Claims

1. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a developing roller configured to develop a latent image;

a developing frame rotatably supporting the developing roller;

a supporting member supporting the developing frame so as to be movable between (a) a developing position for developing the latent image by the developing roller and (b) a non-developing position retracted from the developing position;

a clutch configured to be switchable between a state in which a driving force is transmitted toward the developing roller and a state in which the transmission of the driving force is blocked, the driving force being transmitted when the developing frame is in the developing position, and the transmission of the driving force being blocked when the developing frame is in the non-developing position; and

an urging portion configured to urge the developing frame toward the developing position when the developing frame is in the non-developing position and configured not to urge the developing frame when the developing frame is in the developing position.

2. A cartridge according to claim 1, wherein the supporting member rotatably supports a photosensitive member,

wherein the developing roller is configured to be close to the photosensitive member when the developing device frame is in the developing position, and

wherein the developing roller is configured to be spaced from the photosensitive member when the developing frame is in the non-developing position.

3. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a developing roller;

a first transmission member for transmitting a driving force for rotating the developing roller by rotating about an axis; and

a second transmission member for transmitting the driving force from the first transmission member toward the developing roller by rotating about the axis, the second transmission member being provided with a driving force receiving portion for receiving the driving force by engagement with the first transmission member,

wherein the driving force receiving portion is configured to effect advancement and retraction movement in a radial direction the second transmission member between (a) a first receiving portion position in which the driving force receiving portion is engaged with the first transmission member and (b) a second receiving portion position in which the engagement with the first transmission member is broken.

4. A cartridge according to claim 3, further comprising a rotatable member rotatable about the axis between (a) a first rotational position for placing the driving force receiving portion in the first receiving portion position and (b) a second rotational position for placing the driving force receiving portion in the second receiving portion position, or for permitting movement of the driving force receiving portion from the first receiving portion position to the second receiving portion position.

5. A cartridge according to claim 4, wherein the rotatable member is provided with an urging portion for urging the driving force receiving portion toward the second receiving portion position when the rotatable member is moved to the second rotational position.

6. A cartridge according to claim 4, wherein the rotatable member includes a holding portion for holding the driving force receiving portion in the first receiving portion position when the rotatable member is in the first rotational position.

7. A cartridge according to claim 6, wherein a rotation radius of the holding portion is greater than a rotation radius of the driving force receiving portion.

8. A cartridge according to claim 4, wherein the rotatable member is connected with the first transmission member so as to be rotatable with the first transmission member, and

wherein the connection between the rotatable member and the first transmission member is configured to be broken when a torque for rotating the rotatable member exceeds a predetermined level.

9. A cartridge according to claim 4, further comprising a torque limiter connecting the first transmission member and the rotatable member.

10. A cartridge according to claim 4, further comprising a control member for controlling rotation of the rotatable member, the control member being movable between (a) a first control

position for permitting rotation of the rotatable member and (b) a second control position for stopping the rotation of the rotatable member.

11. A cartridge according to claim 10, wherein, when the rotation of the rotatable member in a predetermined rotational direction is stopped, the control member is configured to move the rotatable member in a direction opposite to the predetermined rotational direction.

12. A cartridge according to claim 10, wherein the control member includes a locking portion for locking a locked portion provided on the rotatable member, and

wherein the locking portion is movable between (a) an unlocked position retracted from a rotation locus of the locked portion and (b) locked position for engaging with the locked portion to stop rotation of the locked portion.

13. A cartridge according to claim 10, wherein the cartridge includes a photosensitive member, and

wherein the control member is configure to be move to (a) the second control position in accordance with movement of the developing roller away from the photosensitive member and (b) the first control position in accordance with the movement of the developing roller toward the photosensitive member.

14. A cartridge according to claim 3, wherein the cartridge includes a photosensitive member.

15. A cartridge according to claim 3, wherein the first transmission member includes an engaging portion for engaging with the driving force receiving portion.

16. A cartridge according to claim 15, further comprising a projection for engagement of at least one of the engaging portion and the driving force receiving portion with each other.

17. A cartridge according to claim 15, wherein one of the engaging portion and the driving force receiving portion is provided with a projection, and the other is provided with a recess for engagement with the projection.

18. A cartridge according to claim 43, wherein the engaging portion and the driving force receiving portion are provided with respective projections that are configured to engage with each other.

19. A cartridge according to claim 3, wherein a plurality of such the driving force receiving portions are provided.

20. A cartridge according to claim 3, wherein the second receiving portion position is placed at a position more remote from the axis than the first receiving portion position.

21. A cartridge according to claim 3, wherein the second receiving portion position is placed at a position closer to the axis than the first receiving portion position.

22. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a developing roller;

a coupling member for transmitting a driving force for rotating the developing roller from outside of the cartridge toward the developing roller by rotating about an axis, the coupling member being provided with a driving force receiving portion for receiving the driving the driving force receiving portion being configured to be movable between (a) a first receiving portion position and (b) a second receiving portion position that is more remote from the axis than the first receiving portion position is from the axis; and

a rotatable member rotatable about the axis relative to the coupling member between (c) a first rotational position for placing the driving force receiving portion in the first receiving portion position and (d) a second rotational position for moving the driving force receiving portion to the second receiving portion position or for permitting movement of the driving force receiving portion to the second receiving portion position,

wherein, in a state that the developing roller and the coupling member do not rotate, the rotatable member is capable of rotating from the second rotational position to the first rotational position.

23. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a developing roller;

a coupling member for transmitting a driving force for rotating the developing roller from outside of the cartridge toward the developing roller by rotating about an axis, the coupling member being provided with a driving force receiving portion for receiving the driving force the driving force receiving portion projecting toward the axis and being configured to be movable between (a) a first receiving portion position and (b) a second receiving portion position that is more remote from the axis than the first receiving portion position is from the axis; and

a rotatable member rotatable about the axis relative to the coupling member between (c) a first rotational position for placing the driving force receiving portion in the first receiving portion position and (d) a second rotational position for moving the driving force receiving portion to the second receiving portion position or for permitting movement of the driving force receiving portion to the second receiving portion position.

24. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus the cartridge comprising:

a developing roller;

a coupling member for transmitting a driving force for rotating the developing roller from outside of the cartridge toward the developing roller by rotating about an axis, the coupling member being provided with a driving force receiving portion for receiving the driving force the driving force receiving portion being configured to be movable between (a) a first receiving portion position and (b) a second receiving portion position placed at a position that is more remote from the axis than the first receiving portion position is from the axis;

a rotatable member rotatable about the axis relative to the coupling member between (c) a first rotational position for placing the driving force receiving portion in the first receiving portion position and (d) a second rotational position for moving the driving force receiving portion to the second receiving portion position or for permitting movement of the driving force receiving portion to the second receiving portion position; and

an urging member for urging the rotatable member from the first rotational position toward the second rotational position.

25. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a developing roller;

a coupling member for transmitting a first driving force for rotating the developing roller from outside of the cartridge toward the developing roller by rotating about an axis, the

coupling member being provided with a first driving force receiving portion for receiving the first driving force the first driving force receiving portion being configured to be movable between (a) a first receiving portion position and (b) a second receiving portion position placed at a position that is more remote from the axis than the first receiving portion position is from the axis; and

a rotatable member provided with a second driving force receiving portion for receiving a second driving force from outside of the cartridge, the rotatable member being rotatable about the axis by the second driving force relative to the coupling member between (c) a first rotational position for placing the first driving force receiving portion in the first receiving portion position and (d) a second rotational position for moving the first driving force receiving portion to the second receiving portion position or for permitting movement of the first driving force receiving portion to the second receiving portion position.

26. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a photosensitive member;

a developing roller movable toward and away from the photosensitive member;

a coupling member for transmitting a driving force for rotating the developing roller from outside of the cartridge toward the developing roller by rotating about an axis, the coupling member being provided with a driving force receiving portion for receiving the driving force the driving force receiving portion being configured to be movable between (a) a first receiving portion position and (b) a second receiving portion position placed at a position that is more remote from the axis than the first receiving portion position is from the axis;

a rotatable member rotatable about the axis relative to the coupling member between (c) a first rotational position for placing the driving force receiving portion in the first receiving portion position and (d) a second rotational position for moving the driving force receiving portion to the second receiving portion position or for permitting movement of the driving force receiving portion to the second receiving portion position; and

a control member for controlling rotation of the rotatable member, wherein the control member moves to a first control position for stopping rotation of the rotatable member in accordance with the developing roller moving close to the photosensitive member, and the control member moves to a second control position for permitting the rotation of said rotatable member in accordance with the developing roller being spaced from the photosensitive member.

27. A cartridge according to claim 24, wherein the first driving force receiving portion projects toward the axis.

28. A cartridge according to claim 22, further comprising an urging member for urging the rotatable member toward the second receiving portion position.

29. A cartridge according to claim 24, wherein the urging member is an elastic member.

30. A cartridge according to claim 22, wherein the driving force receiving portion is a first driving force receiving portion and the driving force is a first driving force, and

wherein the rotatable member includes a second driving force receiving portion for receiving a second driving force from outside of the cartridge for rotating the rotatable member.

31. A cartridge according to claim 25, wherein the second driving force receiving portion projects toward outside of said cartridge.

32. A cartridge according to claim 25, wherein the second driving force receiving portion projects in a direction in which the axis extends.

33. A cartridge according to claim 30, wherein the coupling member projects more outward of the cartridge than the first driving force receiving portion in a direction in which the axis extends.

34. A cartridge according to claim 22, further comprising a control member for controlling rotation of the rotatable member, the control member being movable between (a) a first control position for permitting rotation of the rotatable member and (b) a second control position for stopping the rotation of the rotatable member.

35. A cartridge according to claim 26, wherein, when the rotatable member does not rotate in a predetermined rotational direction, the control member is configured to move the rotatable member in a direction opposite to the predetermined rotational direction.

36. A cartridge according to claim 26, wherein the control member includes a locking portion for locking a locked portion provided on the rotatable member, and

wherein the locking portion is movable between an unlocked position for retracting from a rotation locus of the locked portion to permit rotation of the rotatable member and (b) a locked position for locking the locked portion to stop the rotation of the rotatable member.

37. A cartridge according to claim 34, wherein the cartridge includes a photosensitive member, and

wherein the control member moves (a) to the second control position in accordance with said developing roller moving away from said photosensitive member and (b) to the first control position in accordance with the developing roller moving close to the photosensitive member.

38. A cartridge according to claim 22, wherein the cartridge includes a photosensitive member.

39. A cartridge according to claim 22, wherein the rotatable member includes a holding portion for holding the driving force receiving portion in the first receiving portion position when the rotatable member is in the first rotational position.

40. A cartridge according to claim 39, wherein a rotation radius of the holding portion is greater than a rotation radius of the driving force receiving portion.

41. A cartridge according to claim 22, further comprising a downstream transmission member for transmitting the driving force from the coupling member toward the developing roller, the downstream transmission member having a substantially cylindrical shape,

wherein a part of the coupling member is positioned inside of the cylindrical shape.

42. A cartridge according to claim 41, wherein the downstream transmission member is provided with a gear portion for outputting the driving force toward the developing roller.

43. A cartridge according to claim 22, further comprising:

a developing frame rotatably supporting the developing roller;

a supporting member for movably supporting the developing frame; and

an urging member configured to be switchable between a state in which the urging member urges the developing frame in accordance with movement of the developing frame and a state in which urging member does not urge the developing frame.

44. A cartridge according to claim 43, further comprising a photosensitive member,

wherein the supporting member rotatably supports the photosensitive member, and the developing frame is movable between a developing position in which the developing roller is close to the photosensitive member and a non-developing position in which the developing roller is spaced from the photosensitive member, and

wherein the urging member (a) urges the developing frame toward the developing position when the developing frame is in the non-developing position, and (b) does not urge the developing frame when the developing frame is in the developing position.

45. A cartridge according to claim 22, wherein the coupling member includes an elastic portion for supporting the driving force receiving portion.

46. A cartridge according to claim 22, wherein the coupling member includes a cantilever for supporting the driving force receiving portion.

47. A cartridge according to claim 46, wherein the coupling member is configured to rotate in a predetermined rotational direction when transmitting the driving force, and the cantilever extends toward a free end thereof toward a downstream side in the rotational direction.

48. A cartridge according to claim 22, wherein the cartridge is detachably mountable to the main assembly that is provided with a first main assembly side coupling and a second main assembly side coupling, the first main assembly side coupling and the second main assembly side coupling being coaxially positioned, the driving force receiving portion being configured to receive the driving force from the first main assembly side coupling, and the rotatable member being configured to be rotated by the second main assembly side coupling.

49. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a developing roller;

a coupling member for transmitting a driving force for rotating the developing roller from outside of the cartridge toward the developing roller by rotating about an axis, the coupling member being provided with a driving force receiving portion for receiving the driving force the driving force receiving portion being configured to be movable between (a) a first receiving

portion position and (b) a second receiving portion position placed at a position that is more remote from the axis than the first receiving portion position is from the axis; and

a holding portion for holding the driving force receiving portion, the holding portion being movable relative to the coupling member between (c) a holding position for holding the driving force receiving portion in the first receiving portion position and (d) a non-holding position for moving the driving force receiving portion to the second receiving portion position or for permitting movement of the driving force receiving portion to the second receiving portion position.

50. A cartridge according to claim 49, wherein the holding portion is configured to be rotatable about the axis.

51. A cartridge according to claim 49, wherein the holding portion projects outward of the cartridge.

52. A cartridge according to claim 49, wherein the holding portion projects more outward of the cartridge than the driving force receiving portion.

53. A cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, the cartridge comprising:

a developing roller;

a driving force receiving portion for receiving a driving force from outside of the cartridge for rotating the developing roller the driving force receiving portion being configured to be rotatable about an axis between (a) a first receiving portion position and (b) a second receiving portion position that is more remote from the axis than the first receiving portion position is from the axis; and

an urging force receiving portion for receiving from outside of the cartridge an urging force for moving the driving force receiving portion from the second receiving portion position toward the first receiving portion position.

54. A cartridge according to claim 53, wherein the urging force receiving portion is configured to rotate about the axis.

55. A cartridge according to claim 53, wherein the urging force receiving portion projects outward of the cartridge.

56. A cartridge according to claim 53, wherein the urging force receiving portion projects more outward of the cartridge than the driving force receiving portion in a direction in which the axis extends.

57. An electrophotographic image forming apparatus comprising:

a cartridge according to claim 1; and

a main assembly of the electrophotographic image forming apparatus.