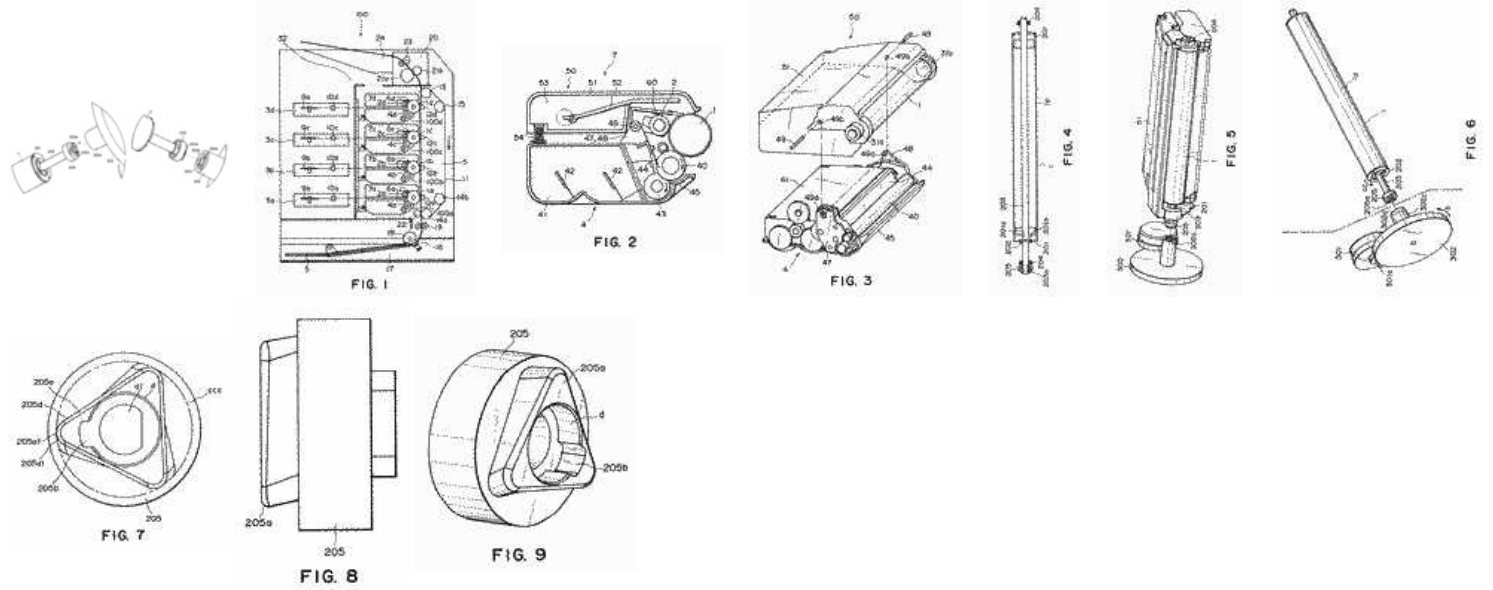


55 results for ((Cartridge and developer and electrophotographic and coupling)/TI/AB/IW OR (G03G21/18)/IPC AND (G03G-021/1814)/CPC AND (G03G-021/1821)/CPC)) - Collection: FAMPAT

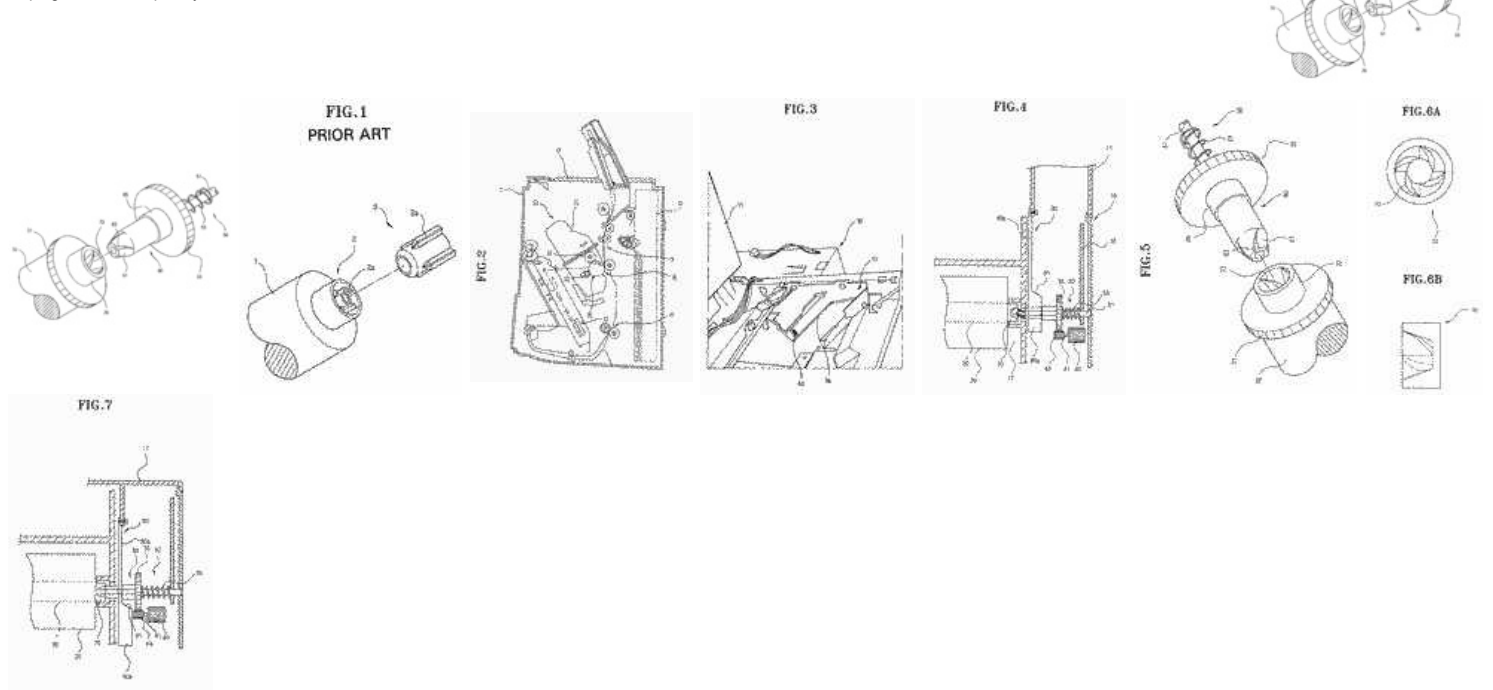
#	Title	Publication number	1st App. date	Applicant/Assignee	1st Publ. date	Publ. date
1.	Coupling part for photosensitive drum in process cartridge and electrophotographic image forming apparatus	EP1229406	2002-01-11	CANON*	2002-08-07	2002-08-07

A process **cartridge** detachably mountable to a main assembly of an **electrophotographic** image forming apparatus for forming an image on a recording material, the apparatus including a motor, a driving rotatable member for transmitting a driving force from the motor, and a twisted recess provided at a central portion of the driving rotatable member and having a non-circular cross-section with a plurality of corners, the recess being rotatable integrally with the driving rotatable member, the process **cartridge** includes an **electrophotographic** photosensitive drum; process means actable on the drum; a twisted projection having a non-circular cross-section with a plurality of corners, the twisted projection being provided at one longitudinal end of the **electrophotographic** photosensitive drum and being engageable with the recess; a permitting portion for permitting engagement between the twisted projection and the recess only at a predetermined relative rotational position therebetween to establish the engagement therebetween with the predetermined relative to rotational position; wherein when the process **cartridge** is mounted to the main assembly of the apparatus, the rotating force is transmitted from the driving rotatable member to the **electrophotographic** photosensitive drum by rotation of the driving rotatable member with the twisted projection being in engagement with the recess.

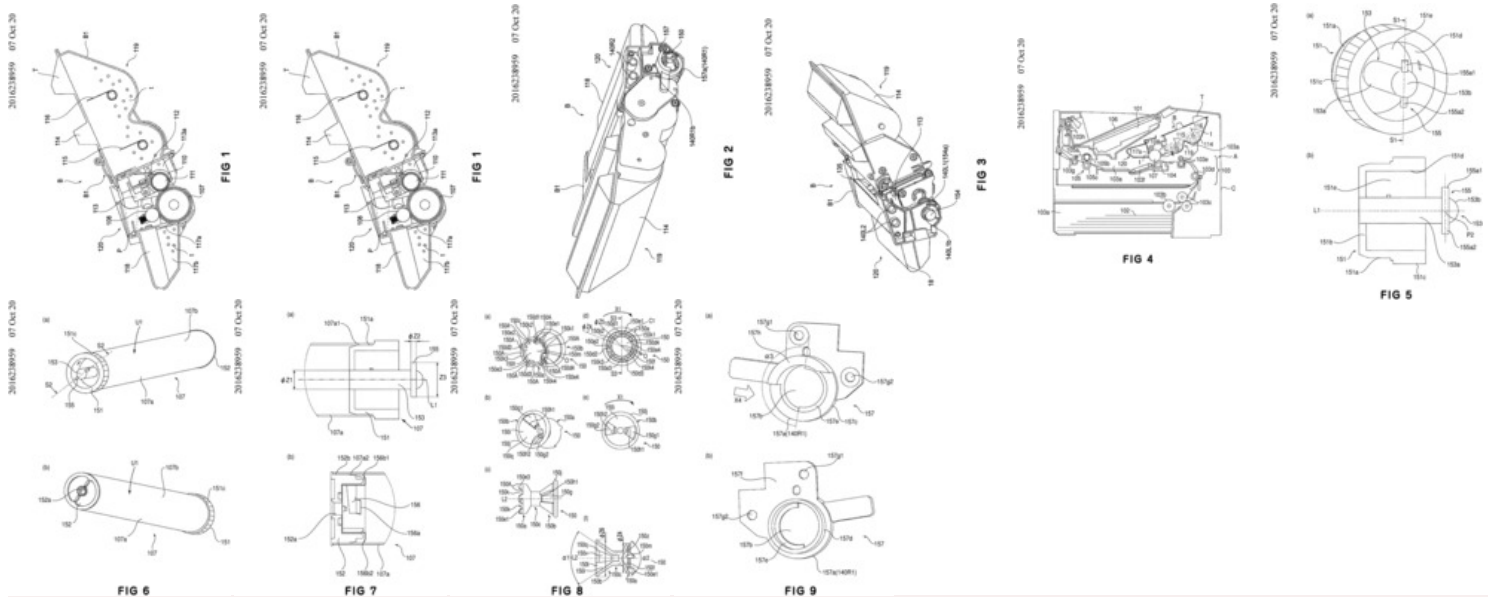


2.	Coupling apparatus, development cartridge and electrophotographic printer having the same	US2003053823	2001-09-18	S PRINTING SOLUTION* SAMSUNG ELECTRONICS	2003-03-20	2003-03-20
----	--	--------------	------------	---	------------	------------

A **coupling** apparatus to transfer a rotation force in a connected state. The apparatus has a first coupler having a first sloping rib formed at one end thereof and sloped in a rotation direction, and a second coupler having a second sloping rib formed at an inner circumference of the second coupler and sloped to correspond to the first sloping rib. The sloping ribs are connected by being pressed as the first coupler and the second coupler are relatively rotated, and rotation axes of the couplers coincide when the sloping ribs are completely connected.



PROCESS CARTRIDGE, ELECTROPHOTOGRAPHIC IMAGE FORMING APPARATUS, AND ELECTROPHOTOGRAPHIC PHOTOSENSITIVE 5 DRUM UNIT A process cartridge for use with a main assembly of an electrophotographic image forming apparatus, the main assembly including a driving shaft, to be driven by a motor, having a 10 rotational force applying portion, wherein the process cartridge is dismountable from the main assembly in a direction substantially perpendicular to an axial direction of the driving shaft, the process cartridge includes i) an electrophotographic photosensitive drum having a 15 photosensitive layer at a peripheral surface thereof, the electrophotographic photosensitive drum being rotatable about an axis thereof; ii) process means actable on the electrophotographic photosensitive drum; iii) a coupling member engageable with the rotational force applying portion 20 to receive a rotational force for rotating the electrophotographic photosensitive drum, the coupling member being capable of taking a rotational force transmitting angular position for transmitting the rotational force for rotating the electrophotographic photosensitive drum to the 25 electrophotographic photosensitive drum and a disengaging angular position in which the coupling member is inclined away from the axis of the electrophotographic photosensitive drum from the rotational force transmitting angular position, wherein when the process cartridge is dismounted from the main 30 assembly of the electrophotographic image forming apparatus in a direction substantially perpendicular to the axis of the electrophotographic photosensitive drum, the coupling member moves from the rotational force transmitting angular position 11849383 1 902028D4 to the disengaging angular position. 11849383 1 902028D4



4. Process cartridge and image forming apparatus

US2008138114

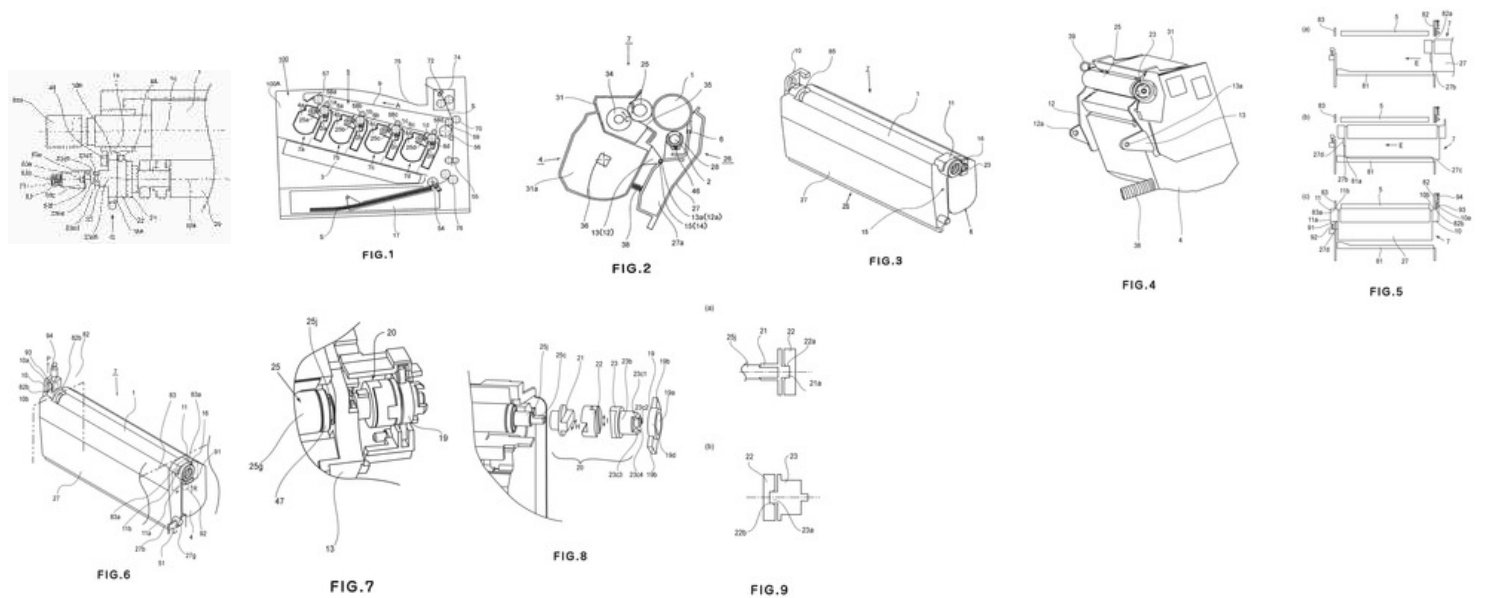
2007-01-01

CANON*

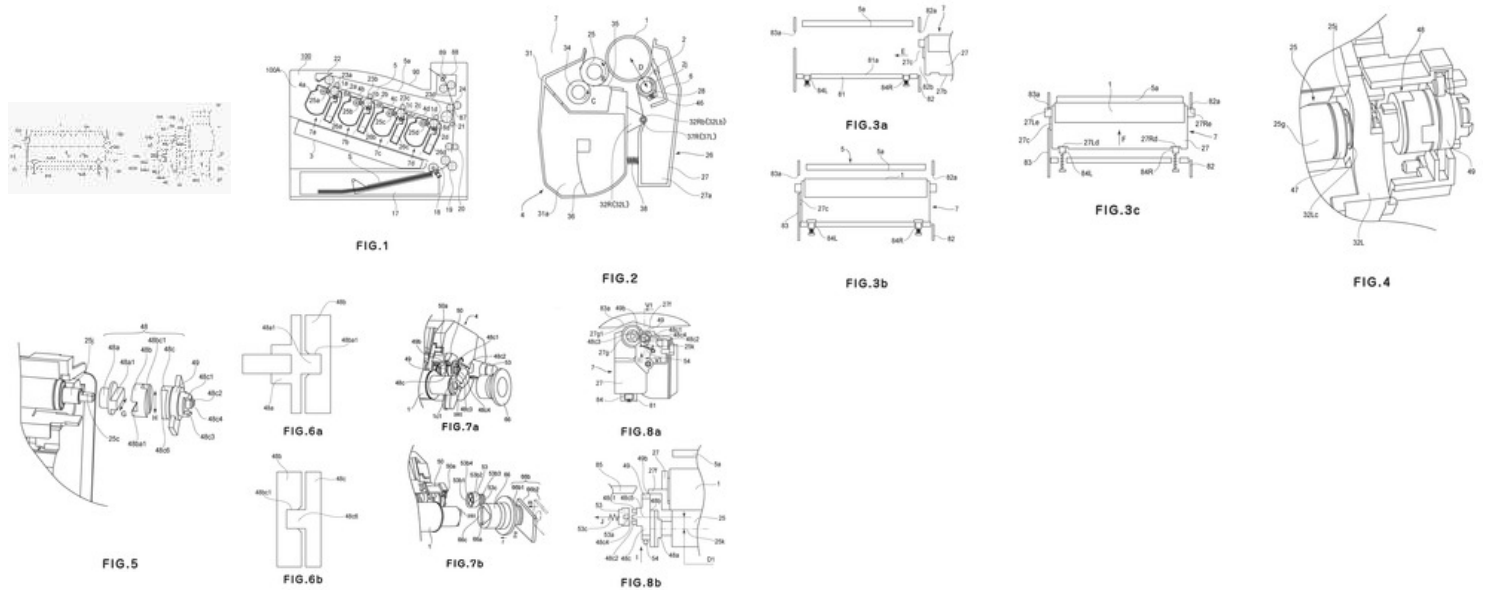
2008-06-12

2008-06-12

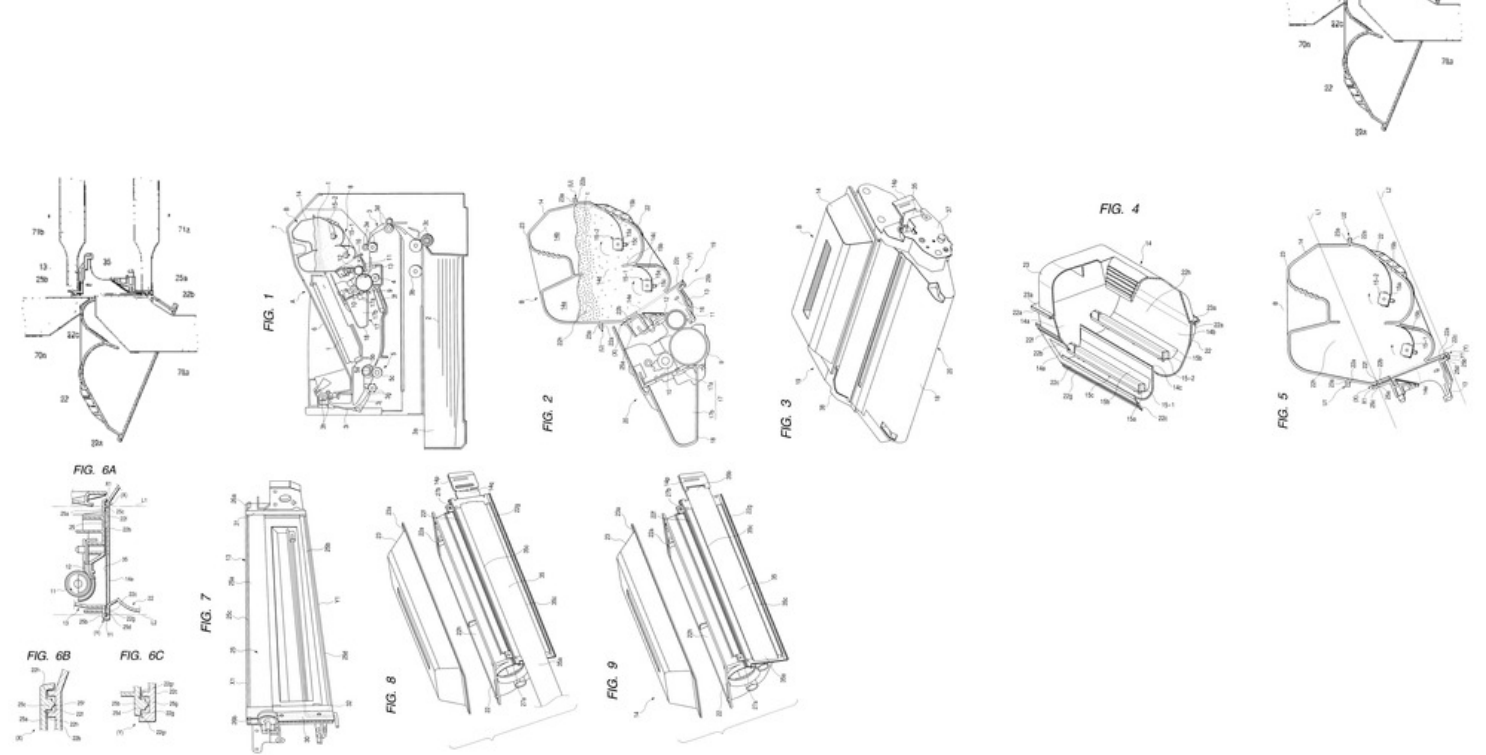
A process cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, wherein the main assembly includes a first rotatable main assembly drive transmission member, and a second rotatable main assembly drive transmission member, the process cartridge includes an electrophotographic photosensitive drum; a developing roller for developing an electrostatic latent image formed on the electrophotographic photosensitive drum with a developer; a drum coupling member, provided on one axial end of the electrophotographic photosensitive drum, for engaging with the first main assembly drive transmission member and transmitting a first rotational driving force to the electrophotographic photosensitive drum, when the process cartridge is mounted to the main assembly of the apparatus along an axial direction of the electrophotographic photosensitive drum; and a shaft coupling member, provided on one axial end of the developing roller, for transmitting a second rotational driving force with a deviation permitted between an axis of the second main assembly drive transmission member and an axis of the developing roller, wherein the shaft coupling member includes an engaging portion for engaging with the second main assembly drive transmission member and receiving the second rotational driving force, when the process cartridge is mounted to the main assembly of the apparatus; and the engaging portion is movable in a direction crossing with the axial direction of the developing roller when the process cartridge enters the main assembly of the apparatus.



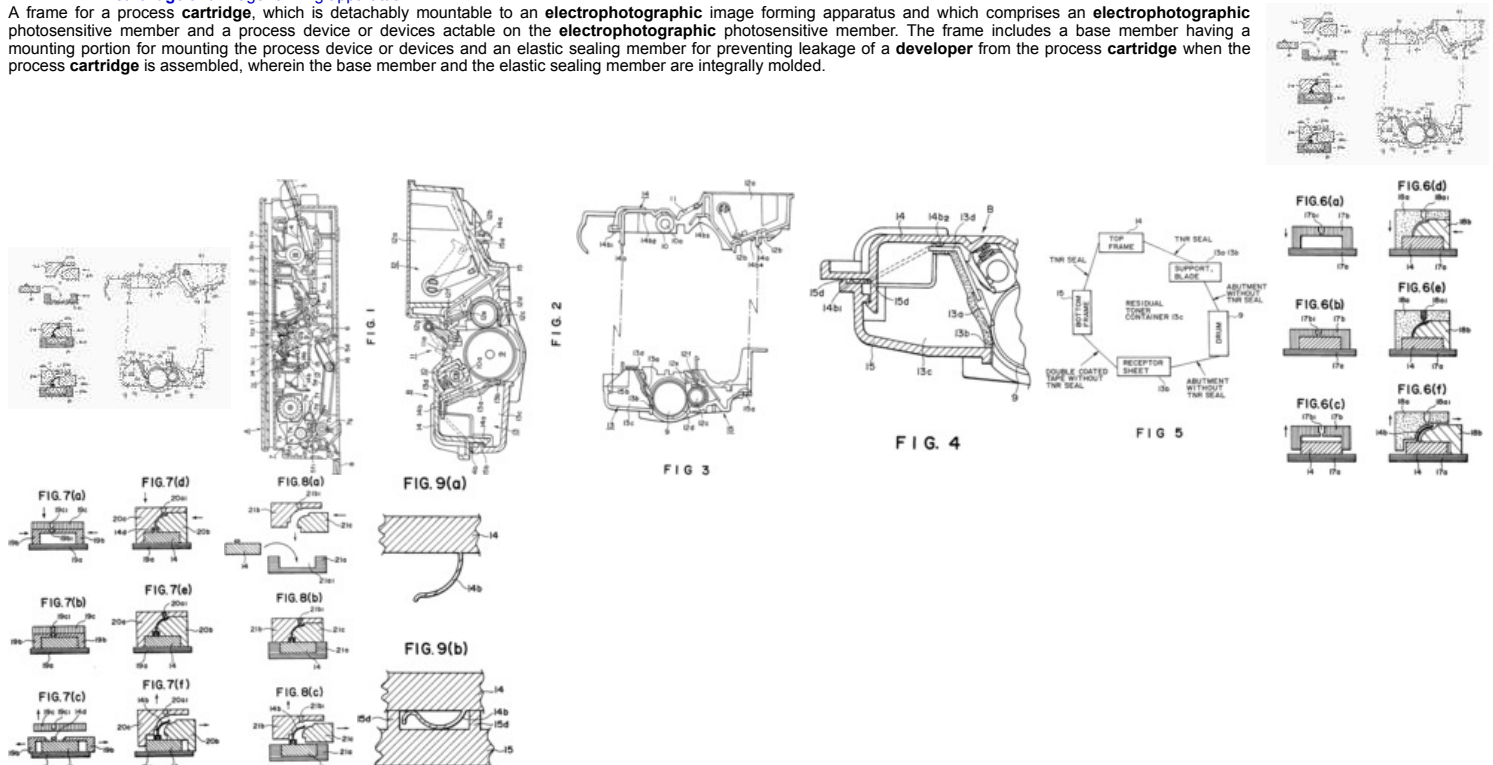
5.	Developing apparatus, process cartridge and electrophotographic image forming apparatus	WO2008072757	2007-11-16	CANON* KEHNON KABUSKIKI KAJSSJA	2008-06-19 2008-06-19
A process cartridge (7) to enter a main assembly in a longitudinal direction (E) of the cartridge (7) and to be urged in a direction (F) crossing the longitudinal direction (E) to position the cartridge (7), the cartridge (7) includes a shaft coupling member (48), provided on one axial end of a developing roller (25), for transmitting a driving force from the main assembly including an engaging portion (48c) wherein a distance (D) between an axis (48c5) of the engaging portion (48c) and an axis (25y) of the developing roller (25) is smaller when the cartridge (7) is positioned to a main assembly positioning portion (81-83) than when the engaging portion (48c) is positioned by a holding portion (27f).					



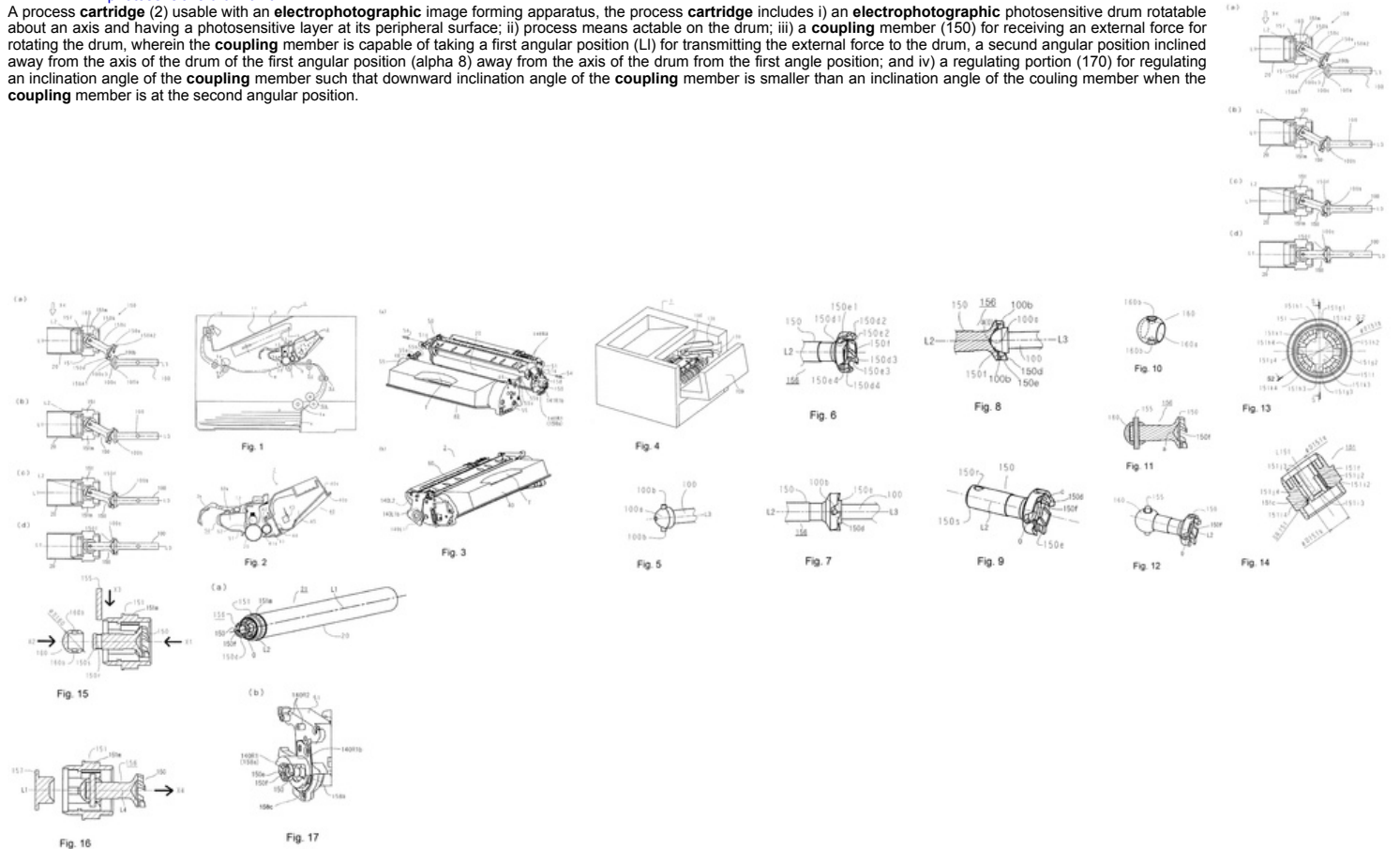
6.	Developer container for a process cartridge and its method of assembling	US2003161657	2002-02-27	CANON*	2003-08-28 2003-08-28
The configuration of a developer container unnecessary for being provided with a flange of a welding receiving portion at the time of the ultrasonic welding thereof increases the capacity of the developer container without enlarging a process cartridge or an apparatus main body. Flanges (25a, 25b) on an opposite surface (25) of a developing frame (13) are respectively touched to flanges (22c) formed on the upper part and the lower part on a wall surface (22b), on which a developer feeding opening (14e) is formed, of a container frame (22) constituting the developer container (14), and the flanges are welded at their connection portions (X, Y) by ultrasonic welding. Then, a flange (23a) of a lid frame (23) is connected to a flange (22a) of the container frame (22) on a welding plane (U) by ultrasonic waves, and thereby a developer container (14), in which the container frame (22) is connected with the developing frame (13) with the developer feeding opening (14e) being put between the frames, is formed. In such a way, the welding plane (U) is disposed at a position above both the connection portions (X, Y) on the outside of the connection portions, and thereby no dead spaces in which developer cannot be contained are formed. <IMAGE>					



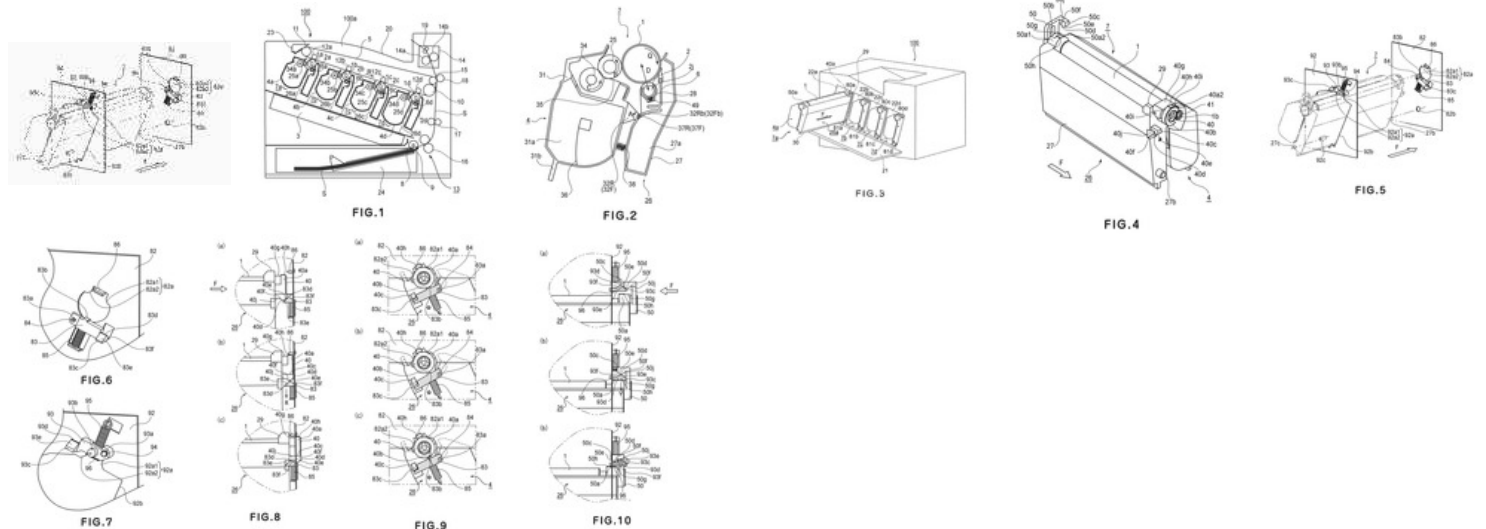
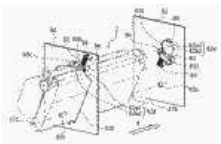
A frame for a process cartridge, which is detachably mountable to an **electrophotographic** image forming apparatus and which comprises an **electrophotographic** photosensitive member and a process device or devices actable on the **electrophotographic** photosensitive member. The frame includes a base member having a mounting portion for mounting the process device or devices and an elastic sealing member for preventing leakage of a **developer** from the process cartridge when the process cartridge is assembled, wherein the base member and the elastic sealing member are integrally molded.



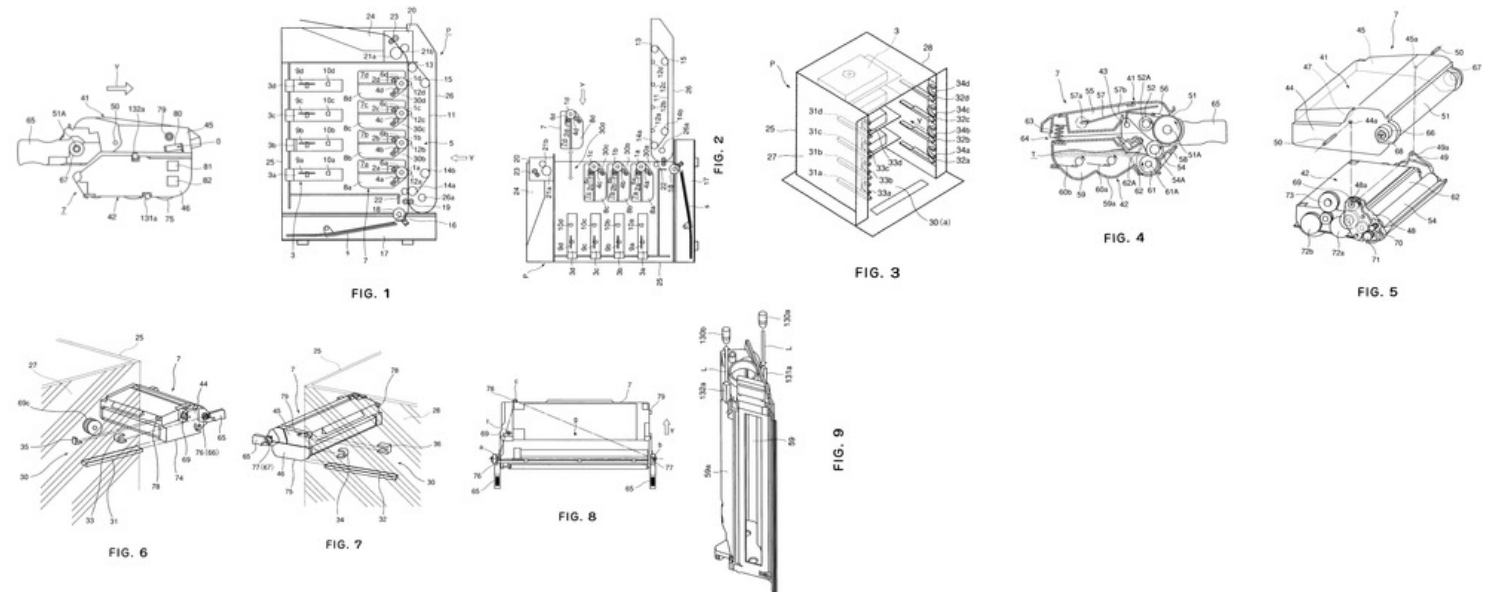
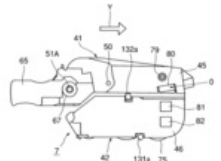
A process cartridge (2) usable with an **electrophotographic** image forming apparatus, the process cartridge includes i) an **electrophotographic** photosensitive drum rotatable about an axis and having a photosensitive layer at its peripheral surface; ii) process means actable on the drum; iii) a **coupling** member (150) for receiving an external force for rotating the drum, wherein the **coupling** member is capable of taking a first angular position (L1) for transmitting the external force to the drum, a second angular position inclined away from the axis of the drum of the first angular position (alpha 8) away from the axis of the drum from the first angle position; and iv) a regulating portion (170) for regulating an inclination angle of the **coupling** member such that downward inclination angle of the **coupling** member is smaller than an inclination angle of the coupling member when the **coupling** member is at the second angular position.



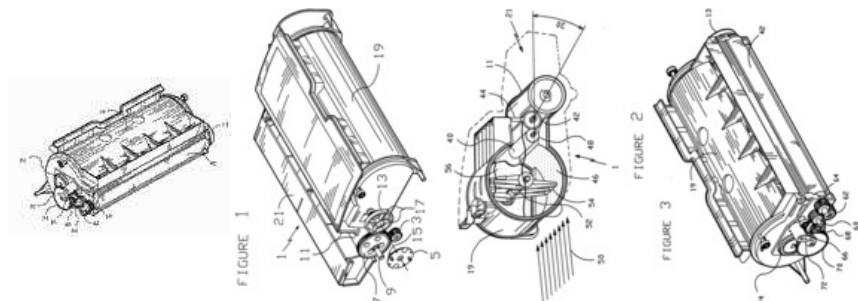
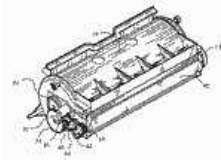
A process cartridge is detachably mountable to a main assembly of an **electrophotographic** image forming apparatus. The **cartridge** includes an **electrophotographic** photosensitive drum, a drum unit supporting the drum, a developing unit supporting a developing roller and swingably coupled with the drum unit, drum and developing roller rotating force receiving portions first and second positionable portions positioned at first and second main assembly side positioning portion by contacting to the first main assembly side positioning portions by contacting by the urging force of first and second main assembly side urging members, a developing device spacing force receiving portion, first and second **cartridge** side rotation regulating portions for limiting rotation of the drum unit by abutting first and second main assembly side rotation regulating portions, when the drum and developing roller rotating force receiving portions receive the rotating forces or when the developing device spacing force receiving portion receives the urging force from the main assembly.



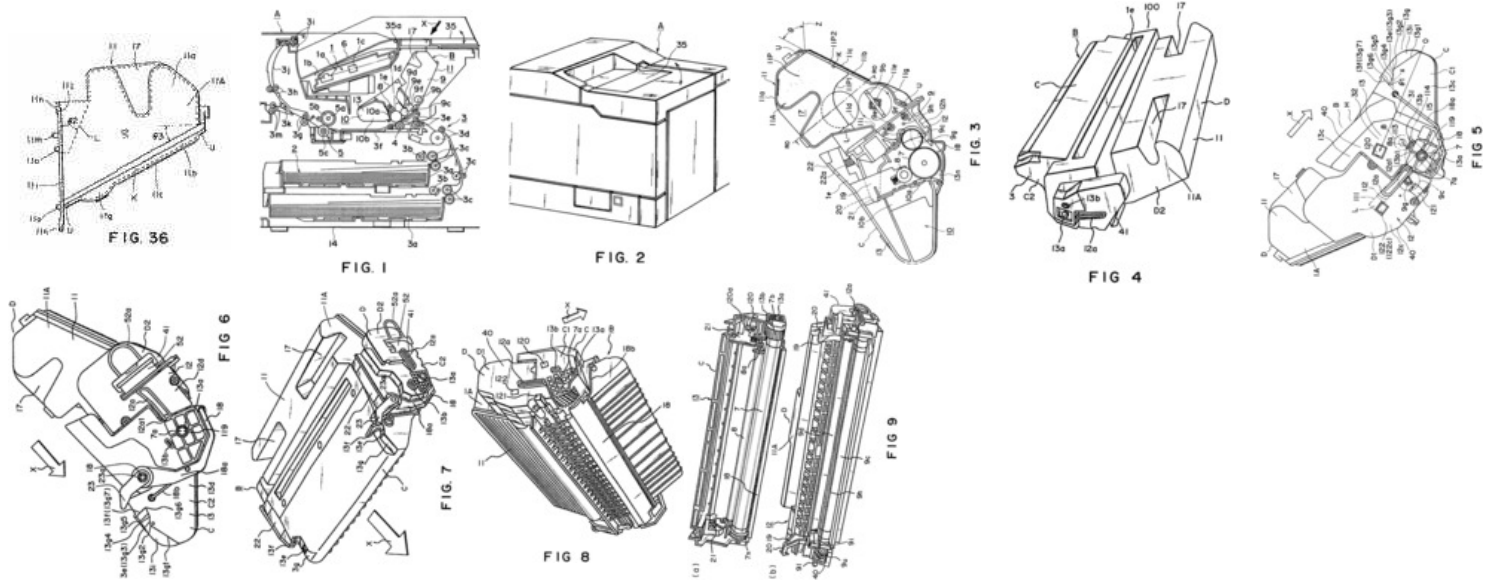
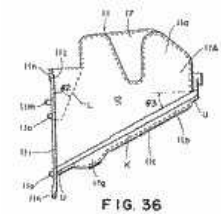
A process cartridge detachably mountable to a main assembly of an **electrophotographic** image forming apparatus, includes a first frame; a second frame coupled with the first frame for rotation about a shaft relative to each other; a first electrical contact, provided in the first frame, for receiving, from the main assembly, a bias voltage to be supplied to the charging member; a second electrical contact, provided in the second frame, for receiving, from the main assembly, a bias voltage to be supplied to a developing member, a **developer** feeding member and a regulating member; and a third electrical contact, provided in the first frame coaxially with the drum, for electrically grounding the drum to the main assembly. The first and second contents are disposed at one end of the first frame and the second frame, respectively, and the third contact is disposed at the other end of the first frame, and wherein the contacts are disposed such that the first contact takes a higher position than the second.



The **cartridge** has a first **coupling** (3) for rotating a photoconductive drum (11) using a driving source from a printer and a second **coupling**, independent of the first, for rotating a **developer** roller by **coupling** with a driving source from the printer, the couplings being on one side of the **cartridge**. The second **coupling** is an integral extension of a toner adder roller intermediate the **developer** roller and a toner paddle. A first linkage from the adder roller to the **developer** roller rotates the **developer** roller by rotation of the second **coupling**. A second linkage, i.e. a speed reduction system, from the adder roller to the toner paddle rotates the toner paddle. The two linkages are entirely on the side of the **cartridge** opposite the first side.



A toner container (111) for containing toner to be used for developing a latent image formed on an **electrophotographic** photosensitive member by developing device, usable with a process **cartridge** detachably mountable to a main assembly of an **electrophotographic** image forming apparatus, the process **cartridge** containing the photosensitive member and the developing device, the container includes a first frame (11) having a toner supply opening (11i) for supplying the toner to the developing device and a mounting portion for mounting a rotatable stirring member for stirring the toner contained in the toner container; a second frame (12) coupled with the first frame (11) and having an outward projection without interference with a rotational region of the stirring member, wherein the toner container is formed by **coupling** the first frame and second frame.



13.

Process cartridge and image forming apparatus

US2008138115

2007-10-03

CANON*

2008-06-12 2008-06-12

A process cartridge (7) being detachably mountable to a main assembly (100A) of an **electrophotographic** image forming apparatus (100), in which a drum unit (26) comprises a holding portion (11c; 27f) capable of holding an engaging portion (23) such that when said process cartridge (7) enters said main assembly (100A) of the apparatus with a developing unit (4) positioned in a spaced position from the drum unit (26), the engaging portion (23) is positioned engageably with a second main assembly drive transmission member (53) by the holding portion (11c; 27f) while an axis (23c5) of said engaging portion (23) is deviated from an axis (25k) of a developing roller (25) with respect to a direction (Q) crossing the axis (25k) of said developing roller (25) to engage said engaging portion (23) with the second main assembly drive transmission member (53) in a state where the second rotational driving force can be transmitted from the second main assembly drive transmission member (53) to said engaging portion (23).

14.

Developing apparatus, process cartridge and electrophotographic image forming apparatus

IN3308/CHENP/2009

2009-06-11

CANON*

2016-08-31 2016-08-31

A process cartridge detachably mountable to a main assembly Of an **electrophotographic** image forming apparatus, whetein the main assembly includes a rotatable first main assembly drive transmission member and a riptatable second main assembly drive transmission mi^mber^ the process cartridge includes an **electrophotographic** photosensitive drum; a drum unit containing the **electrophotographic** drum; a developing roller for developing an electrostatic latent image fjiormed on the **electrophotographic** photosensitive; drum with a **developer**; a developing unit containing the developing roller and movably connected with the drum unit, the developing unit being movable relative to the drum unit between a nnttai^t pn.sition in which the developing roller is contacted to the **electrophotographic** photosensitive drum and a spaced position in which the developing roller is sparted from the **electrophotographic** photosensitive drum; a drum coupling member, provided on one axial ^nd of the **electrophotographic** photosensitive drum, for engaging with the first main assembly drive transmission member and transmitting a • first rotational driving force to the electrophotogiraphic photosensitive drum, when the process cartridge is mounted to the main assembly of the apparatus along an axial direction of the **electrophotographic** photosensitive drum; a shaft coupling member, provided on one axial end of the developing roller, for transmitting a second rotational driving force with a deviation permitted between an axis of the second main assembly drive transmission member and an axis of the developing roller, wherein the shaft coupling member includes an engaging portiojn for engaging with the second main assembly drive transmission member and receiving the second rotational driving force; when the process cartridge is mounted to the main assembly of the apparatus; the engaging portion is movable in a direction crossing with the axial direction of the developing roller; and when the process cartridge enters the maili assembly of the apparatus with the dp=vR] oping unit positioned in the spaced position, an axis of the engaging portion is deviated from the axis of the developing roller with respect to the crossing direction.

An image forming apparatus comprises a **cartridge** that includes a developing roller and a **coupling** member for receiving a rotational force for rotating the developing roller. A cylindrical member movably supports one end portion of the **coupling** member inside of the cylindrical member. A cylindrical member side force receiving portion is provided inside the cylindrical member. A first regulating portion, provided inside of the cylindrical member, prevents one end portion of the **coupling** member from disengaging in an axial direction of the cylindrical member. A second regulating portion regulates deformations of the first regulating portion outward of the cylindrical member in the radial direction in a state in which one end portion of the **coupling** member is mounted to the inside of the cylindrical member. The apparatus also includes a driving motor and a driving shaft engageable with the **coupling** member of the **cartridge**.

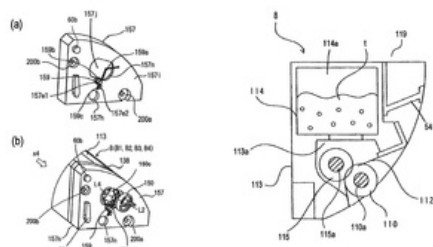
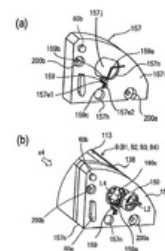


Fig. 1

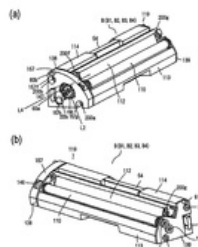


Fig. 2

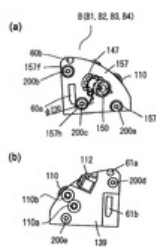


Fig. 3

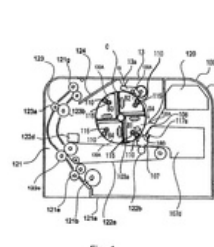


Fig. 4

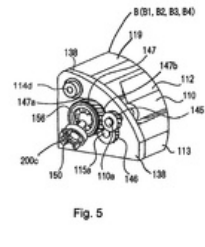


Fig. 5

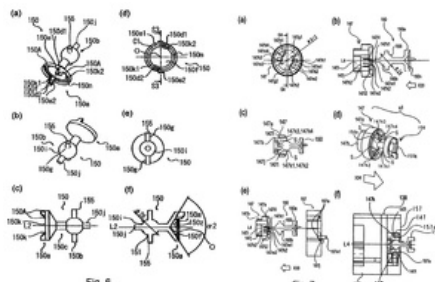


Fig. 6

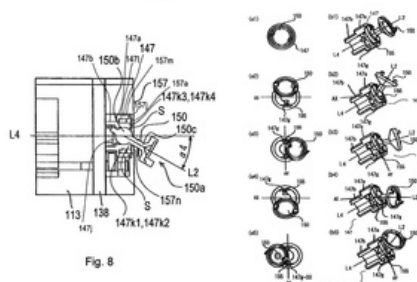


Fig. 8

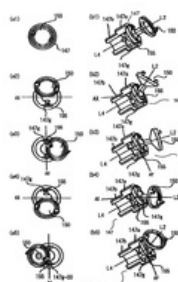


Fig. 2

16. Process cartridge and developer container assembly

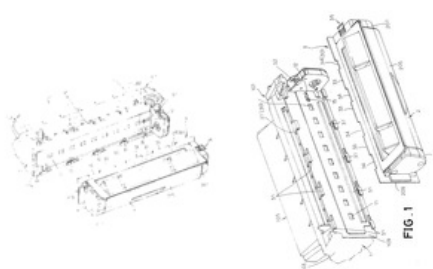
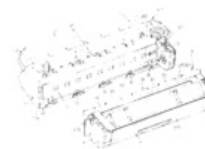
DE20209842

2002-06-11

GENERAL PLASTIC INDUSTRIAL*
GENERAL PLASTIC INDUSTRY
GEWNERAL PLASTIC INDUSTRY

2002-08-29 2002-08-29

A process **cartridge** and **developer** container assembly is constructed to include a main **cartridge** holding an **electrophotographic** photosensitive member, developing means, charging means, and cleaning means, a **developer** container holding **developer** and detachably secured to the main **cartridge**, and a **coupling** member for enabling the **developer** container to be detachably coupled to the main **cartridge**. The main **cartridge** has a plurality of **developer** receiving openings, and a first sliding cover, which opens the **developer** receiving openings upon installation of the **developer** container in the main **cartridge**, or closes the **developer** receiving openings after removal of the **developer** container.



FIG

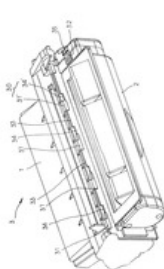


FIG. 2



FIG. 3

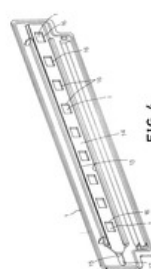


FIG 4

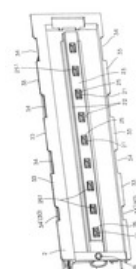


FIG. 5

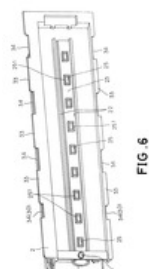


FIG. 6

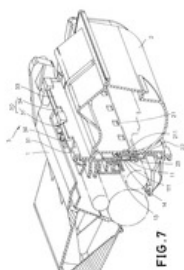


FIG. 7

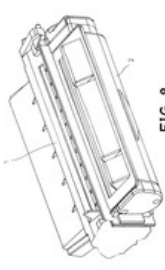
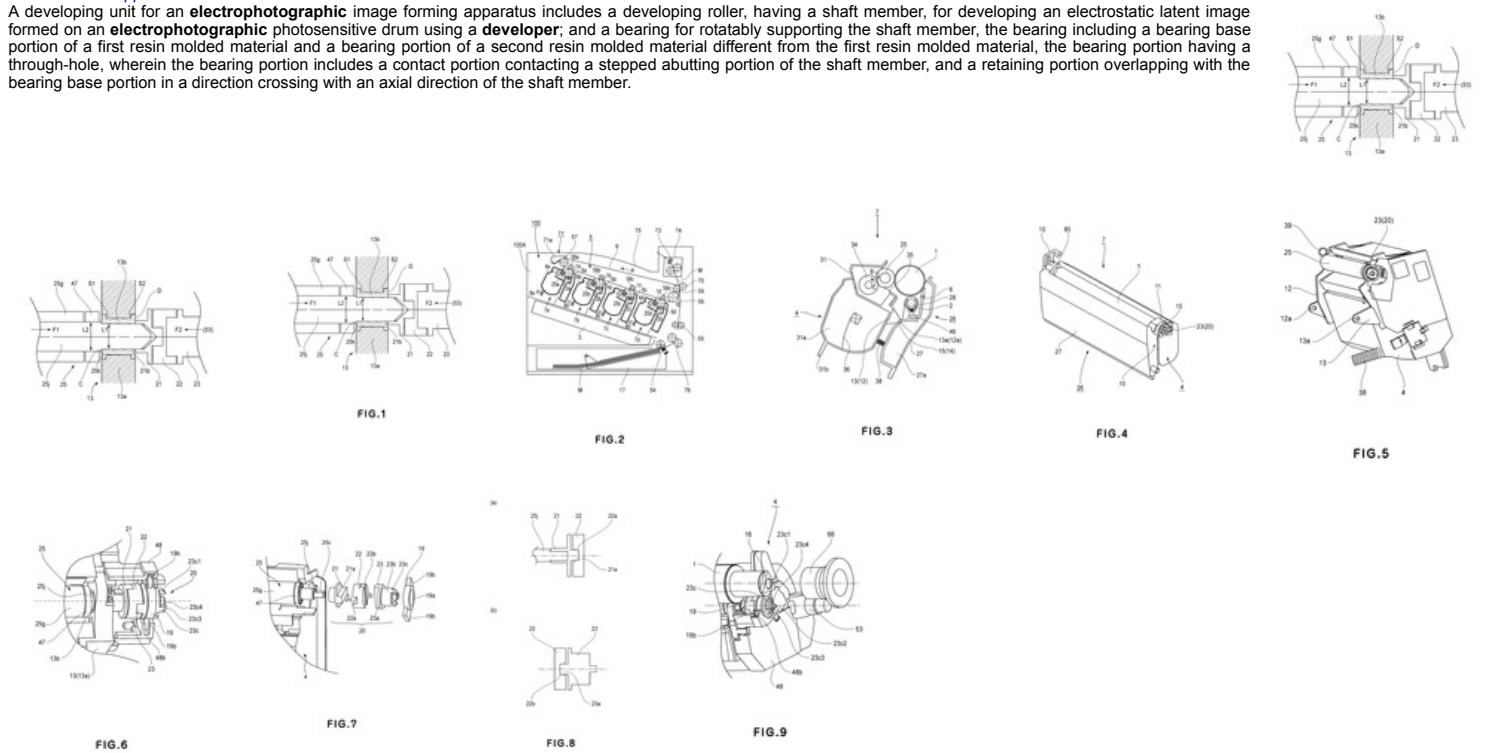
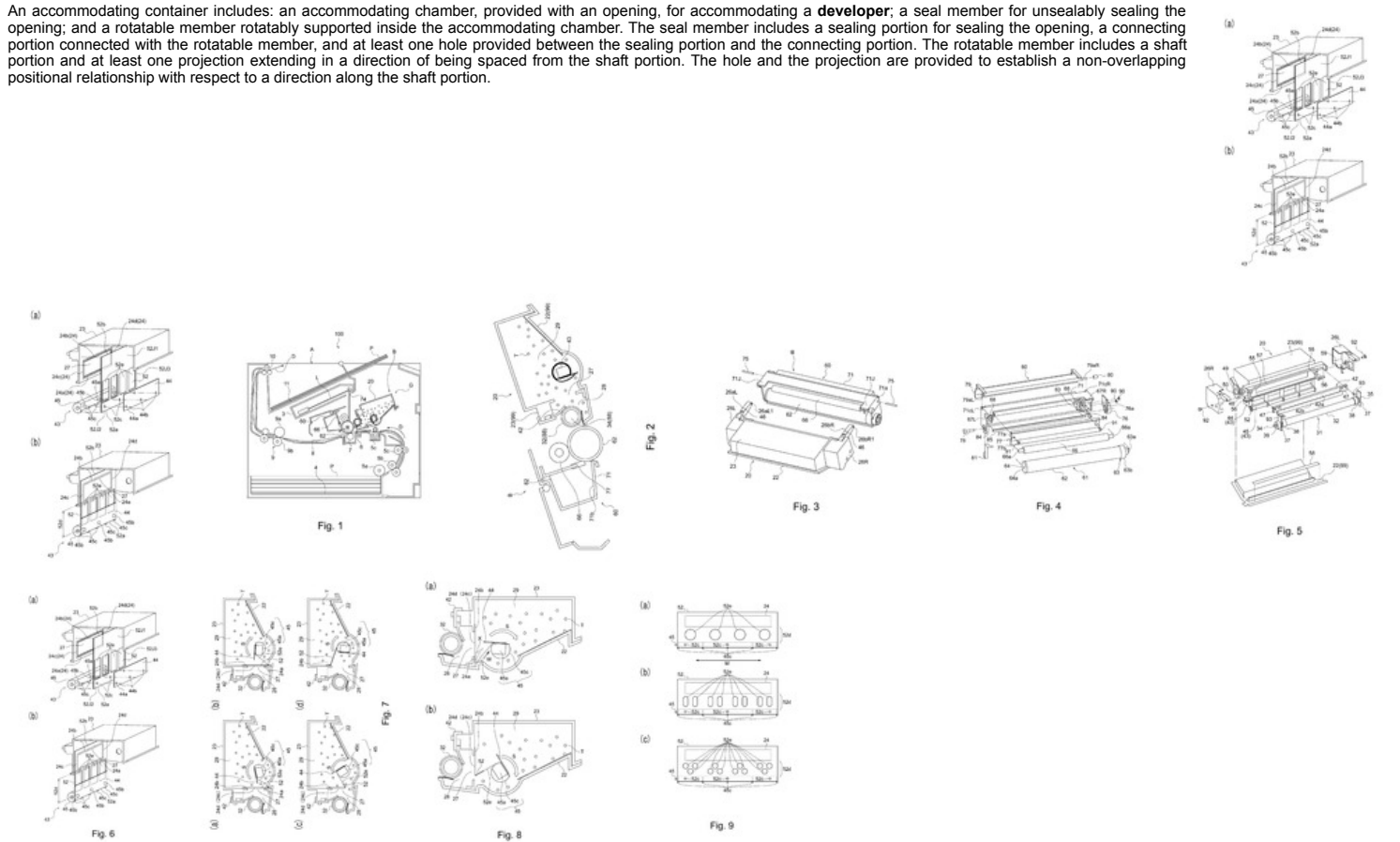


FIG. 8

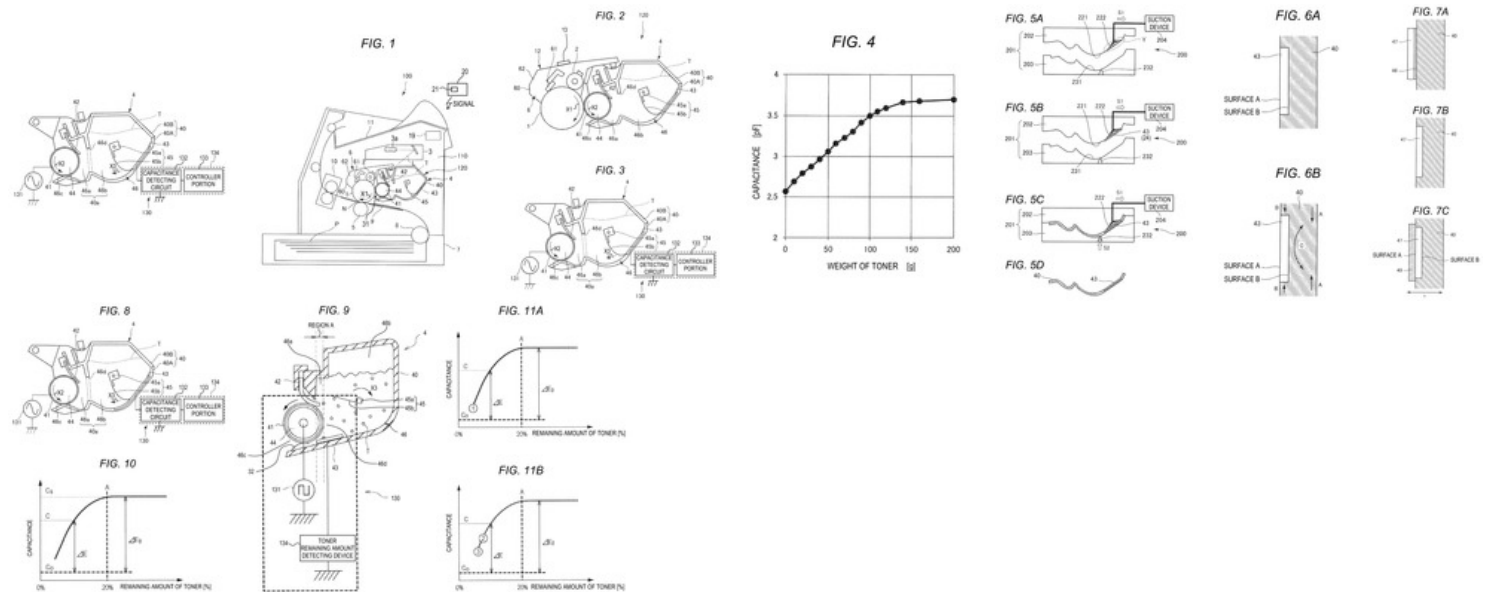
A developing unit for an **electrophotographic** image forming apparatus includes a developing roller, having a shaft member, for developing an electrostatic latent image formed on an **electrophotographic** photosensitive drum using a **developer**; and a bearing for rotatably supporting the shaft member, the bearing including a bearing base portion of a first resin molded material and a bearing portion of a second resin molded material different from the first resin molded material, the bearing portion having a through-hole, wherein the bearing portion includes a contact portion contacting a stepped abutting portion of the shaft member, and a retaining portion overlapping with the bearing base portion in a direction crossing with an axial direction of the shaft member.



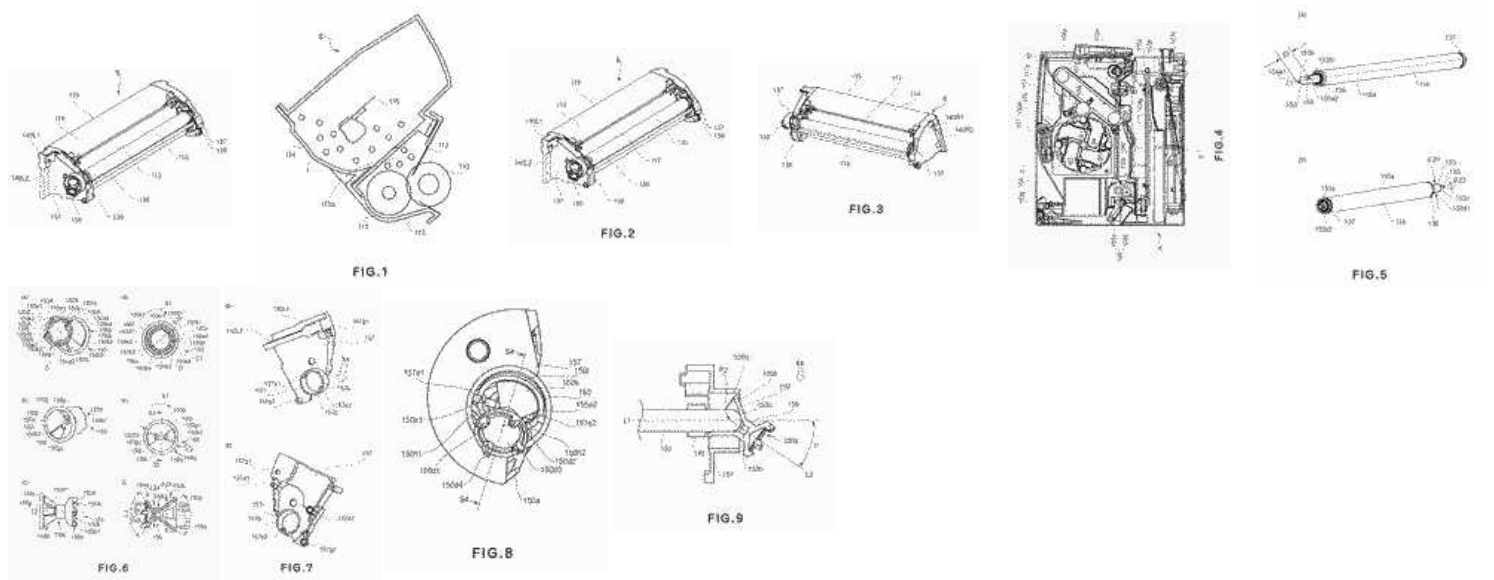
An accommodating container includes: an accommodating chamber, provided with an opening, for accommodating a **developer**; a seal member for unsealably sealing the opening; and a rotatable member rotatably supported inside the accommodating chamber. The seal member includes a sealing portion for sealing the opening, a connecting portion connected with the rotatable member, and at least one hole provided between the sealing portion and the connecting portion. The rotatable member includes a shaft portion and at least one projection extending in a direction of being spaced from the shaft portion. The hole and the projection are provided to establish a non-overlapping positional relationship with respect to a direction along the shaft portion.



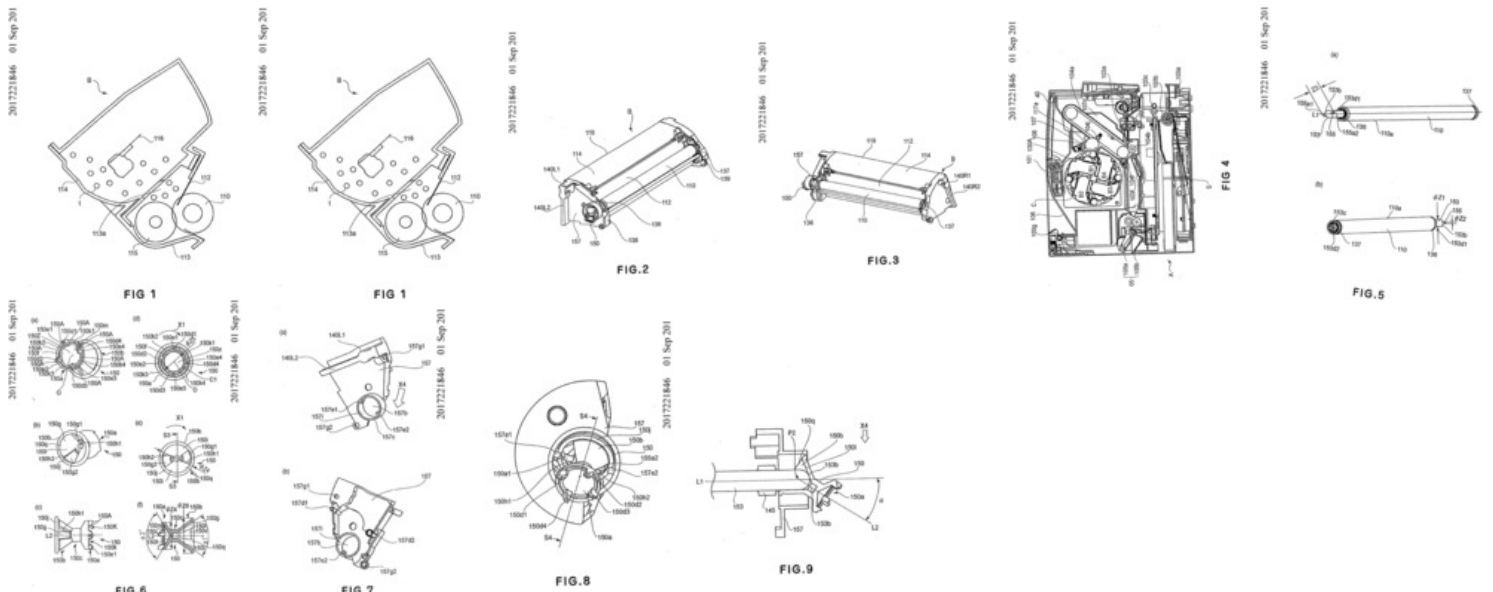
The present invention relates to a method of manufacturing a **developer** container including a frame including first and second frames configured to define a **developer** containing portion, a first electrode, and a second electrode which is arranged on a surface of the first frame and which has a surface opposed to the first electrode, a **developer** amount in the **developer** containing portion being detected based on a capacitance between the first electrode and the second electrode, the method comprising: holding a conductive resin member constituting the second electrode on a mold configured to mold the first frame, a surface of the conductive resin member being in contact with a surface of the mold, the surface of the mold being configured to mold a surface of the first frame on a side of the **developer** containing portion; injecting a resin to be formed into the first frame, into the mold on which the conductive resin member is held; curing the resin to form the first frame to which the second electrode constituted by the conductive resin member is fixed; and **coupling** the first frame and the second frame to form the **developer** containing portion.



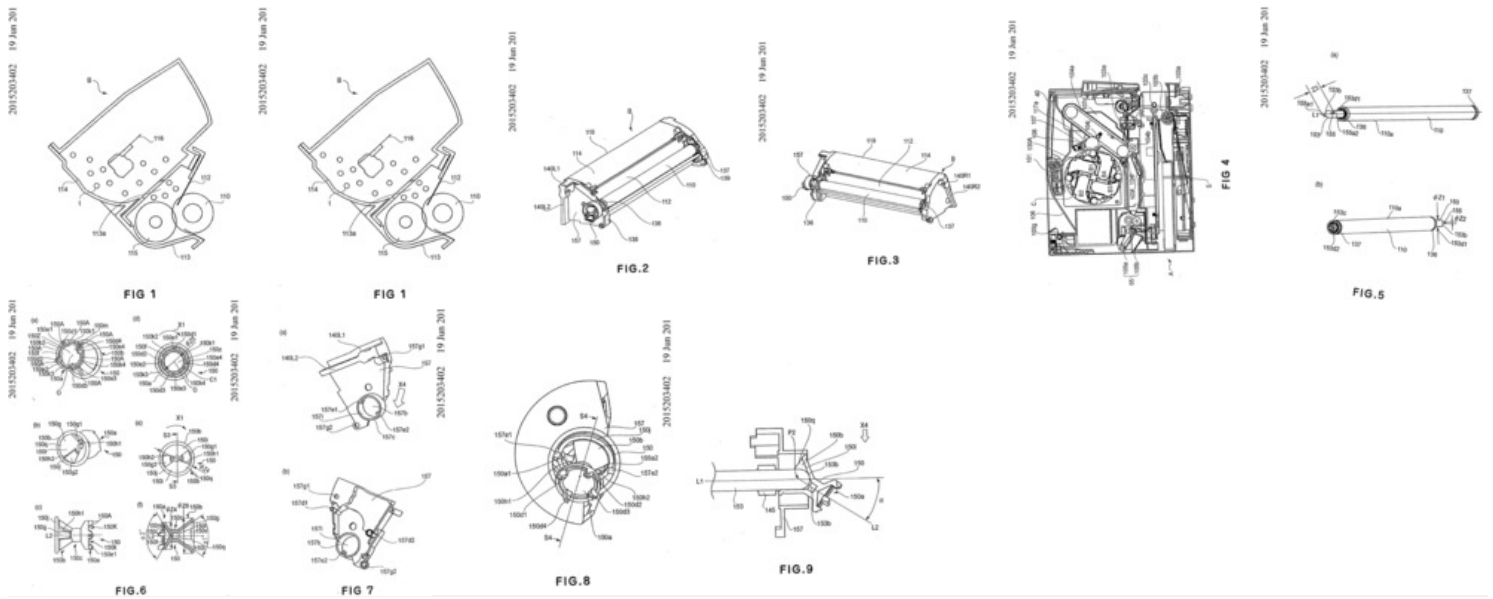
A **coupling** member (150) usable with an **electrophotographic** image forming apparatus, said apparatus including a driving shaft (180) rotatable by a motor and having a rotating force applying portion (182), and a movable member, said **coupling** member being effective to transmit a rotating force from the driving shaft in a developing roller which is movable in a direction (X4) substantially perpendicular to an axial direction of the driving shaft, said **coupling** member comprising: a rotating force receiving portion (150a) engageable with the rotating force applying portion to receive the rotating force from the driving shaft; and a rotating force transmitting portion (150b) for transmitting the rotating force received through said rotating force receiving portion to said developing roller, said **coupling** member being capable of taking a rotational force transmitting angular position for transmitting the rotational force for rotating said developing roller to said developing roller through the rotating force transmitting portion, a pre-engagement angular position in which said **coupling** member is inclined away from said rotational force transmitting angular position, and a disengaging angular position which said **coupling** member is inclined away from the rotational force transmitting angular position in a direction opposite to said pre-engagement angular position.



ELECTROPHOTOGRAPHIC IMAGE FORMING APPARATUS, DEVELOPING APPARATUS, AND COUPLING MEMBER An image forming apparatus **cartridge** is described. The image forming apparatus **cartridge** comprises: a casing; a **developer** roller having an axis L1, the **developer** roller being rotatably supported in the casing to permit rotation about the axis L1; a first gear connected to the **developer** roller; a second gear in meshing engagement with the first gear; and a **coupling** member having an axis L2, the **coupling** member having (i) a first end portion connected to the second gear and operatively connected with the **developer** roller so as to be capable of transmitting a rotational force to the **developer** roller via the first and second gears, (ii) a second end portion having a recess formed therein and including at least two projections provided at diametrically opposed positions, and (iii) a connecting portion connecting the first end portion and the second end portion. The **coupling** member is movable between a first position in which the axis L2 of the **coupling** member is substantially parallel to and offset from the axis L1 of the **developer** roller, and a second position in which the axis L2 of the **coupling** member is inclined with respect to the axis L1 of the **developer** roller. A maximum angle of inclination of the axis L2 of the **coupling** member with respect to the axis L1 of the **developer** roller is about 20 degrees to about 60 degrees. 11737249_1



- 155 A developing device usable with an **electrophotographic** image forming apparatus, the apparatus including a driving 5 shaft rotatable by a motor and having a rotating force applying portion, and a movable member, the developing device being mountable to the movable member, and the developing device being movable in a direction substantially perpendicular to an axial direction of the driving shaft in 10 response to movement of the movable member in one direction with the developing device mounted to the movable member, the developing device includes i) a developing roller for developing an electrostatic latent image formed on an **electrophotographic** photosensitive drum, the developing roller 15 being rotatable about an axis; and ii) a **coupling** member for transmitting a rotating force to the developing roller, the **coupling** member including, a rotating force receiving portion engageable with the rotating force applying portion to receive a rotating force from the driving shaft, and a rotating force 20 transmitting portion for transmitting the rotating force received through the rotating force receiving portion to the developing roller, the **coupling** member being capable of taking a rotational force transmitting angular position for transmitting the rotational force for rotating the developing 25 roller to the developing roller, a pre-engagement angular position which is taken before the **coupling** member is engaged with the rotating force applying portion and in which the **coupling** member is inclined away from the rotational force transmitting angular position, and a disengaging angular 30 position which is taken for the **coupling** member to disengage from the driving shaft and in which the **coupling** member is inclined away from the rotational force transmitting angular position. 10156073 1 905731D2 - 156 position in a direction opposite to the pre-engagement angular position; wherein in response to a movement of the developing device when the movable member moves in the one direction, the **coupling** member moves from the pre-engagement angular position 5 to the rotational force transmitting angular position to be opposed to the driving shaft, and wherein when the movable member makes a further movement in the one direction from a position where the **coupling** member is opposed to the driving shaft, in response to the further movement, the **coupling** 10 member is disengaged from the driving shaft by moving from the rotational force transmitting angular position to the disengaging angular position. 10156073 1 905731D2



A cleaning frame used in a process cartridge which is detachably mountable to a main body of an electrophotographic image forming apparatus and which includes an electrophotographic photosensitive drum, and a cleaning member for removing developer adhered to the electrophotographic photosensitive drum, the process cartridge including a drum attaching portion for attaching the electrophotographic photosensitive drum, a cleaning member attaching portion for attaching the cleaning member, one end wall provided at one longitudinal end of the cleaning frame, the other end wall provided at the other longitudinal end of the cleaning frame, an exposure opening for receiving information light to be illuminated onto the electrophotographic photosensitive drum attached to the drum attaching portion when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, and a reinforcing member provided between the one end wall and the other end wall along the longitudinal direction of the cleaning frame said reinforcing member being disposed at a side opposite to the side at which the exposure opening is provided in the cleaning frame a direction transverse to the longitudinal direction of the cleaning frame, wherein a gap between said reinforcing member and a deep side wall opposed to said cleaning member attached to said cleaning member attaching portion at a side opposite to the side at which said exposure opening is provided in the direction transverse to the longitudinal direction of said cleaning frame is 0.5 mm to 3.0 mm.

