sleeve type rotation shaft (AS401) rotates on one or both of the differential output/input end rotation shaft (S401) or the differential output/input end rotation shaft (S402), the annular input wheel (W400) is driven by a transmission wheel (W300), and the transmission wheel (W300) is driven by the external rotary kinetic power, i.e. driven by the sleeve type rotation shaft (AS111);

The mentioned output/input wheel (W401), the output/input wheel (W402) and the epicycle wheel (W403) are composed of bevel gears or bevel friction wheels;

The transmission function structured by the transmission wheel

(W300) and the annular input wheel (W400) includes being constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is structured by the transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or the planetary type transmission gear set, or the epicycle type transmission gear set, or CVT, or the hydraulic transmission device, and a shell and the bearings;

-- The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the output/input end rotation shaft (S1012) of the first transmission device (T1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the shell of the epicycle gear set (EG101) is fixed in the housing (H100), and the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and drives the sun wheel (W111) of the planetary gear set (T300), the outer annular wheel (W113) of the planetary gear set (T300) is fixed in the housing (H100) through the shell of the planetary gear set (T300) or the outer annular wheel (W113) is directly fixed in the housing (H100), the planetary wheel (W112) of the planetary gear set (T300) is combined with the rocker arm (A111) and combined with the sleeve type rotation shaft (AS111) for driving

the output/input end rotation shaft (S1041) of the differential output
 epicycle gear set (T400), and the transmission wheel (W300) drives the
 annular input wheel (W400) and then through the epicycle wheel
 (W403) drives the output/input wheel (W401) and the output/input
 5 wheel (W402), the differential output/input end rotation shaft (S401) is
 connected to the output/input wheel (W401) for being driven by the
 output/input wheel (W401), the differential output/input end rotation
 shaft (S402) is connected to the output/input wheel (W402) for being
 driven by the output/input wheel (W402), and the differential operation
 10 is enabled to be performed between the differential output/input end
 rotation shaft (S401) and the differential output/input end rotation shaft
 (S402) through the epicycle wheel (W403).

25. A clutch device structured with controllable epicycle gear set and the
 applied power train thereof as claimed in claims 21, 22, 23 and 24,
 15 wherein in the differential output epicycle gear set (T400), a limited
 slip differential device (LSD401) can be further installed between shaft
 ends of the differential output/input end rotation shaft (S401) and the
 differential output/input end rotation shaft (S402) inside the
 output/input wheel (W401), the output/input wheel (W402) and the
 20 epicycle wheel (W403).

26. A clutch device structured with controllable epicycle gear set and the
 applied power train thereof, wherein it is structured by that rocker arm
 (A101) and a sleeve type rotation shaft (AS101) driven by a first rotary
 kinetic power source (P1) and an epicycle wheel (W103) of an
 25 epicycle gear set (EG101) are combined with a controllable brake
 device (BK101), and an input wheel (W102) of the epicycle gear set
 (EG101) and an output/input end of a rotation shaft (S102) are
 combined with a second rotary kinetic power source (P2) and an
 output/input end rotation shaft (S1026), which mainly consists of:

30 --First rotary kinetic power source (P1): constituted by one or more

than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;

5 --Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for

10 reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction

15 transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

-- Controllable brake device (BK101): constituted by a brake device

20 controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS101) or the rocker arm

25 (A101), and the other action side is fixed in the housing (H100);

--One end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the other end of the rotation shaft (S101) is combined with an output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), and the

30 rotation shaft (S102) combined with the output wheel (W102) of the

epicycle gear set (EG101) is served as an output/input end for being combined with an output/input end rotation shaft (S1024) of the second rotary kinetic power source (P2), and the other output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2) is combined with a rotation shaft (S1026) for being served as an output/input end;

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the controllable brake device (BK101) is fixed in a housing (H100), and through controlling the controllable brake device (BK101) to perform brake locking or releasing, the operations of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026).

27. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 26, wherein it is further structured by that a first transmission device (T1) is installed between the first rotary kinetic power source (P1) and the controllable brake device (BK101), and the input wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) are combined with the second rotary kinetic power source (P2) and the output/input end rotation shaft (S1026), and in which:

- First rotary kinetic power source (P1);
- Second rotary kinetic power source (P2);
- Epicycle gear set (EG101);
- Controllable brake device (BK101);
- 5 --First transmission device (T1): which is constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or
- 10 an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;
- The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1012) of the first transmission device
- 15 (T1), and the output/input end rotation shaft (S1013) at the other end of the first transmission device (T1) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);
- The rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end
- 20 rotation shaft (S1024) of the second rotary kinetic power source (P2), and the output/input end rotation shaft (S1025) at the other end of the second rotary kinetic power source (P2) is combined with the rotation shaft (S1026);
- The epicycle wheel (W103) of the epicycle gear set (EG101) is
- 25 combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the
- 30 controllable brake device (BK101) is fixed in a housing (H100), and

- through controlling the controllable brake device (BK101) to perform brake locking or releasing, the operations of connecting for transmission or releasing between the rotation shaft (S101) and the rotation shaft (S102) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026).
28. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 26, wherein it is further structured by that a third rotary kinetic power source (P3) is installed between the first rotary kinetic power source (P1) and the controllable brake device (BK101), and in which:
- First rotary kinetic power source (P1);
 - Second rotary kinetic power source (P2);
 - Third rotary kinetic power source (P3): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;
 - Epicycle gear set (EG101);
 - Controllable brake device (BK101);
 - The other end of the rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined to the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3);
 - The rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end

rotation shaft (S1024) of the second rotary kinetic power source (P2), and the output/input end rotation shaft (S1025) at the other end of the second rotary kinetic power source (P2) is combined with the rotation shaft (S1026) for being served as an output/input end;

- 5 --The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3), and the other output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3) is combined with the rotation shaft (S101)
- 10 combined with the input wheel (W101) of the epicycle gear set (EG101);
- The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101)
- 15 rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the controllable brake device (BK101) is fixed in a housing (H100), and through controlling the controllable brake device (BK101) to perform
- 20 brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the rotation shaft (S102) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the
- 25 third rotary kinetic power source (P3) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026), or the first rotary kinetic power source (P1) drives the third rotary kinetic power source (P3) to operate as the
- 30 power generator function, or the third rotary kinetic power source (P3)

is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).

29. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 27, wherein it is further structured by that a third rotary kinetic power source (P3) is installed between the first transmission device (T1) and the controllable brake device (BK101), and in which:

- First rotary kinetic power source (P1);
- Second rotary kinetic power source (P2);
- 10 --Third rotary kinetic power source (P3): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for
- 15 reversely inputting rotary kinetic energy;
- Epicycle gear set (EG101);
- Controllable brake device (BK101);
- First transmission device (T1);
- The other end of the rotation shaft (S101) combined with the input
- 20 wheel (W101) of the epicycle gear set (EG101) is combined to the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), the other output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1012) of the first transmission device
- 25 (T1), and the other output/input end rotation shaft (S1013) of the first transmission device (T1) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);
- The rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the output/input end
- 30 rotation shaft (S1024) of the second rotary kinetic power source (P2),

and the other output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2) is combined with the rotation shaft (S1026) for being served as the output/input end;

--The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the output/input end rotation shaft (S1013) of the first transmission device (T1), the other output/input end rotation shaft (S1012) of the first transmission device (T1) is combined with the output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3), and the other output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3) is combined with rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) or the rocker arm (A101) is combined to an action side of the controllable brake device (BK101), the other action side of the controllable brake device (BK101) is fixed in a housing (H100), and through controlling the controllable brake device (BK101) to perform brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the rotation shaft (S102) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the third rotary kinetic power source (P3) and the rotation shaft (S1026); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S1026), or the first rotary kinetic power source (P1) drives the third rotary kinetic power source (P3) to operate as the

power generator function, or the third rotary kinetic power source (P3) is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).

30. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 26, wherein it is further structured by the first rotary kinetic power source (P1) and a transmission unit (T200) and the epicycle gear set (EG101) and a controllable brake device (BK102), and the output wheel (W102) of the epicycle gear set (EG101) and the output/input end of the rotation shaft (S102) are combined with the second rotary kinetic power source (P2), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for driving the rocker arm (A101) and the sleeve type rotation shaft (AS101), and the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is installed with a rotation shaft (S110), which mainly consists of:
- First rotary kinetic power source (P1): constituted by one or more than of one of rotary kinetic power sources capable of generating the rotary kinetic power output, including an internal combustion engine, external combustion engine, Sterling engine, turbine engine, wind-driven blade power set, flow-driven power set, or manual power;
 - Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;
 - Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103),

and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the rotation shaft (S102), and the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with the controllable brake device (BK102) and combined with the second rotary kinetic power source (P2), and the epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type

rotation shaft (AS101) rotates on the rotation shaft (S101), and the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the output/input end rotation shaft (S110);

--Through controlling the controllable brake device (BK102) to perform brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S110); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S110).

31. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 30, wherein it is further structured by that the input wheel (W101) of the epicycle gear set (EG101) is combined with the rotation shaft (S101) and combined with the rotation shaft (S1011) of the first rotary kinetic power source (P1), the rotation shaft (S101) is combined to an action side of a controllable brake device (BK103), and the other action end of the controllable brake device (BK103) is fixed in the housing (H100), a planetary gear set (300) is installed between the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) and the second rotary kinetic power source (P2), the output/input end of the rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined with a rocker arm (A111) of a planetary gear set (T300), an outer annular wheel (W113) of the planetary gear set (T300) is fixed in the housing (H100), a sun wheel

(W111) of the planetary gear set (T300) is combined with the second rotary kinetic power source (P2), the epicycle wheel (W103) of the epicycle gear set (EG101) is provided for driving the rocker arm (A101) and the sleeve type rotation shaft (AS101), and the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and in which:

- First rotary kinetic power source (P1);
- Second rotary kinetic power source (P2);
- Epicycle gear set (EG101);
- Controllable brake device (BK102);
- Controllable brake device (BK103);
- Transmission unit (T200);
- Planetary gear set (T300): constituted by a sun wheel (W111), a planetary wheel (W112), an outer annular wheel (W113) composed of friction wheels or gears, and a shell fixed in the housing (H100), wherein the outer annular wheel (W113) is fixed in the shell then fixed in the housing or directly fixed in the housing, the planetary wheel (W112) is combined with the rocker arm (A111) and combined with the rotation shaft (S102), and the sun wheel (W111) is combined with the output/input end rotation shaft (S1024) of the second rotary kinetic power source (P2);
- The output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), the other action side of the controllable brake device (BK102) is fixed in the housing (H100), and the other end of the rotation shaft (S102) is combined with the rocker arm (A111) driven by the planetary wheel (W112) of the planetary gear set (T300);
- The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve

type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101) and is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the rotation shaft (S110);

--The output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1) is combined with the rotation shaft (S101), the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), as well as connected to an action side of the controllable brake device (BK103), and the other action side of the controllable brake device (BK103) is fixed in the housing (H100);

--Through controlling one or both of the controllable brake device (BK102) and the controllable brake device (BK103) to perform brake locking or releasing, the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S110) is enabled to be controlled; for example controlling the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) or between the rotation shaft (S102) and the sleeve type rotation shaft (AS101), one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) is further controlled to drive the rotation shaft (S110).

32. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 30, wherein it is further structured by that the second rotary kinetic power source (P2) is installed at one end of the output/input end rotation shaft (S110) of the transmission unit (T200), and in which:

--First rotary kinetic power source (P1);

--Second rotary kinetic power source (P2): constituted by a rotational

electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;

5 --Epicycle gear set (EG101);

--Controllable brake device (BK102);

--Transmission unit (T200): constituted by the automatic, manumatic, semi-automatic, or manual gear shifting device with fixed or variable

10 speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic transmission device;

15 --One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel

20 (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve

25 type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for

30 driving the output/input end rotation shaft (S110);

--One end of the rotation shaft (S110) is combined with the output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2), and the other end of the rotation shaft (S110) is served as an output/input end;

5 --Through controlling the controllable brake device (BK102) to perform brake locking or releasing, the operations of connecting for transmission or releasing between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic
10 power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S110); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S110).

33.A clutch device structured with controllable epicycle gear set and the
15 applied power train thereof as claimed in claim 32, wherein it is further structured by that an epicycle gear set (EG201) and a controllable brake device (BK104) are installed between one end of the output/input end rotation shaft (S110) of the transmission unit (T200) and the second rotary kinetic power source (P2), and in which:

20 --First rotary kinetic power source (P1);
--Second rotary kinetic power source (P2);
--Epicycle gear set (EG101);
-- Epicycle gear set (EG201): constituted by an input wheel (W201) and an output wheel (W202) and at least an epicycle wheel (W203),
25 and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S201), the rotation shaft (S202), the rocker arm (A201), the sleeve type rotation shaft (AS201) and a bearing, and
30 installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102);

-- Controllable brake device (BK104): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
 5 action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS201) or the rocker arm (A201), and the other action side is fixed in the housing (H100);

--Transmission unit (T200): constituted by the automatic, manumatic,
 10 semi-automatic, or manual gear shifting device with fixed or variable speed ratios which is further structured by a transmission gear set composed of gears, friction wheels, pulleys and pulley belts, chains and chain wheels, or a planetary type transmission gear set, or an epicycle type transmission gear set, the CVT, or the hydraulic
 15 transmission device;

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the
 20 output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve
 25 type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end
 30 rotation shaft (S1032) of the transmission unit (T200) is provided for

driving the output/input end rotation shaft (S110);

--One end of the rotation shaft (S110) is combined with the output/input end rotation shaft (S202) combined with the output wheel (W202) of the epicycle gear set (EG201), the other output/input end rotation shaft (S201) combined with the input wheel (W201) of the epicycle gear set (EG201) is combined with the output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2), and the epicycle wheel (W203) of the epicycle gear set (EG201) is provided for driving the rocker arm (A201) and the sleeve type rotation shaft (AS201), the sleeve type rotate shaft (AS201) is capable of rotating on the rotation shaft (S201) and is provided for connecting to an action side of the controllable brake device (BK104), the other action side of the controllable brake device (BK104) is fixed in the housing (H100), and the other end of the rotation shaft (S110) is served as an output/input end;

--Through controlling one or both of the controllable brake device (BK102) and the controllable brake device (BK104) to perform brake locking or releasing, the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2) and the rotation shaft (S110) is enabled to be controlled; for example controlling the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) or between the rotation shaft (S201) and the rotation shaft (S202), one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) is controlled to drive the rotation shaft (S110).

34. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 32, wherein it is further structured by that the third rotary kinetic power source (P3) is installed between the first rotary kinetic power source (P1) and the rotation shaft

(S101) combined with the input wheel (W101) of the epicycle gear set (EG101), and in which:

--First rotary kinetic power source (P1);

--Second rotary kinetic power source (P2);

5 --Third rotary kinetic power source (P3): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for
10 reversely inputting rotary kinetic energy;

-- Epicycle gear set (EG101): constituted by an input wheel (W101) and an output wheel (W102) and at least an epicycle wheel (W103), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction
15 transmissions to form an epicycle gear set function, and structured by the rotation shaft (S101), the rotation shaft (S102), the rocker arm (A101), the sleeve type rotation shaft (AS101) and a bearing, and installed with a shell for being combined with the housing (H100);

--Controllable brake device (BK102);

20 --Transmission unit (T200);

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), the rotation shaft (S1052) at the other end of the third rotary kinetic power source (P3) is combined with the
25 output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side
30 of the controllable brake device (BK102), and the other action side of

the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the output/input end rotation shaft (S110);

--One end of the rotation shaft (S110) is combined with the output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2), and the other end of the rotation shaft (S110) is served as an output/input end;

--The rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), and the other output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);

--Through controlling the controllable brake device (BK102) to perform brake locking or releasing, the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) are enabled to be controlled, so as to further control the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the third rotary kinetic power source (P3) and the rotation shaft (S110); for example controlling one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) to drive the rotation shaft (S110), or the first rotary kinetic power source (P1) drives the third rotary kinetic power source (P3) to operate as the

power generator function, or the third rotary kinetic power source (P3) is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).

35. A clutch device structured with controllable epicycle gear set and the applied power train thereof as claimed in claim 34, wherein it is further structured by that the epicycle gear set (EG201) and the controllable brake device (BK104) are installed between one end of the output/input end rotation shaft (S110) of the transmission unit (T200) and the second rotary kinetic power source (P2), and in which:

- 10 --First rotary kinetic power source (P1);
- Second rotary kinetic power source (P2): constituted by a rotational electric machine, or constituted by a rotational electric machine combined with a transmission unit, mainly having the motor function for converting the input electric power into the rotary mechanical kinetic energy, as well as having the power generator function for reversely inputting rotary kinetic energy;
- 15 --Third rotary kinetic power source (P3);
- Epicycle gear set (EG101);
- Epicycle gear set (EG201): constituted by an input wheel (W201) and an output wheel (W202) and at least an epicycle wheel (W203), and including through bevel gears engaging with each other, or through bevel friction wheels mutually performing friction transmissions to form an epicycle gear set function, and structured by the rotation shaft (S201), the rotation shaft (S202), the rocker arm (A201), the sleeve type rotation shaft (AS201) and a bearing, and installed with a shell for being combined with the housing (H100);
- 20 --Controllable brake device (BK102);
- Controllable brake device (BK104): constituted by a brake device controlled by a manual force or mechanical force or hydraulic force or pneumatic force or electromagnetic force, and having two controllable
- 25
- 30

action sides for the operations of a brake locking state for engagement or a releasing state for separation, wherein one of the action sides is connected to the sleeve type rotation shaft (AS201) or the rocker arm (A201), and the other action side is fixed in the housing (H100);

5 --Transmission unit (T200);

--One end of the rotation shaft (S101) is combined with the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), the rotation shaft (S1052) at the other end of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1), the other end of the rotation shaft (S101) is combined with the input wheel (W101) of the epicycle gear set (EG101), the output/input end rotation shaft (S102) combined with the output wheel (W102) of the epicycle gear set (EG101) is combined to an action side of the controllable brake device (BK102), and the other action side of the controllable brake device (BK102) is fixed in the housing (H100);

--The epicycle wheel (W103) of the epicycle gear set (EG101) is combined with the rocker arm (A101) and combined with the sleeve type rotation shaft (AS101), the sleeve type rotation shaft (AS101) rotates on the rotation shaft (S101), the sleeve type rotation shaft (AS101) is provided for driving the output/input end rotation shaft (S1031) of the transmission unit (T200), and the other output/input end rotation shaft (S1032) of the transmission unit (T200) is provided for driving the output/input end rotation shaft (S110);

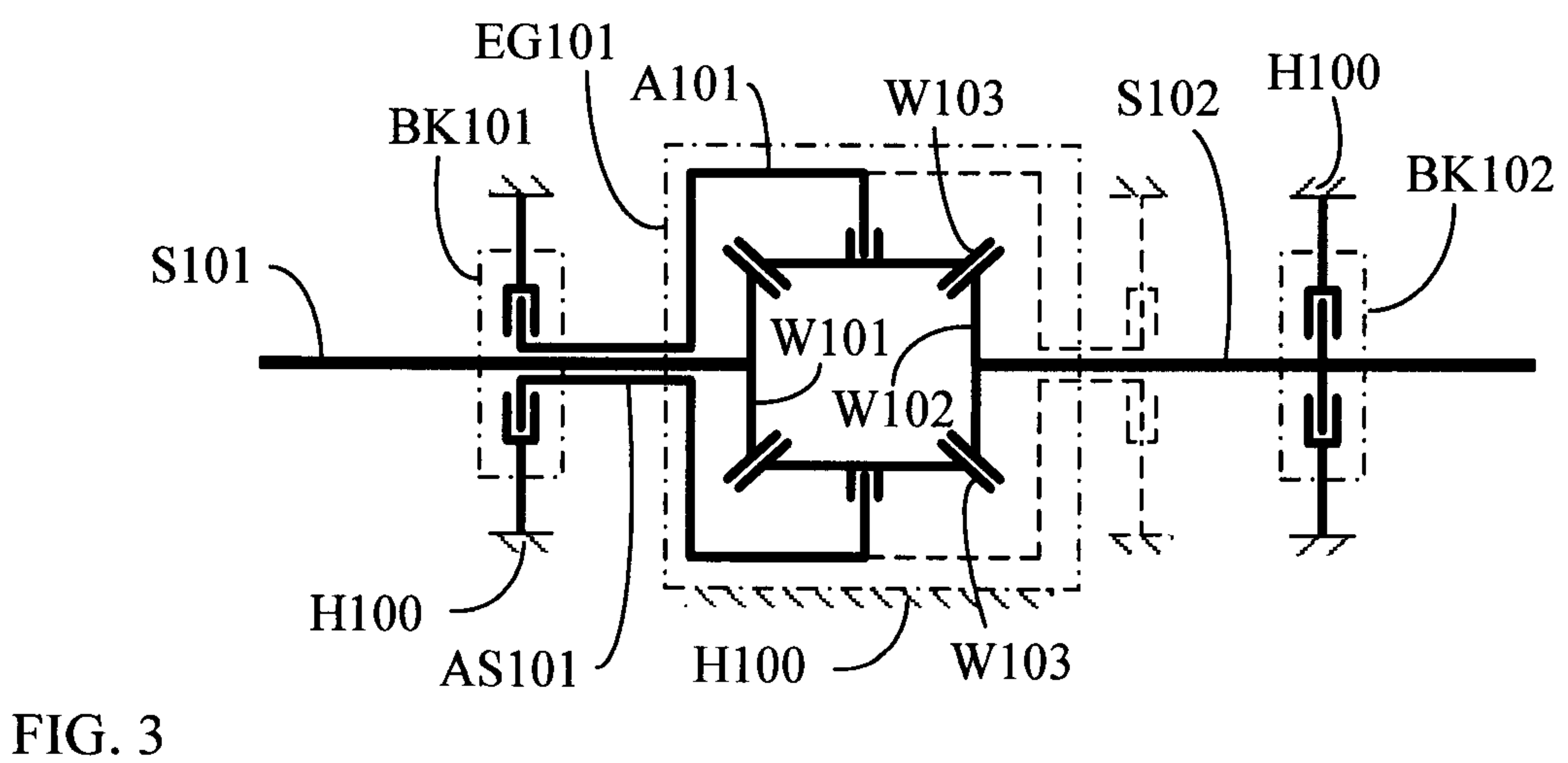
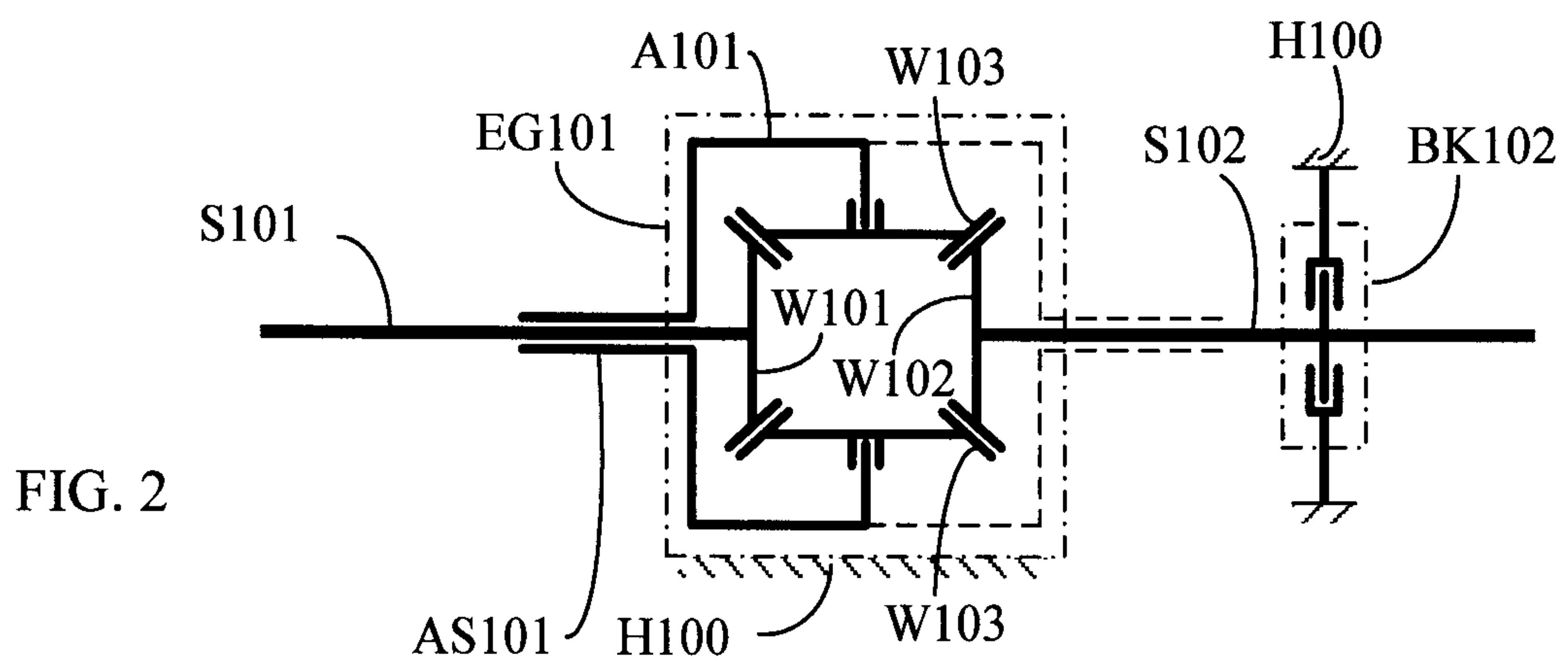
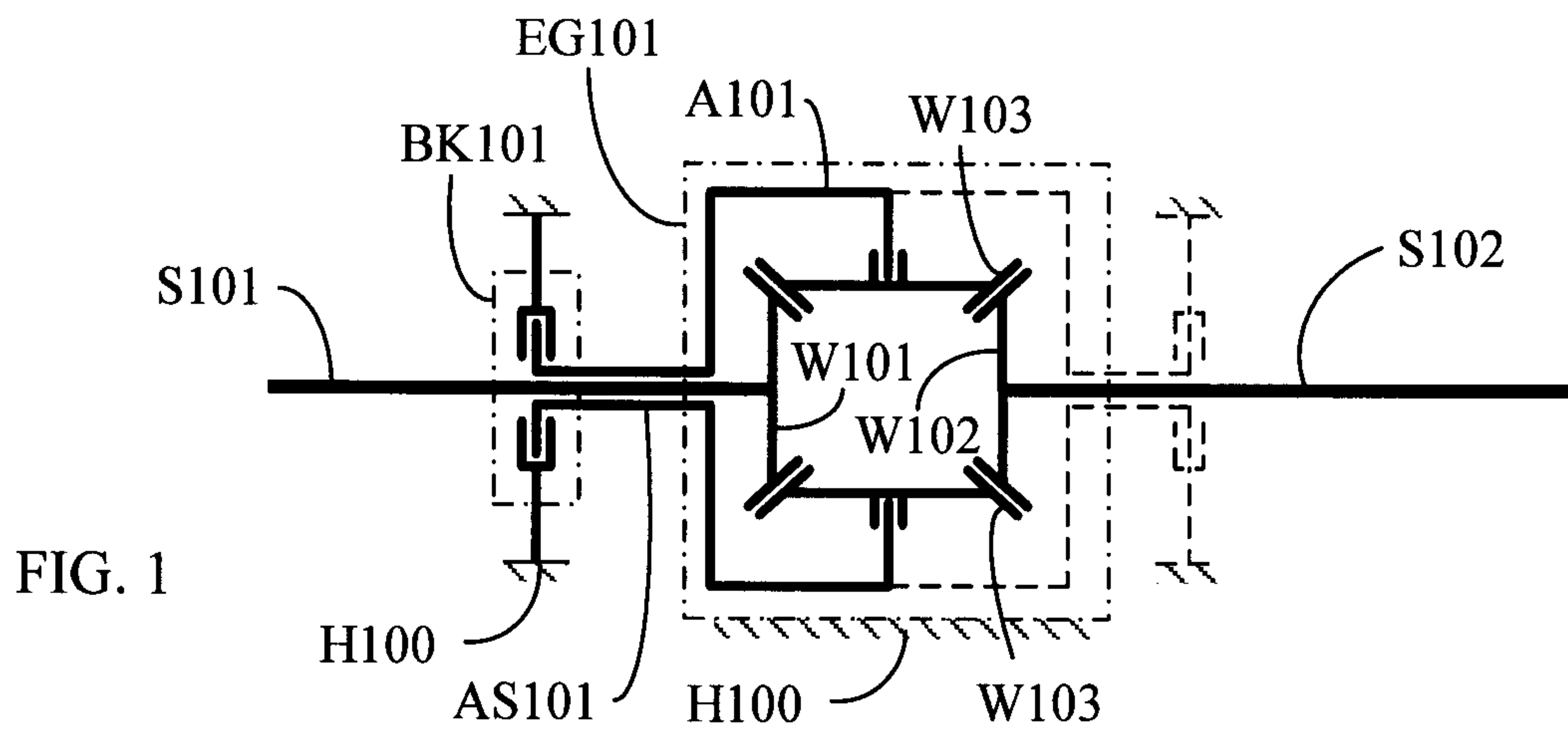
25 --One end of the rotation shaft (S110) is combined with the output/input end rotation shaft (S202) combined with the output wheel (W202) of the epicycle gear set (EG201), the other output/input end rotation shaft (S201) combined with the input wheel (W201) of the epicycle gear set (EG201) is combined with the output/input end rotation shaft (S1025) of the second rotary kinetic power source (P2),

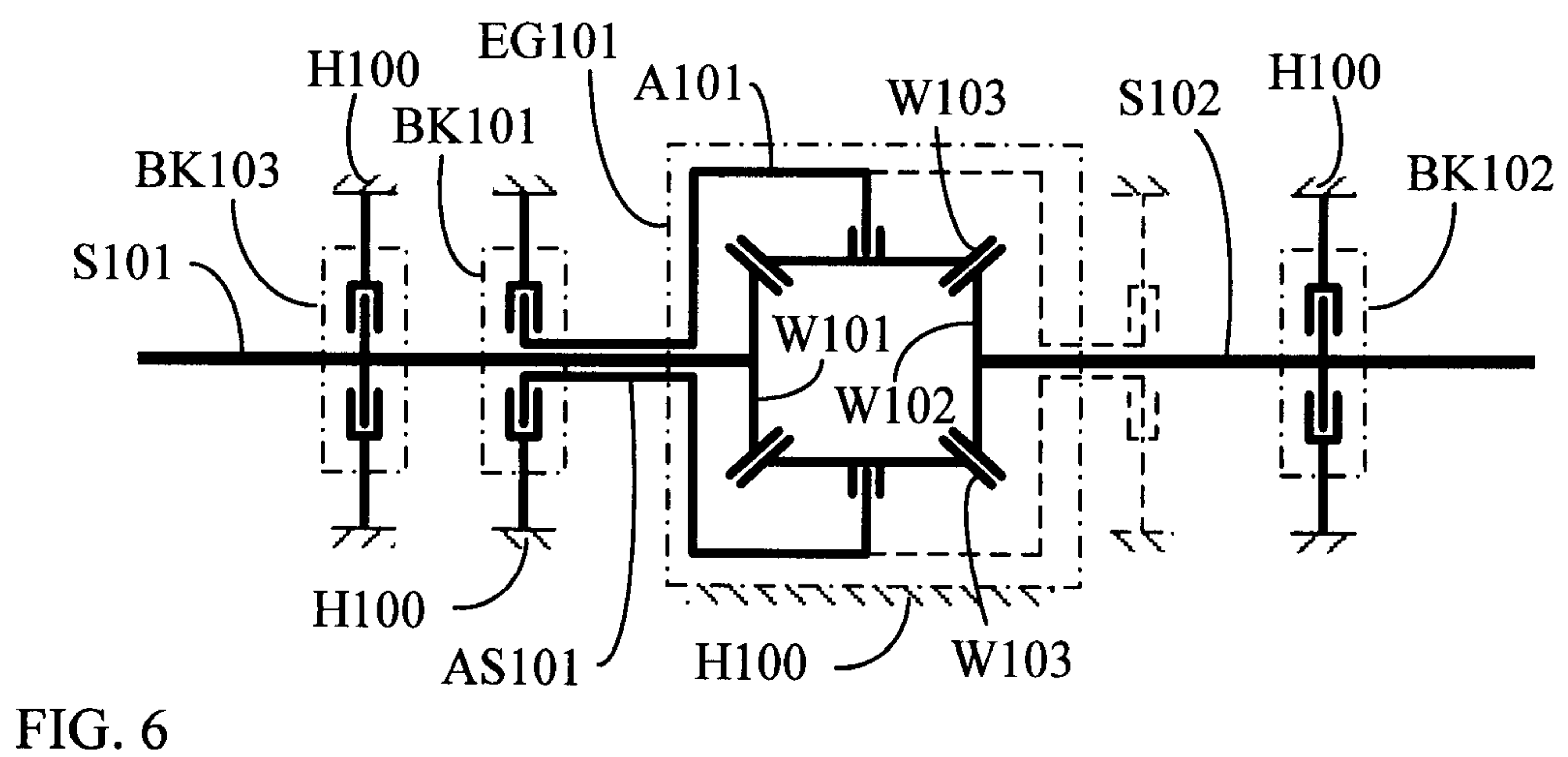
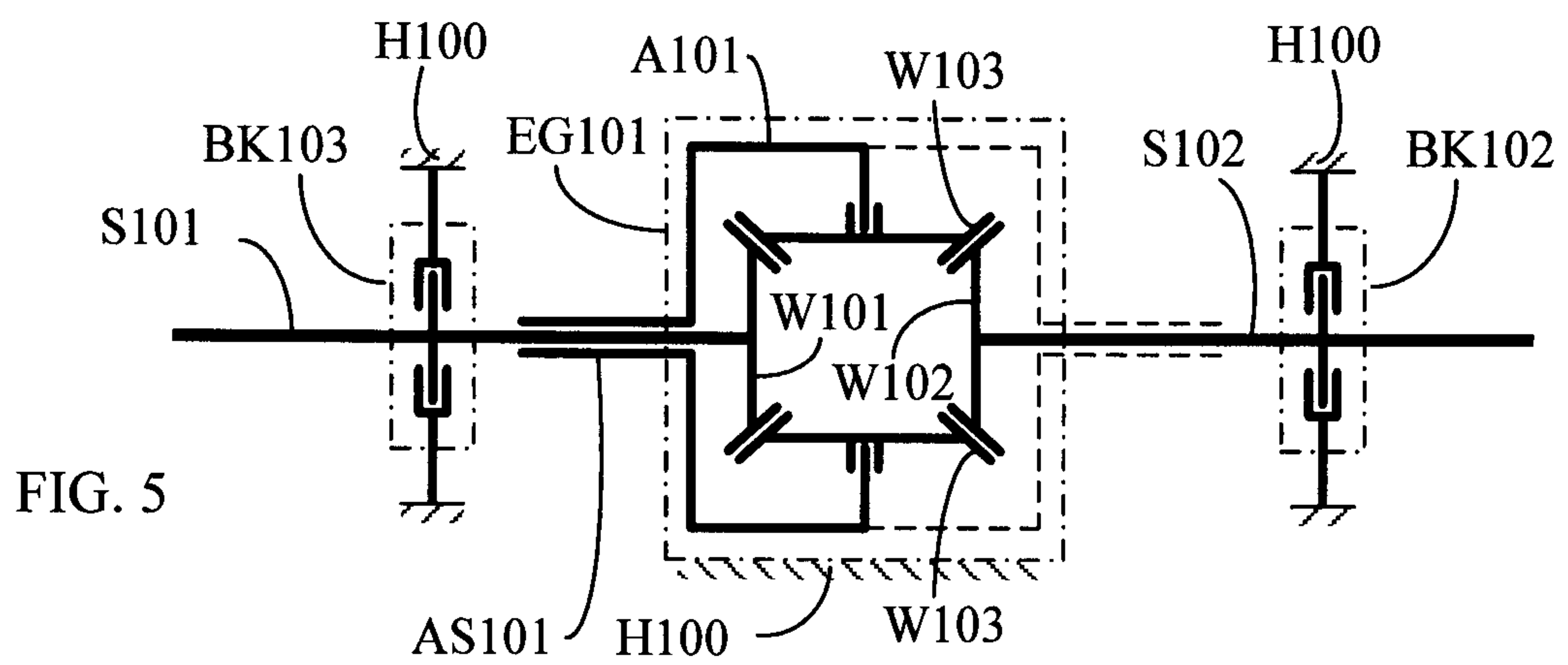
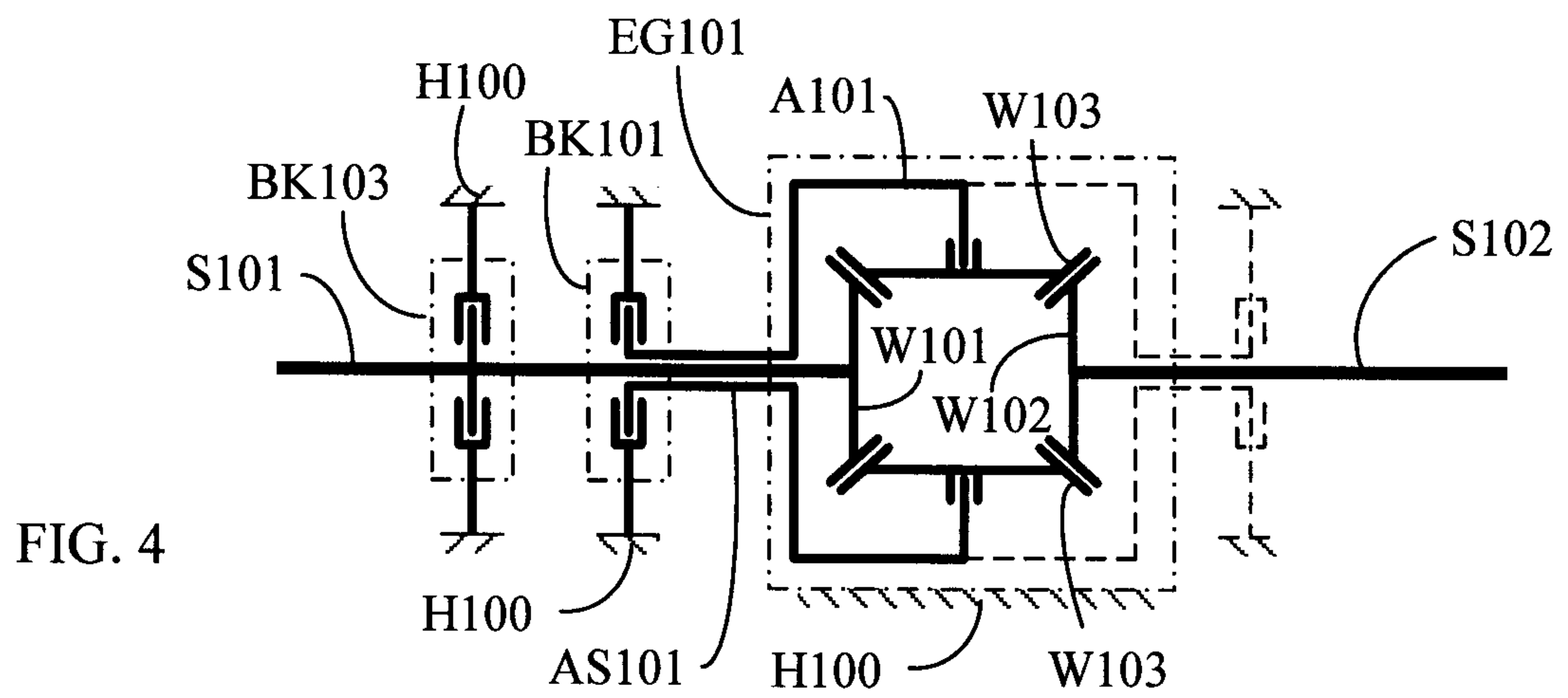
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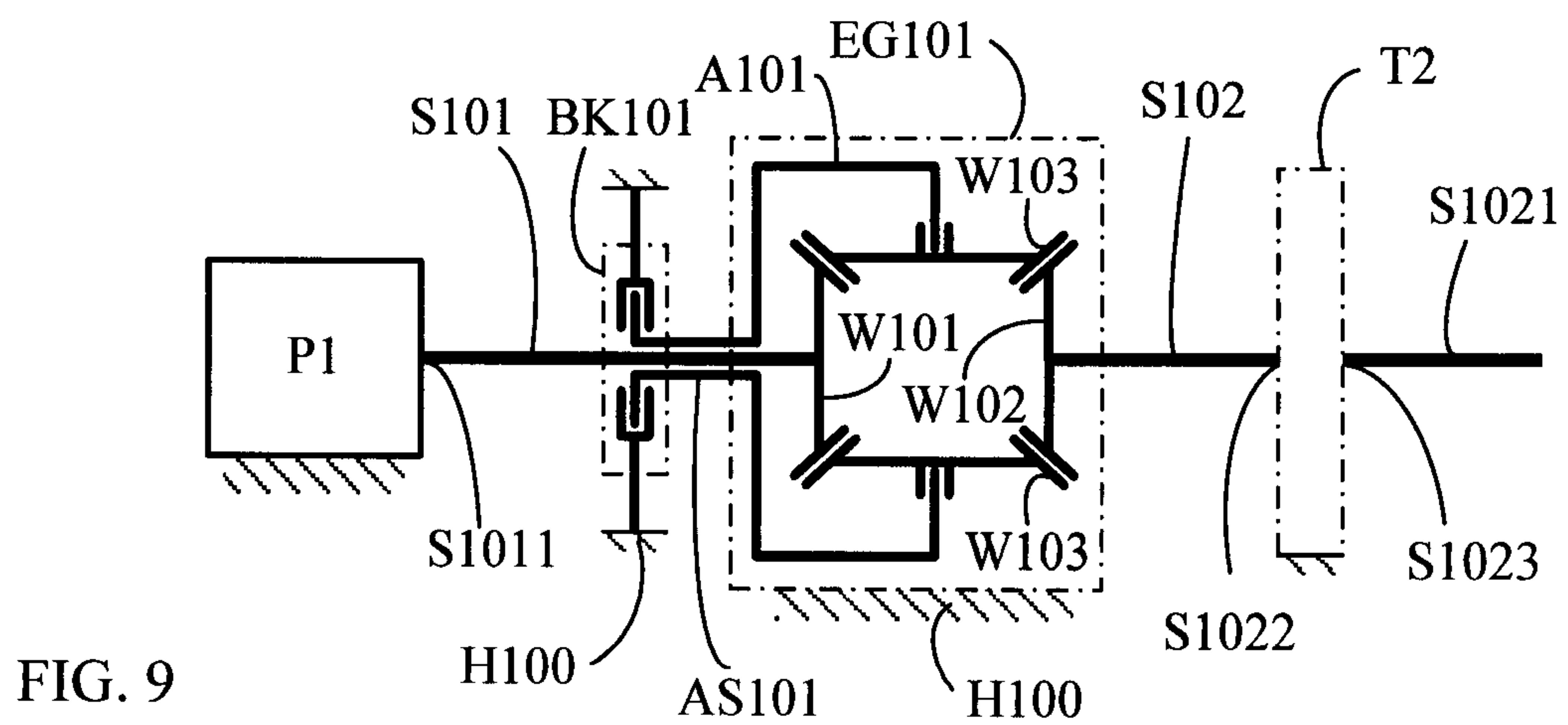
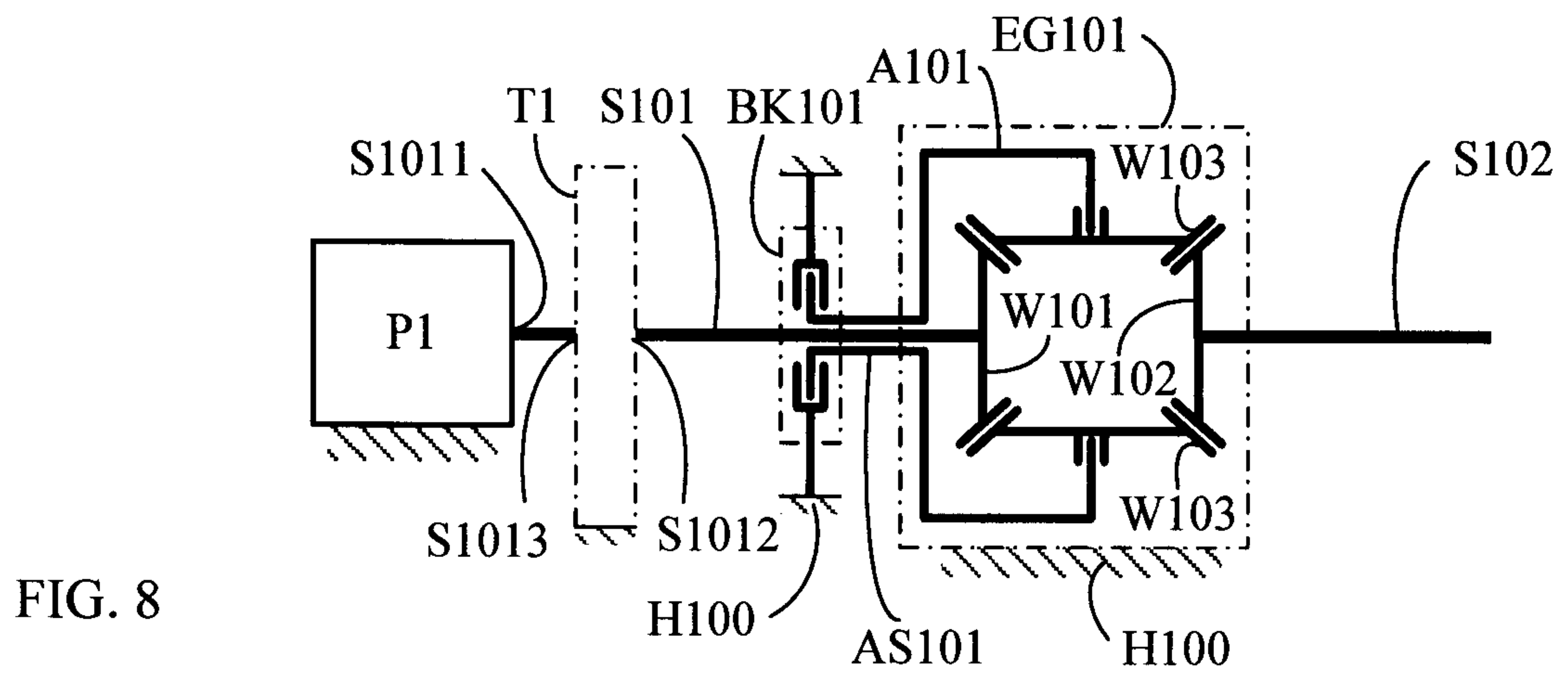
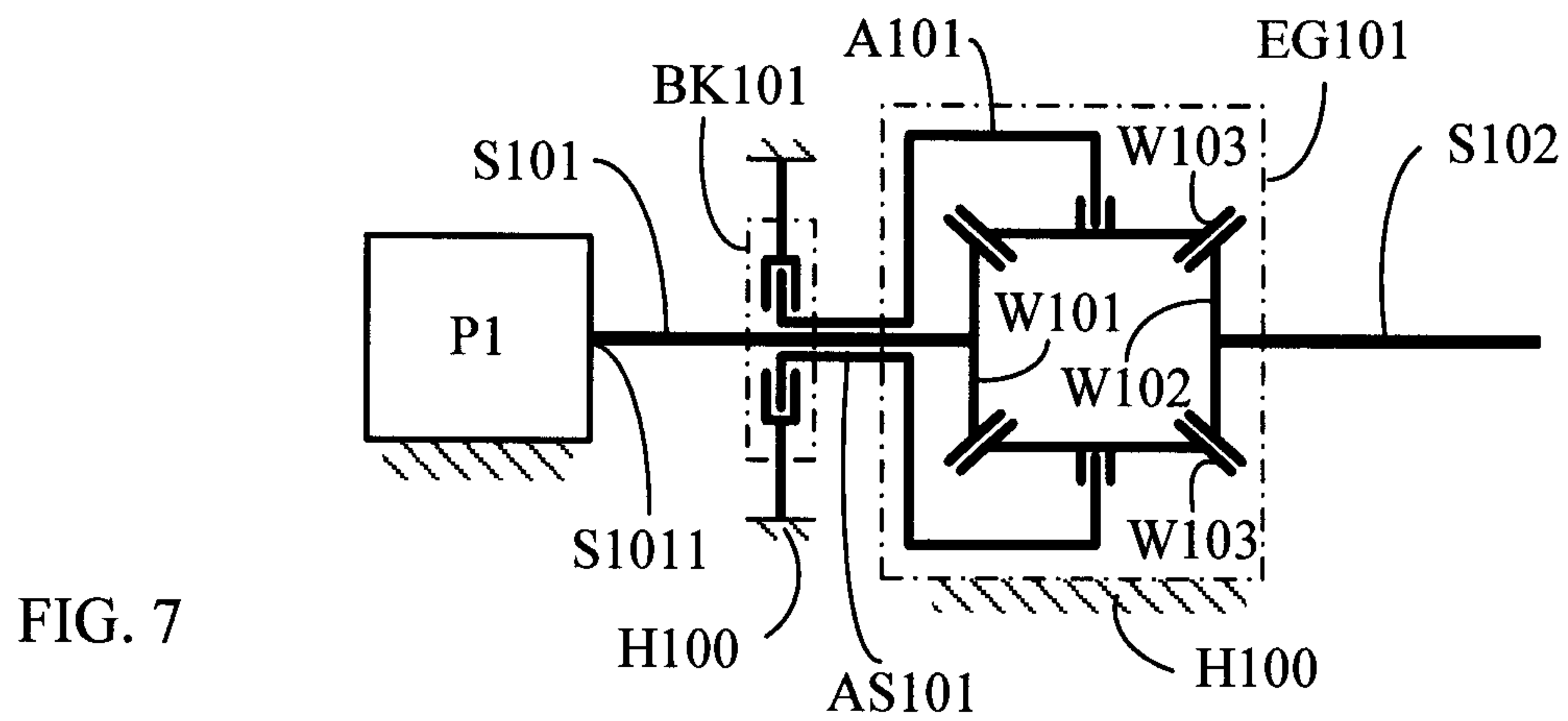
and the epicycle wheel (W203) of the epicycle gear set (EG201) is provided for driving the rocker arm (A201) and the sleeve type rotation shaft (AS201), the sleeve type rotate shaft (AS201) is capable of rotating on the rotation shaft (S201) and is provided being combined to an action side of the controllable brake device (BK104), the other action side of the controllable brake device (BK104) is fixed in the housing (H100), and the other end of the rotation shaft (S110) is served as an output/input end;

--The rotation shaft (S101) combined with the input wheel (W101) of the epicycle gear set (EG101) is combined with the output/input end rotation shaft (S1051) of the third rotary kinetic power source (P3), and the other output/input end rotation shaft (S1052) of the third rotary kinetic power source (P3) is combined with the output/input end rotation shaft (S1011) of the first rotary kinetic power source (P1);

--Through controlling one or both of the controllable brake device (BK102) and the controllable brake device (BK104) to perform brake locking or releasing, the operation relation between the first rotary kinetic power source (P1), the second rotary kinetic power source (P2), the third rotary kinetic power source (P3) and the rotation shaft (S110) are able to be controlled; for example controlling the operations of connecting for transmission or releasing functions between the rotation shaft (S101) and the sleeve type rotation shaft (AS101) or between the rotation shaft (S201) and the rotation shaft (S202), one or both of the first rotary kinetic power source (P1) and the second rotary kinetic power source (P2) is controlled to drive the rotation shaft (S110), or the first rotary kinetic power source (P1) drives the third rotary kinetic power source (P3) to operate as the power generator function, or the third rotary kinetic power source (P3) is operated as the motor function to actuate and drive the first rotary kinetic power source (P1).







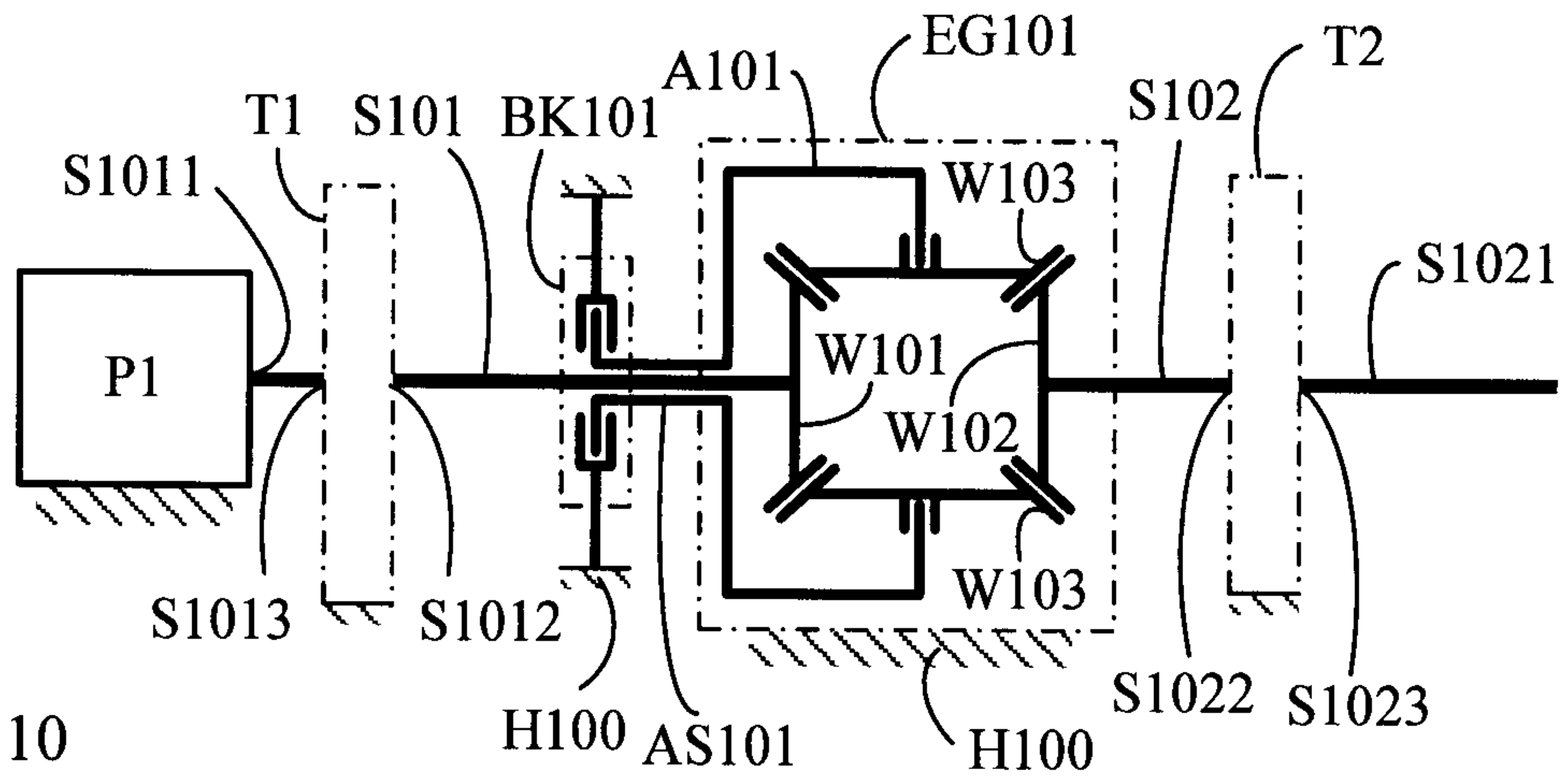


FIG. 10

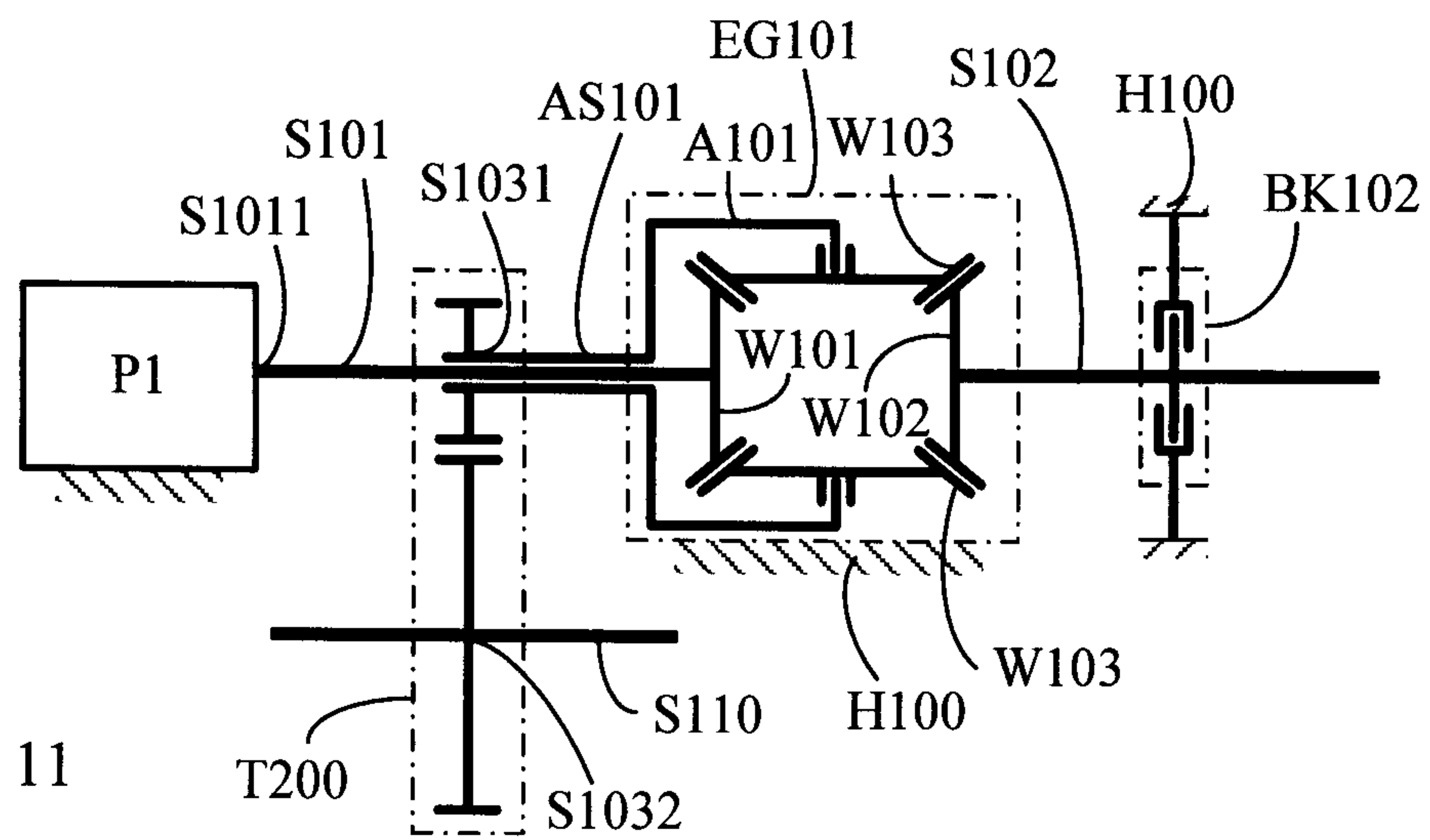


FIG. 11

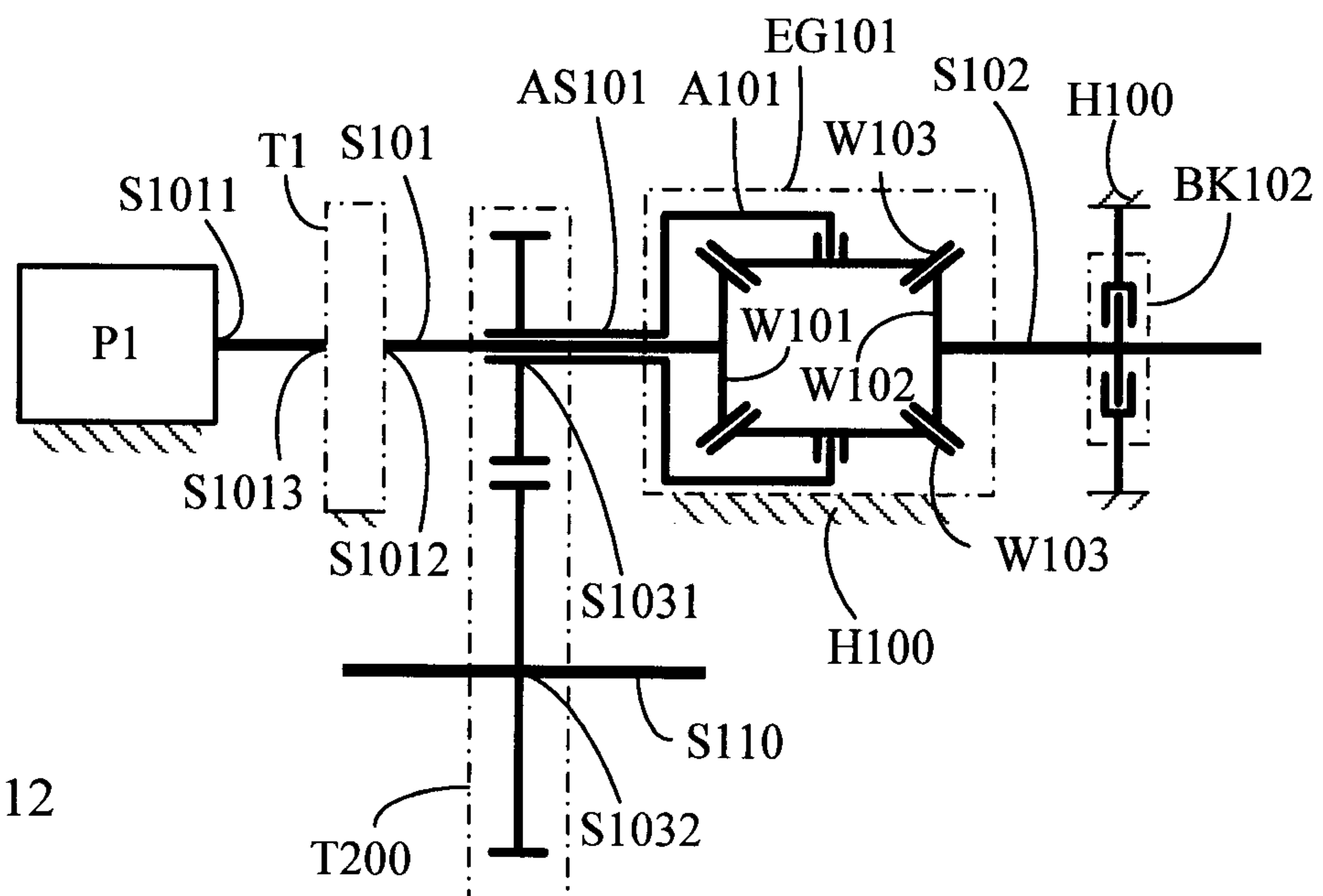
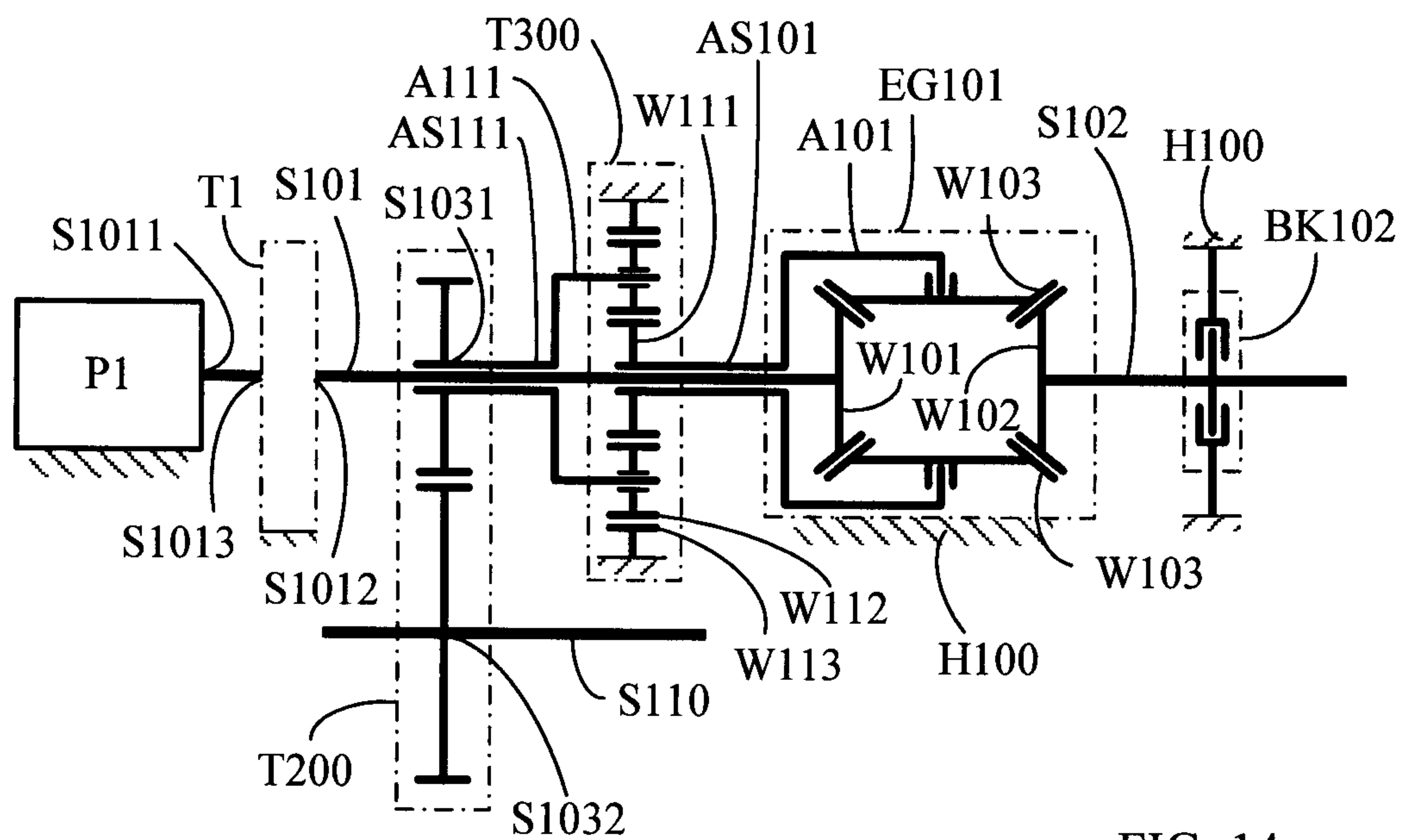
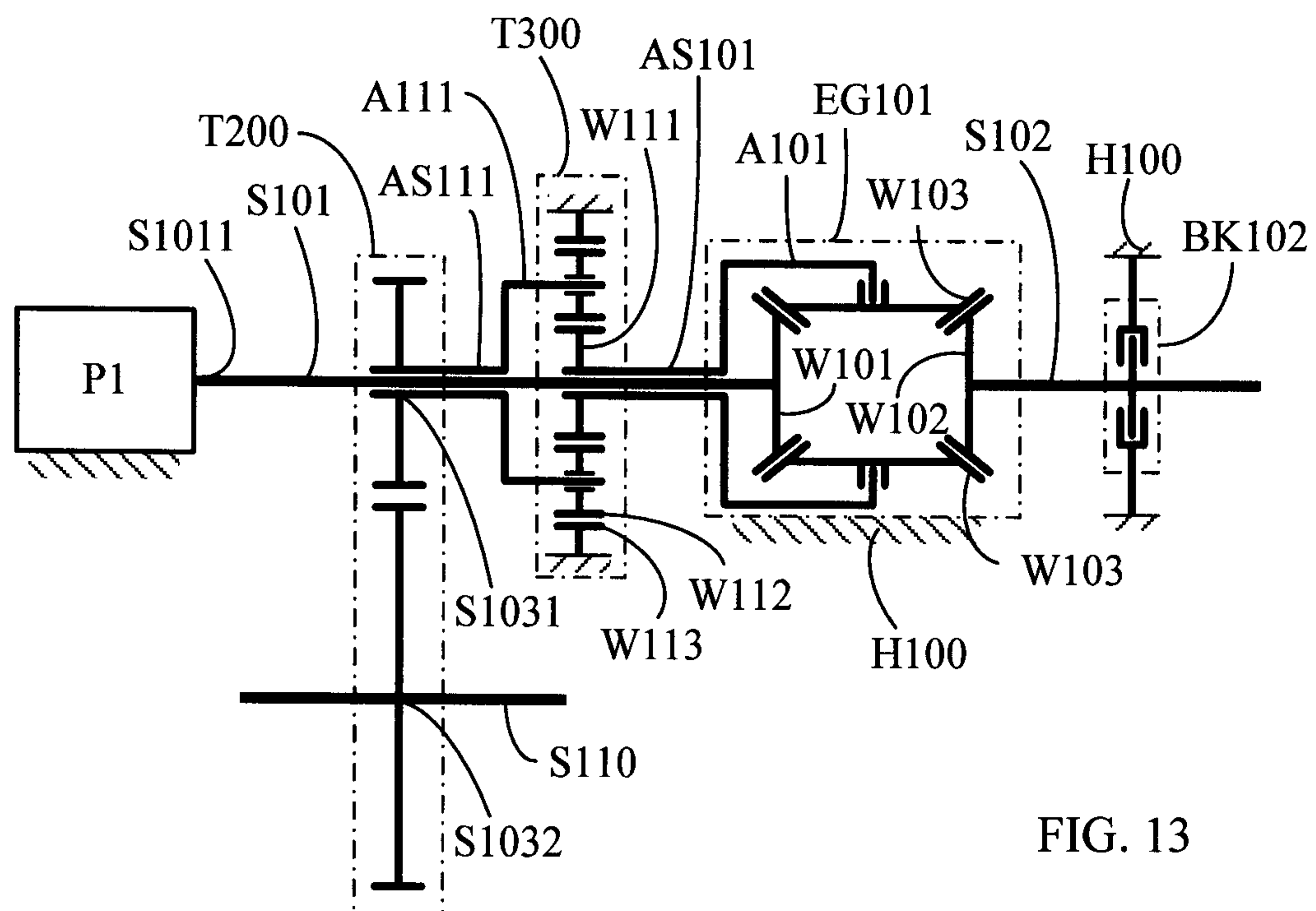


FIG. 12



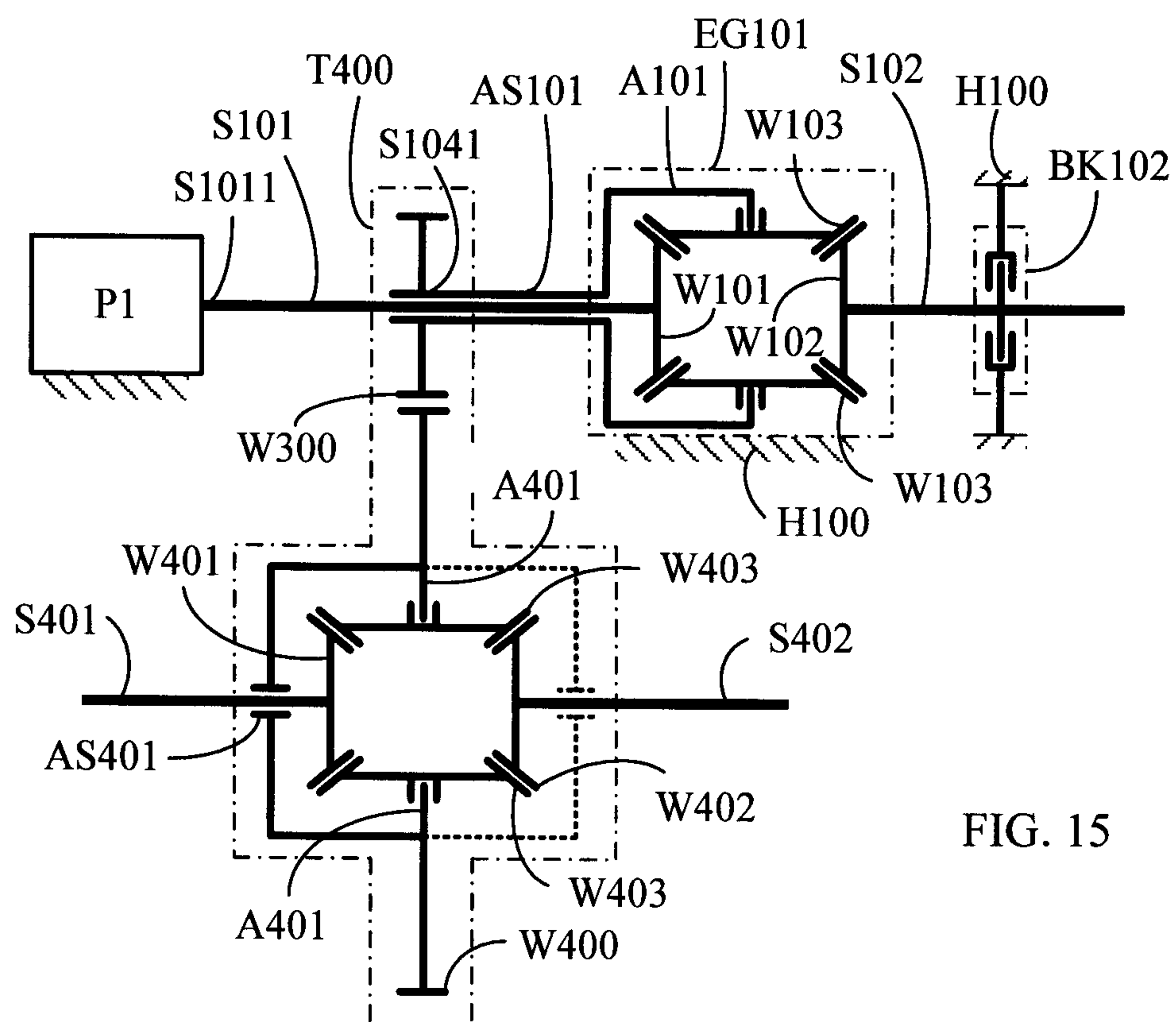


FIG. 15

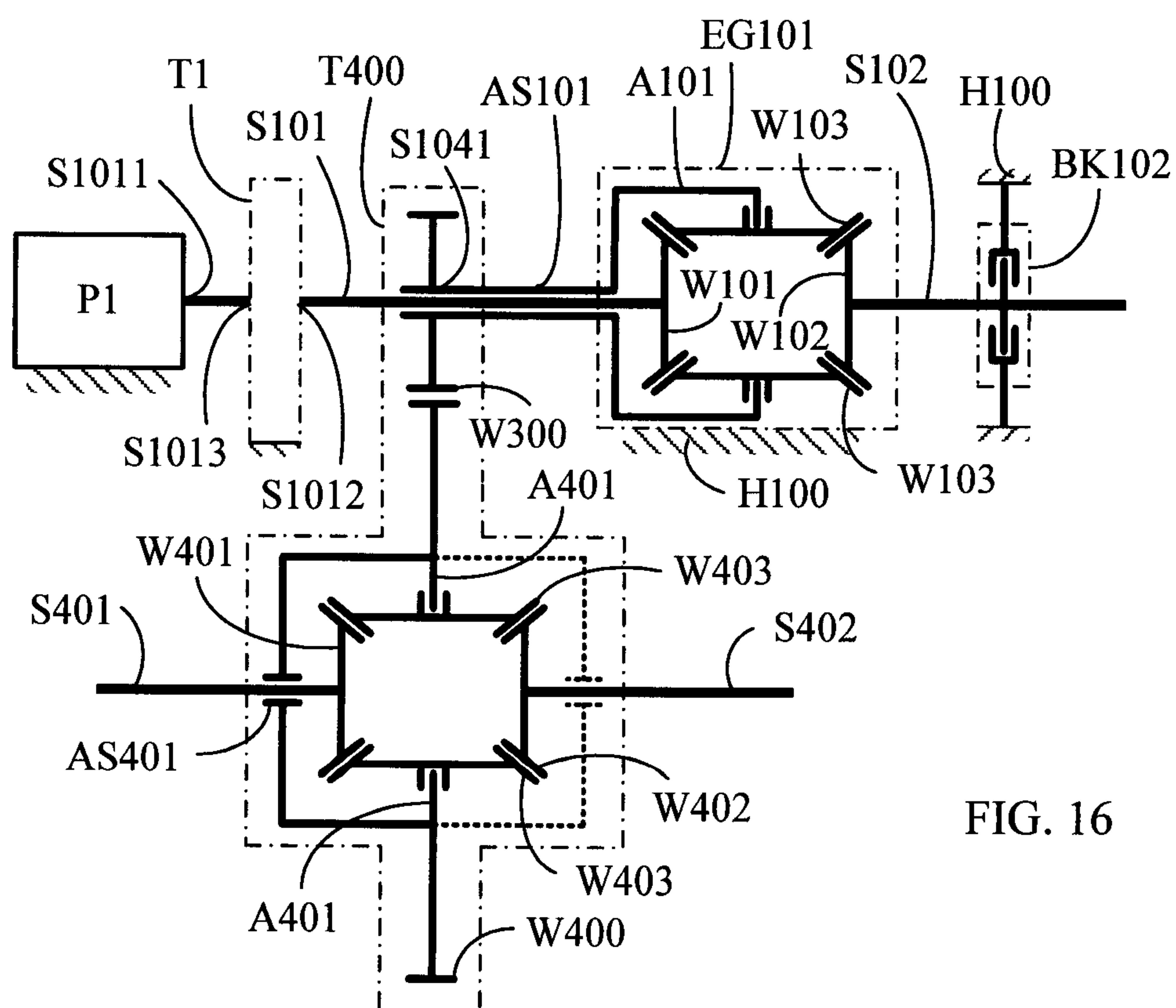


FIG. 16

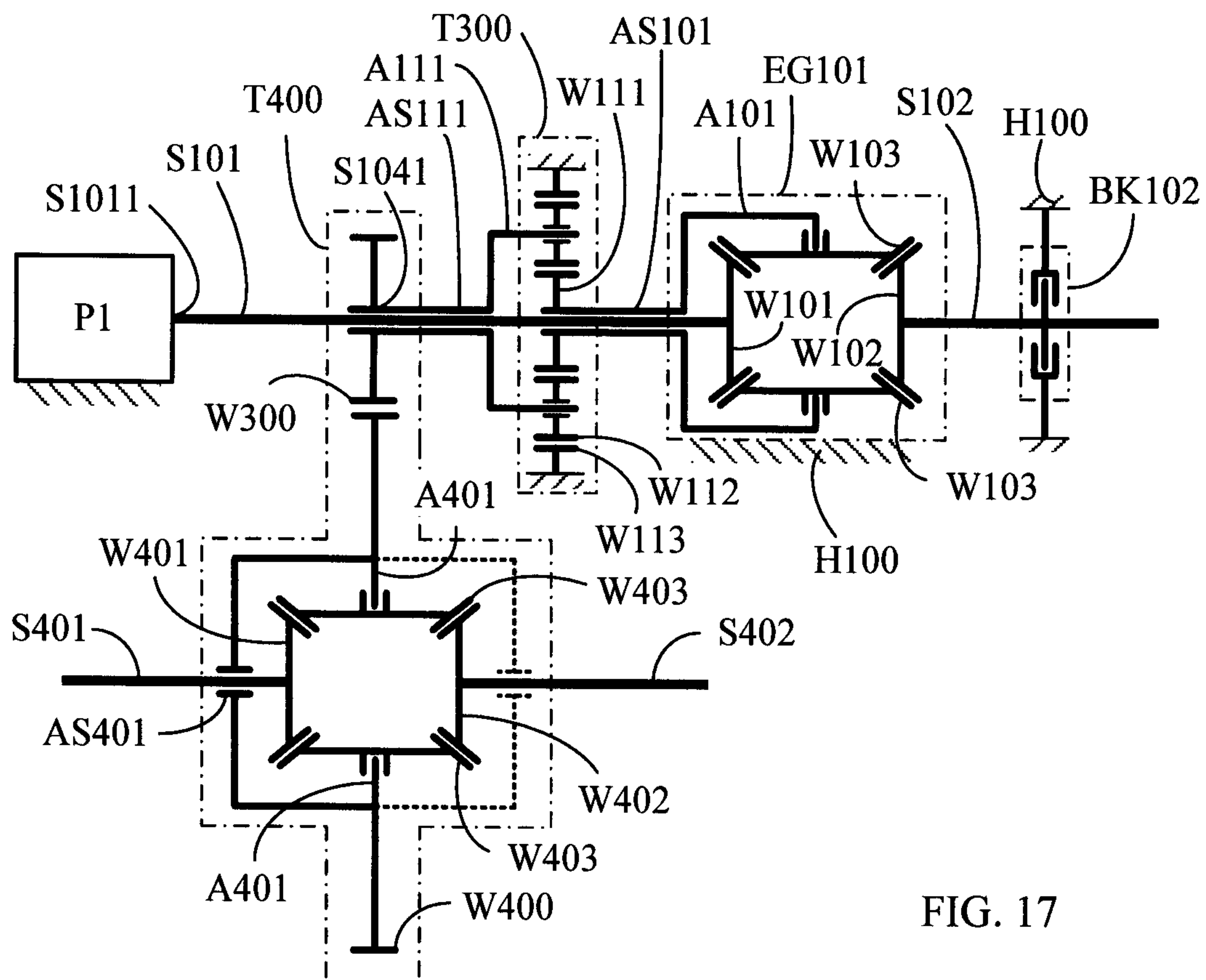


FIG. 17

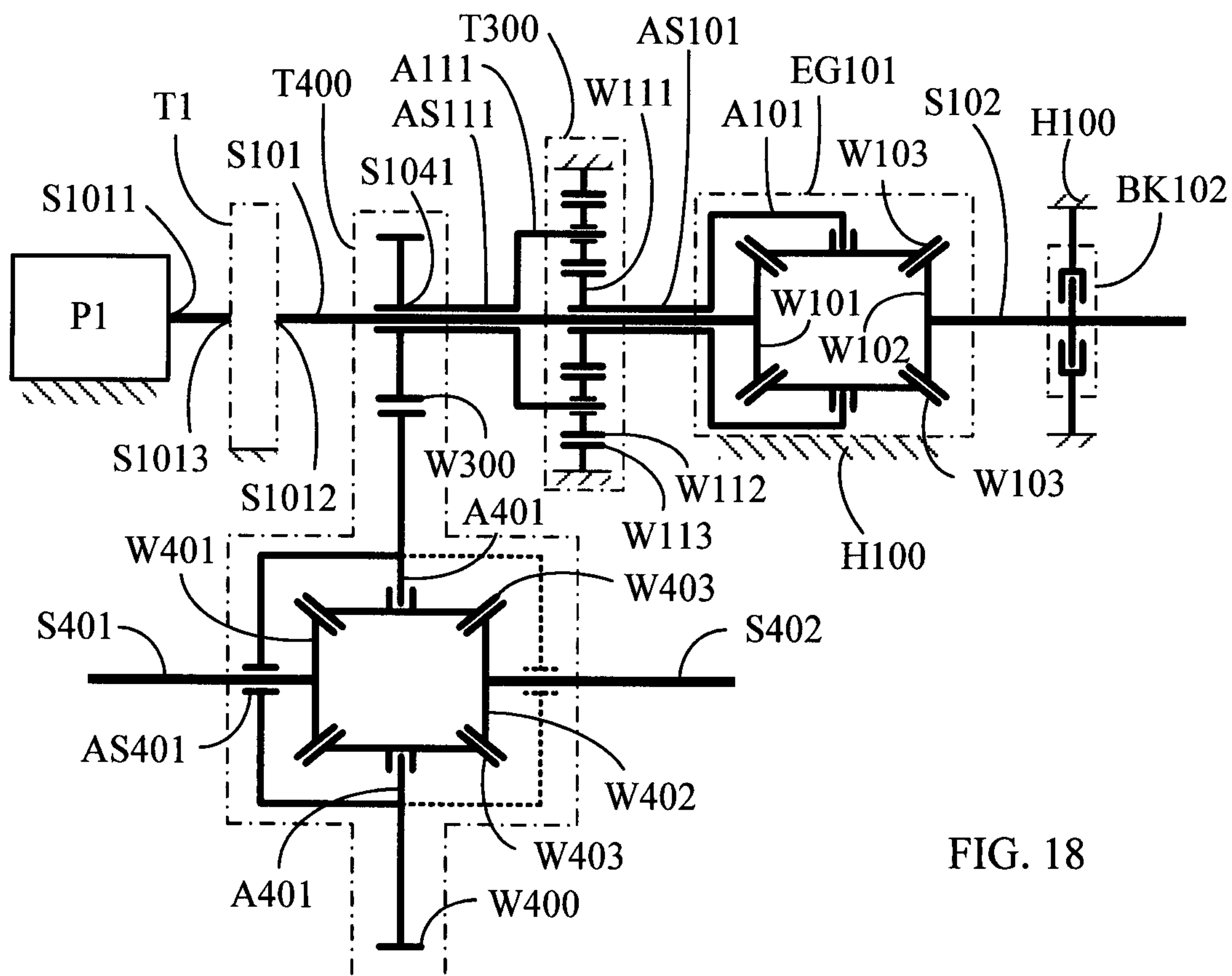


FIG. 18

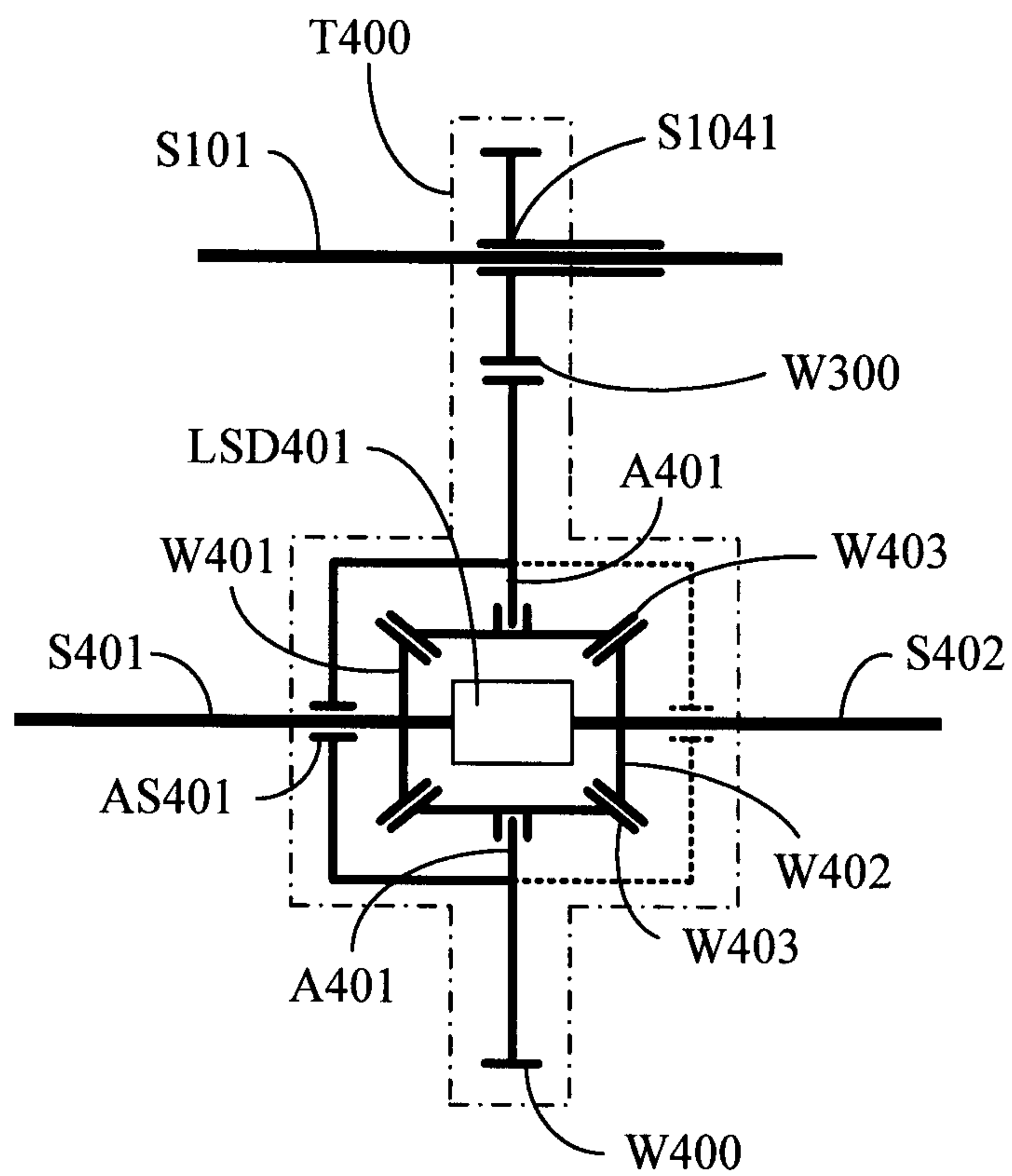


FIG. 19

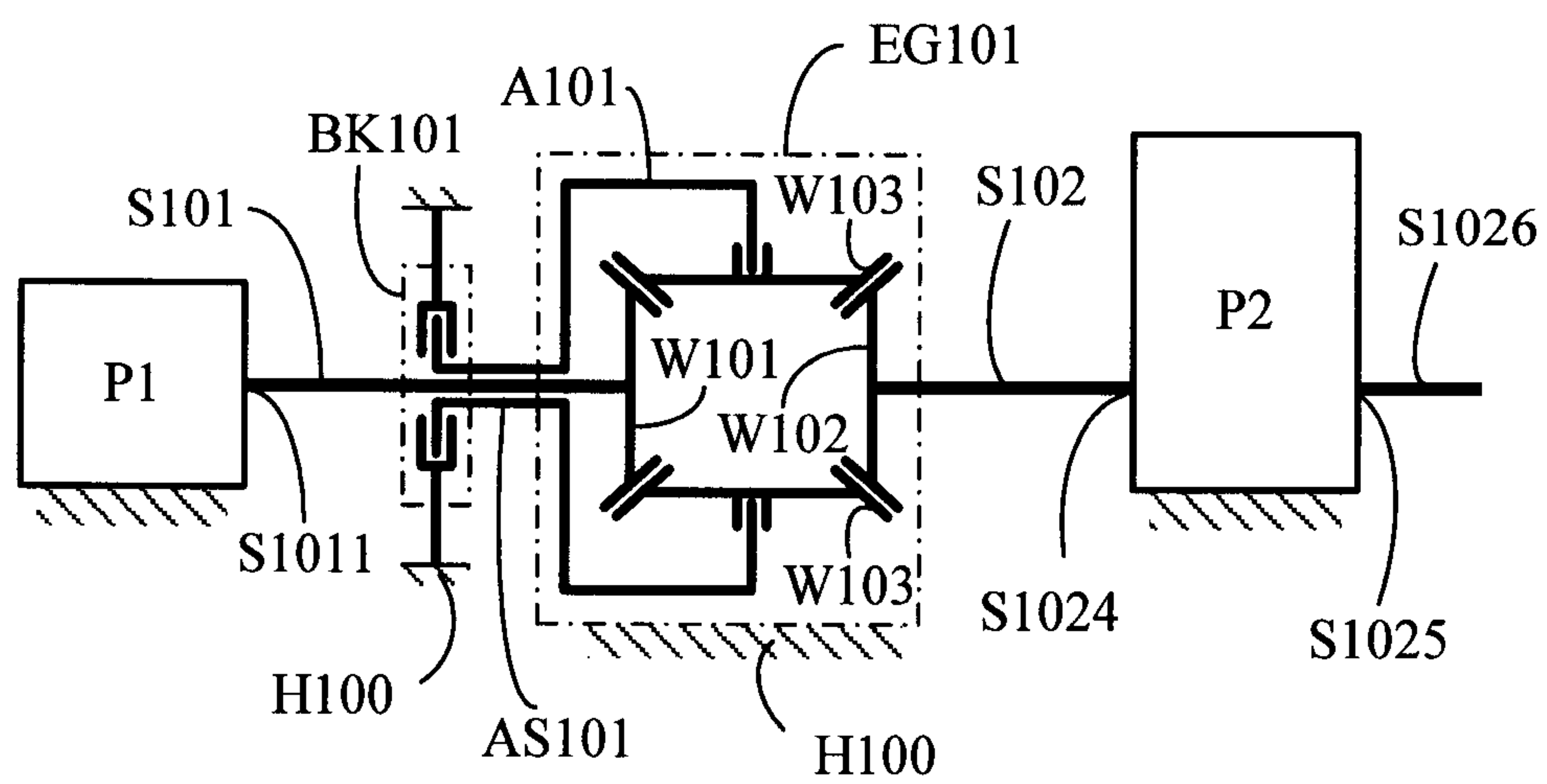


FIG. 20

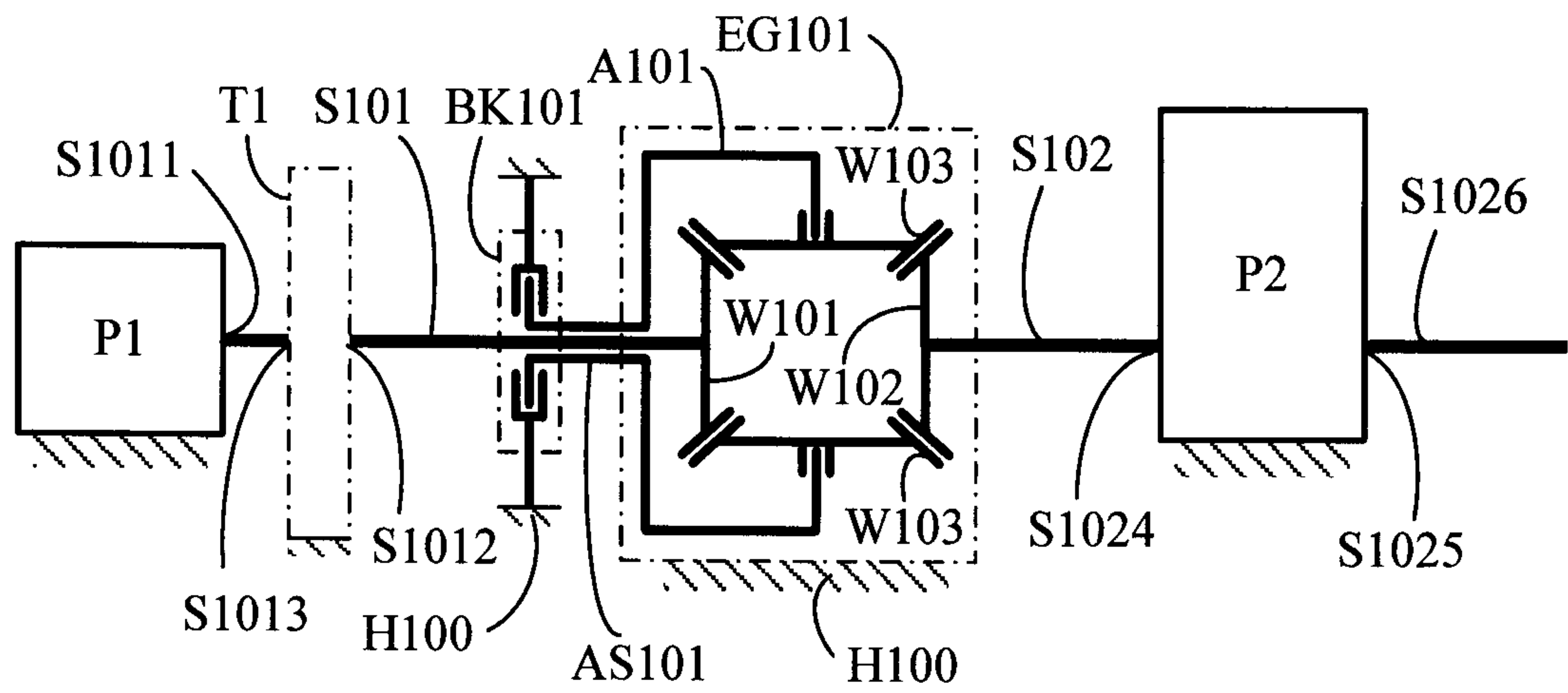


FIG. 21

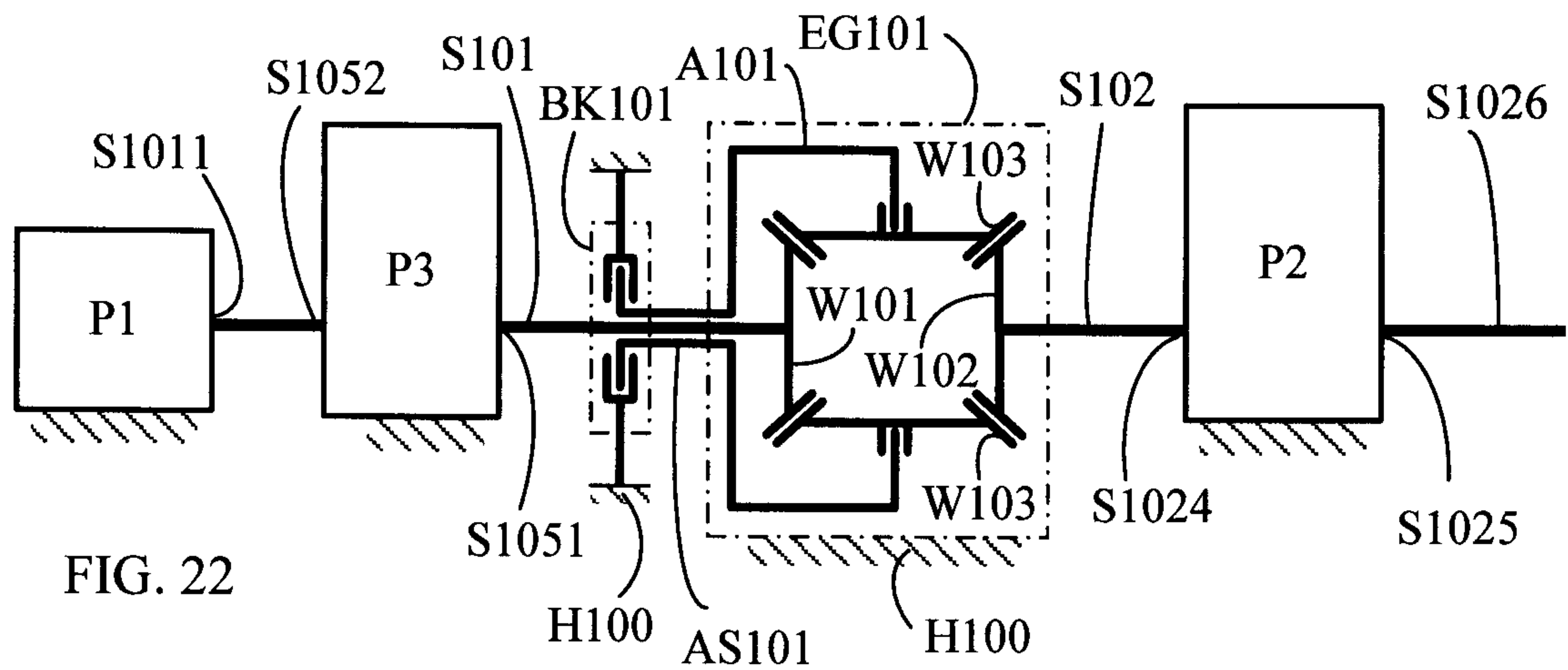


FIG. 22

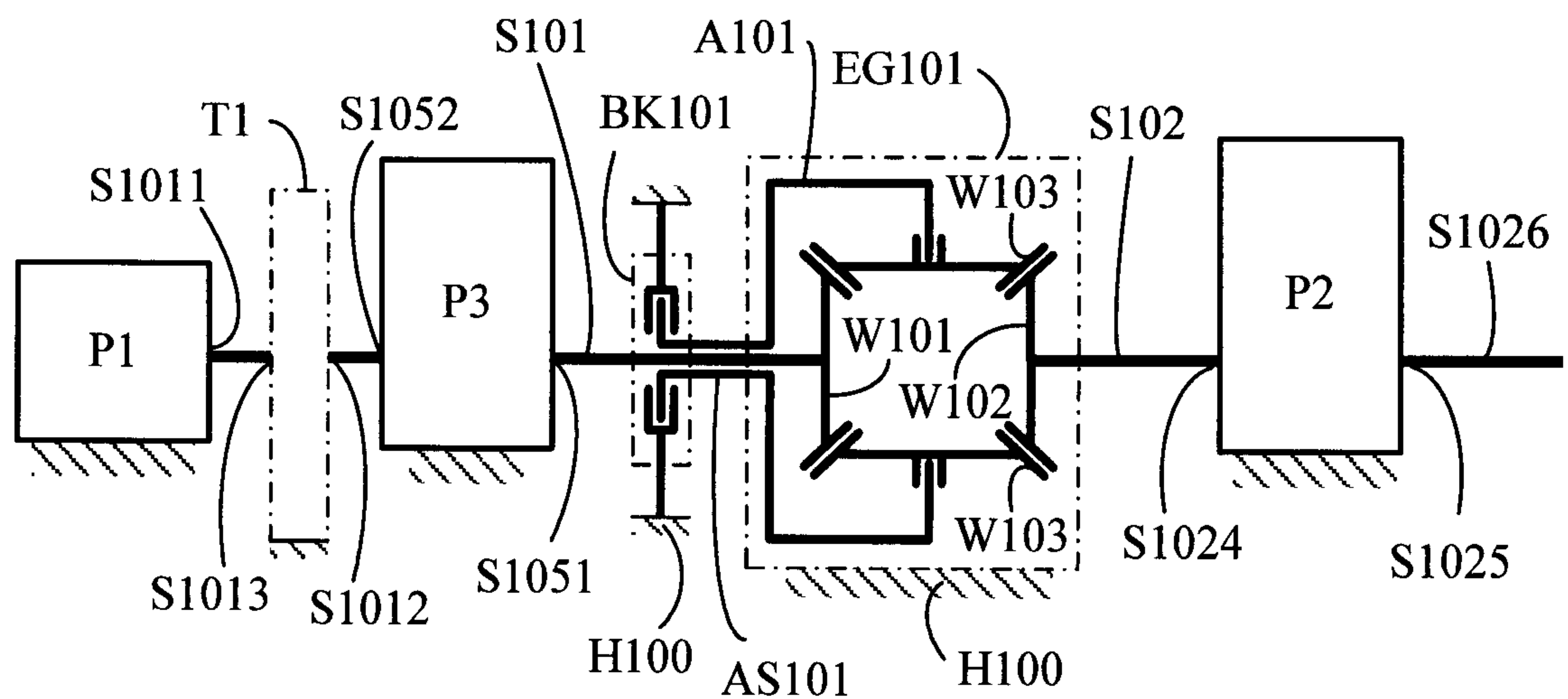


FIG. 23

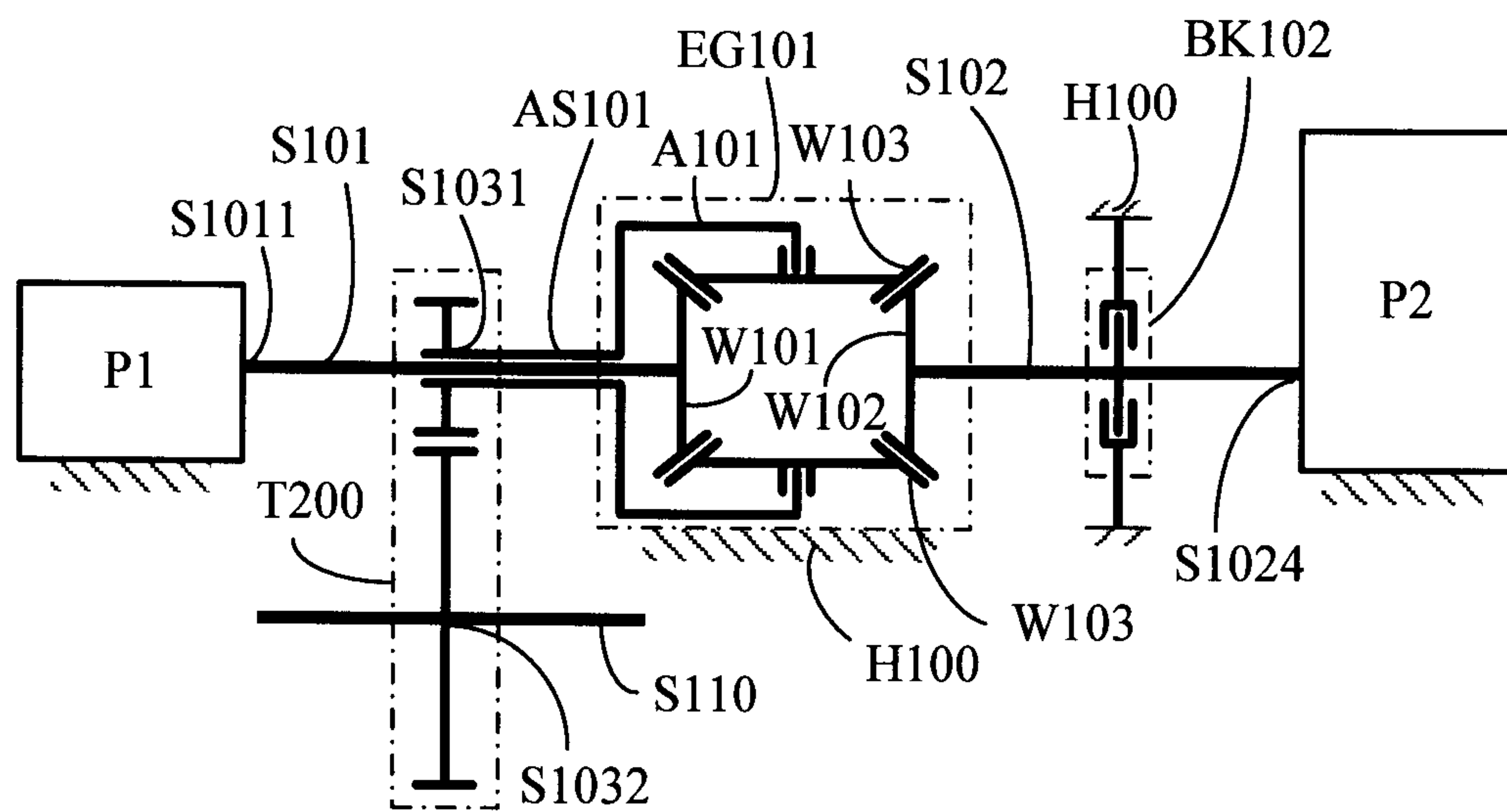


FIG. 24

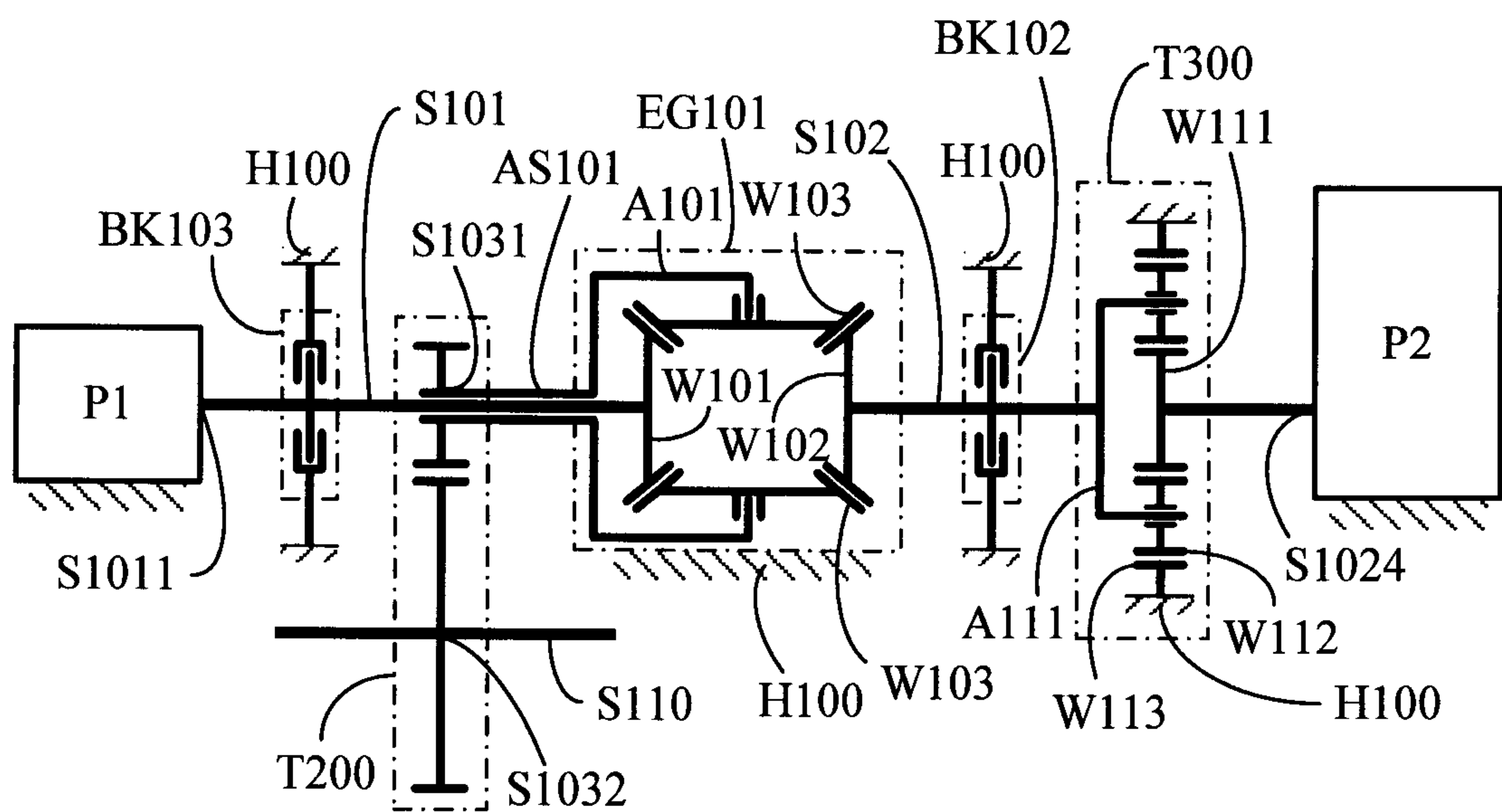


FIG. 25

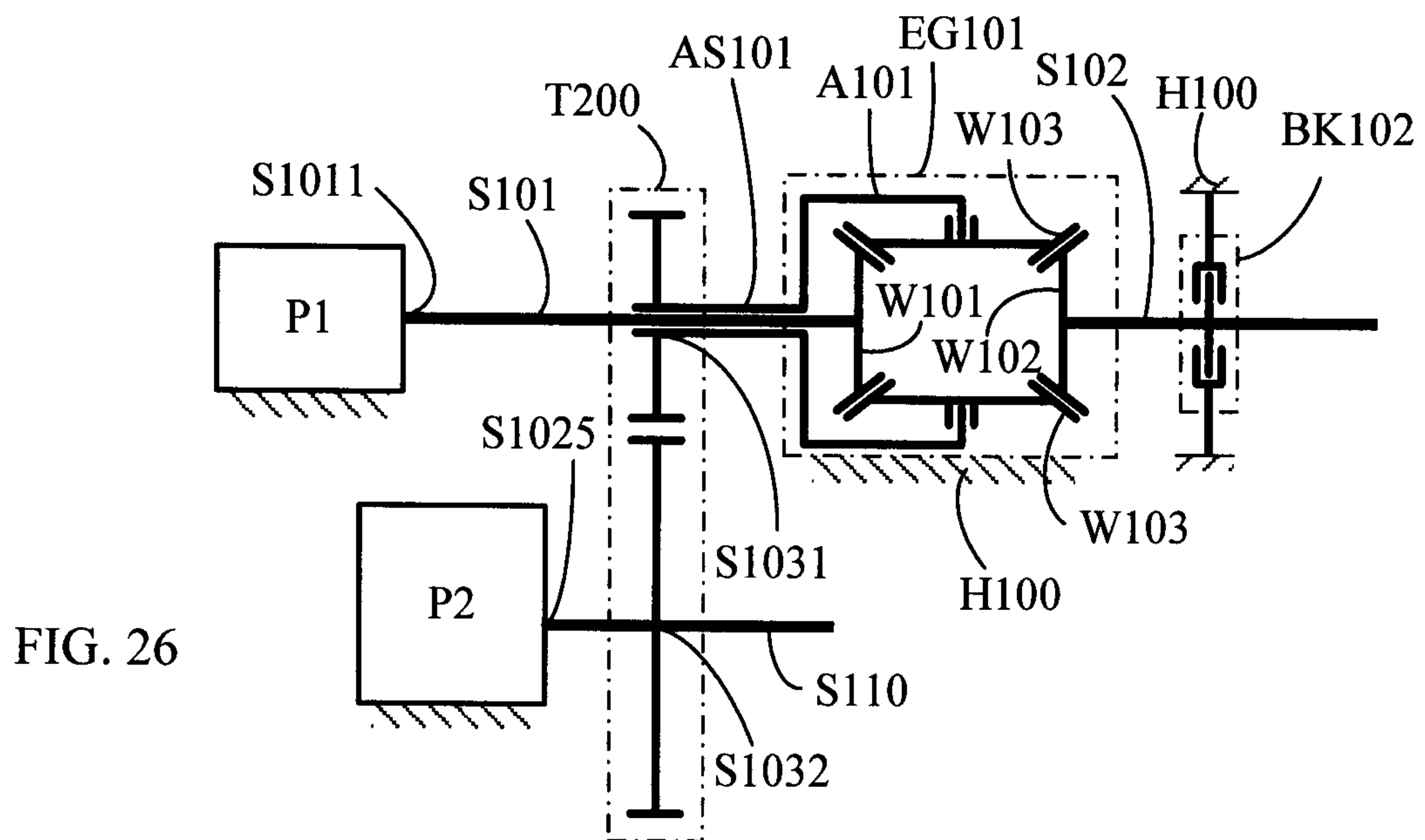


FIG. 26

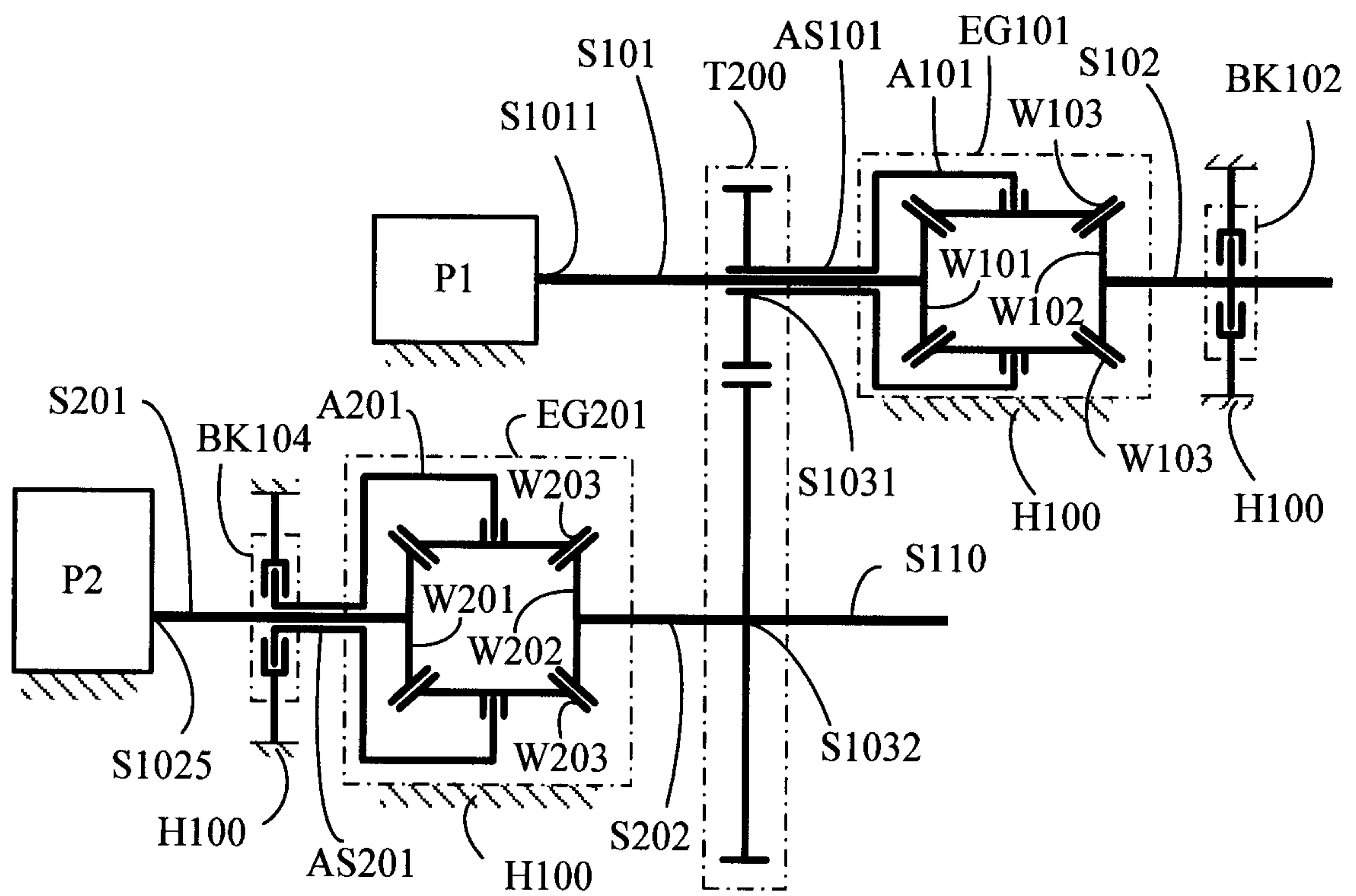


FIG. 27

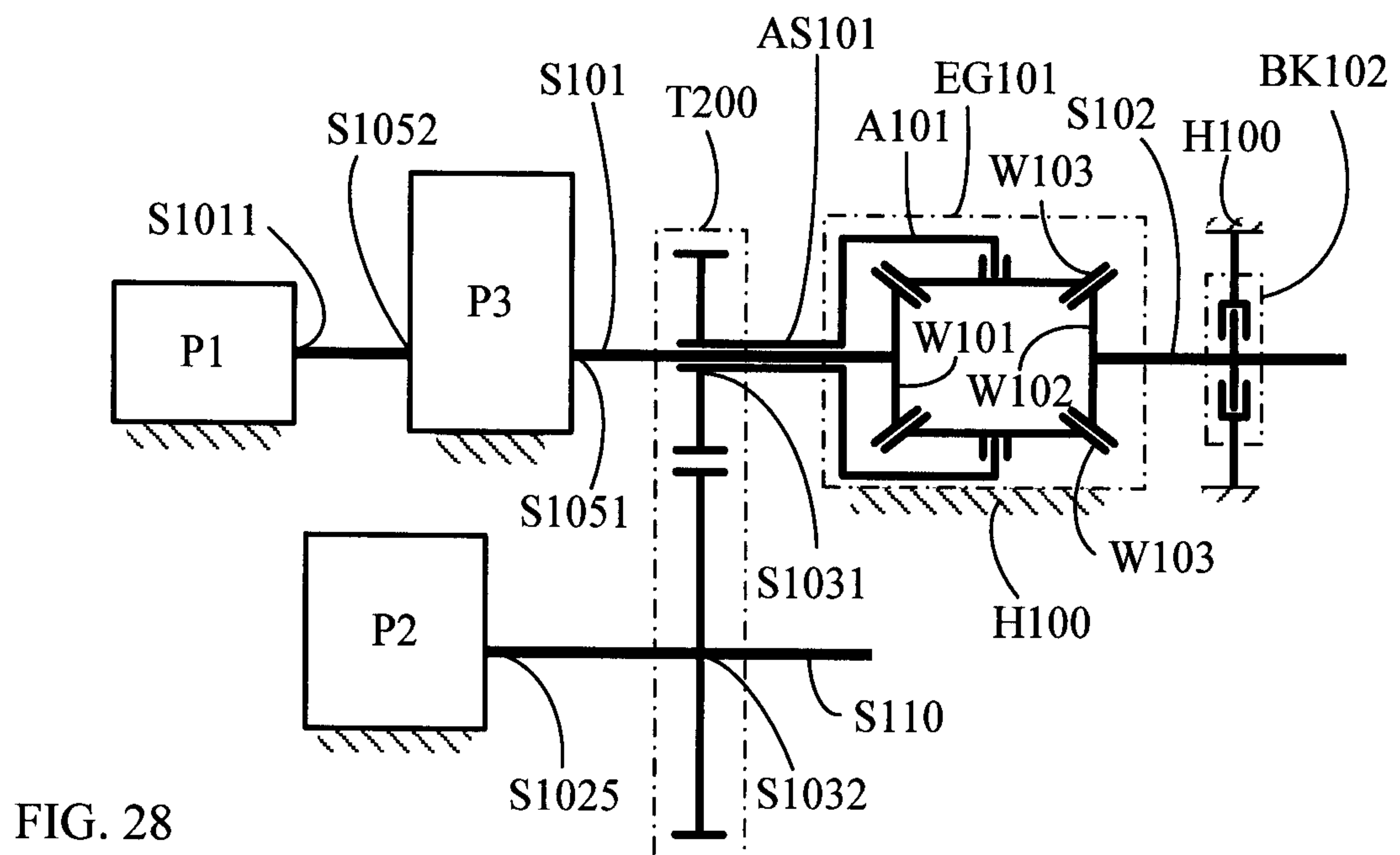


FIG. 28

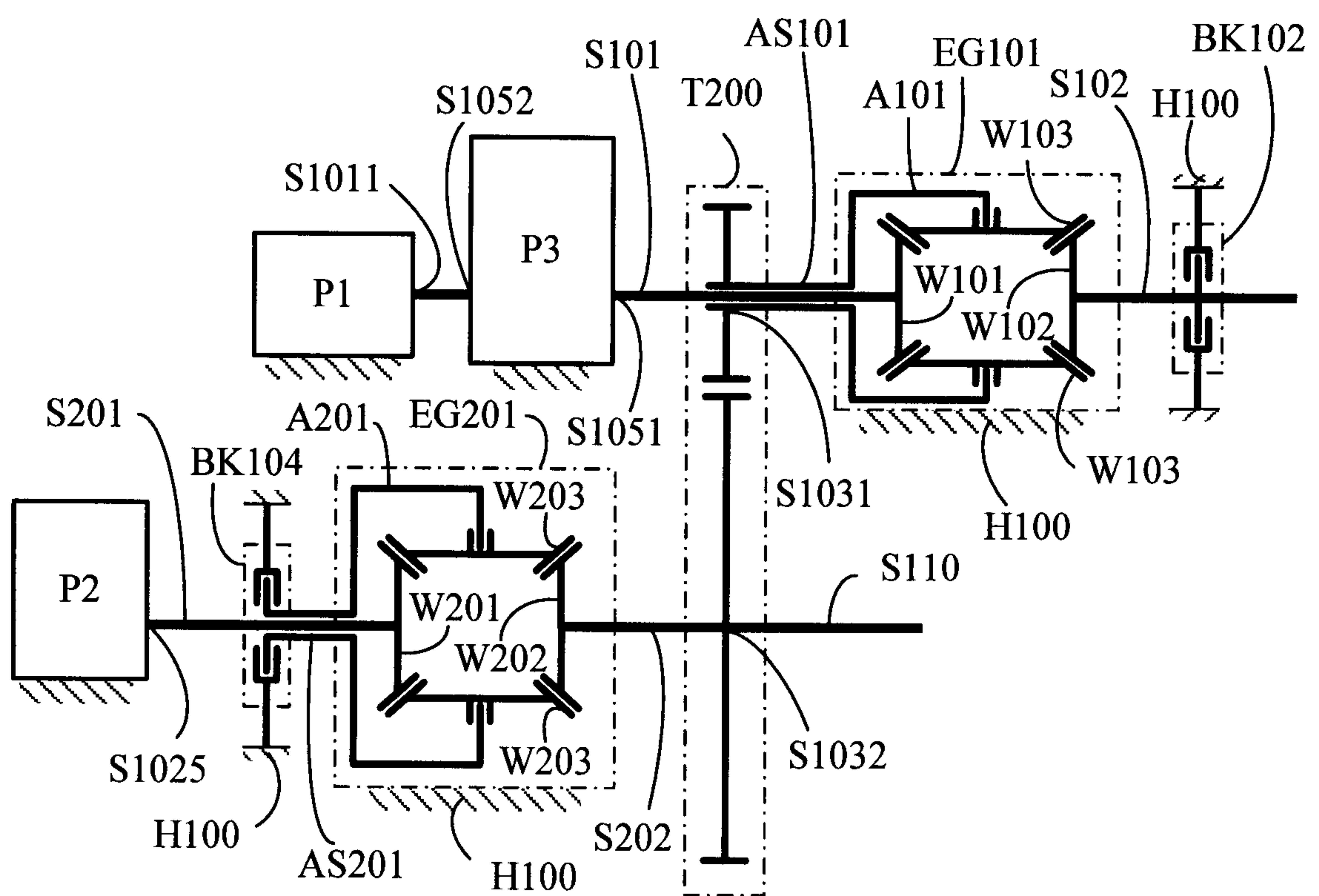


FIG. 29

