

CLAIMS

1. A cartridge mountable, along a predetermined mounting path, to a main assembly of an electrophotographic image forming apparatus including (i) a photosensitive member on which a latent image is capable of being formed, (ii) a main assembly driving shaft, and (iii) an abutting portion, wherein said cartridge is movable in the main assembly between a developing position at a terminal end of said mounting path and a retracted position which is retracted from the developing position and which is away from the mounting path, said cartridge comprising:

a developer carrying member capable of developing the latent image while being in contact with the photosensitive member when said cartridge is in the developing position;

a coupling member capable of inclining relative to a rotational axis of said developer carrying member, wherein said coupling member is capable of taking a reference attitude in which a drive transmission is capable from the main assembly driving shaft to said developer carrying member when said cartridge is in the developing position, an at-mounting attitude inclined relative to the rotational axis of said developer carrying member to engage with the main assembly driving shaft when said cartridge moves along the mounting path, and an at-spaced attitude inclined relative to the rotational axis of said developer carrying member in a direction different from that in the at-mounting attitude;

a movable member including (i) a movable portion capable of taking a first movement position for causing said coupling member to take the at-spaced attitude and a second movement position for causing said coupling member to take the at-mounting attitude and (ii) a force receiving portion for receiving a force, from the abutting portion, for moving said movable portion from the second movement position to the first movement position, and

an elastic member urging the movable member so that the movable portion moves from the first movement position to the second movement position.

2. A cartridge according to Claim 1, wherein said movable portion is

capable of urging said coupling member at least one of the first movement position and the second movement position.

3. A cartridge according to Claim 2, wherein said movable portion is capable of directly urging said coupling member at least one of the first movement position and the second movement position.

4. A cartridge according to Claim 1, wherein when said coupling member takes the at-spaced attitude, said movable portion is spaced from said coupling member; and when said coupling member takes the at-mounting attitude, said movable portion contacts said coupling member.

5. A cartridge according to Claim 1, wherein said movable portion contacts said coupling member when said coupling member takes the at-spaced attitude and when it takes the at-mounting attitude.

6. A cartridge according to Claim 1, wherein when said coupling member takes the at-spaced attitude, said movable portion is spaced from said coupling member; and when said coupling member takes the at-mounting attitude, said movable portion urges said coupling member.

7. A cartridge according to Claim 1, wherein as seen along an axial direction of said developer carrying member, the rotational axis of said coupling member taking the at-spaced attitude and the rotational axis of said coupling member taking the at-mounting attitude are perpendicular to each other.

8. A cartridge according to Claim 7, wherein as seen along the axial direction of said developer carrying member, an angle formed between the rotational axis of said coupling member taking the at-spaced attitude and the rotational axis of said coupling member taking the at-mounting attitude is a value in

a range of 20° to 150°.

9. A cartridge according to Claim 8, wherein as seen along the axial direction of said developer carrying member, an angle formed between the rotational axis of said coupling member taking the at-spaced attitude and the rotational axis of said coupling member taking the at-mounting attitude is a value in a range of 30° to 120°.

10. A cartridge according to Claim 9, wherein as seen along the axial direction of said developer carrying member, an angle formed between the rotational axis of said coupling member taking the at-spaced attitude and the rotational axis of said coupling member taking the at-mounting attitude is a value of 75°.

11. A cartridge according to Claim 1, wherein as seen along the axial direction of said developer carrying member, an angle formed between a line connecting a center of inclination of said coupling member and said rotational axis of said developer carrying member and the rotational axis of said coupling member taking the at-spaced attitude is not more than 30°.

12. A cartridge according to Claim 11, wherein as seen along the axial direction of said developer carrying member, an angle formed between a line connecting a center of inclination of said coupling member and said rotational axis of said developer carrying member and the rotational axis of said coupling member taking the at-spaced attitude is 5°.

13. A cartridge according to Claim 1, wherein as seen along the axial direction of said developer carrying member, an angle formed between a line connecting a center of inclination of said coupling member and said rotational axis of said developer carrying member and the rotational axis of said coupling member

taking the at-mounting attitude is a value in the range of 45° to 95° .

14. A cartridge according to Claim 11, wherein as seen along the axial direction of said developer carrying member, an angle formed between a line connecting a center of inclination of said coupling member and said rotational axis of said developer carrying member and the rotational axis of said coupling member taking the at-mounting attitude is 70° .

15. A cartridge according to Claim 1, wherein an angle formed between the rotational axis of said coupling member taking the at-spaced attitude and the rotational axis of said coupling member taking the reference attitude is a value in the range of 20° to 60° .

16. A cartridge according to Claim 1, wherein an angle formed between the rotational axis of said coupling member taking the at-mounting attitude and the rotational axis of said coupling member taking the reference attitude is a value in the range of 20° to 60° .

17. A cartridge according to Claim 1, wherein said movable portion is capable of taking a movement reference position for placing said coupling member in the reference attitude.

18. A cartridge according to Claim 17, wherein for said movable portion, said movement reference position and said second movement position are in the same position.

19. A cartridge according to Claim 1, wherein said elastic member for movement includes a spring.

20. A cartridge according to Claim 19, wherein said spring is a torsion

spring.

21. A cartridge according to Claim 19, wherein said spring is a coil spring.
22. A cartridge according to Claim 1, wherein said movable member is rotatable.
23. A cartridge according to Claim 1, wherein said movable member is provided with said force receiving portion at one end thereof and said movable portion at the other end thereof.
24. A cartridge according to Claim 1, further comprising a developing blade positioned next to said developer carrying member, wherein as seen along the rotational axis of said developer carrying member, said force receiving portion is disposed substantially in an opposite side from said developer carrying member with respect to said developing blade.
25. A cartridge according to Claim 1, wherein said coupling member includes a free end portion provided with a rotational force receiving portion for receiving a rotational force from the main assembly driving shaft, a connection end portion provided with a rotational force transmitting portion for transmitting the rotational force to said developer carrying member, a connecting portion connecting said free end portion and said connection end portion.
26. A cartridge according to Claim 25, wherein said coupling member includes a positioned portion to be positioned relative to said cartridge when taking said at-spaced attitude or the at-mounting attitude.
27. A cartridge according to Claim 26, wherein the positioned portion is provided at said connecting portion.

28. A cartridge according to Claim 26, wherein said positioned portion is provided at said connection end portion.

29. A cartridge according to Claim 28, wherein said positioned portion is provided projected from said connection end portion.

30. A cartridge according to Claim 26, further comprising an at-spaced positioning portion for positioning said positioned portion to cause said coupling member to take the at-spaced attitude.

31. A cartridge according to Claim 30, further comprising a cartridge frame provided with said at-spaced positioning portion.

32. A cartridge according to Claim 31, wherein said cartridge frame includes a supporting member for supporting said developer carrying member, and said supporting member includes said at-spaced positioning portion.

33. A cartridge according to Claim 26, further comprising an at-mounting positioning portion for positioning said positioned portion to cause said coupling member to take the at-mounting attitude.

34. A cartridge according to Claim 33, further comprising a cartridge frame provided with said at-mounting positioning portion.

35. A cartridge according to Claim 34, wherein said cartridge frame includes a supporting member for supporting said developer carrying member, and said supporting member includes the at-mounting positioning portion.

36. A cartridge according to Claim 25, wherein a maximum outer diameter

of at least one of said connecting portion in a cross section is smaller than a distance between the rotational axis of said coupling member and radially inside of said rotational force receiving portion in a direction perpendicular to said rotational axis of said coupling member.

37. A cartridge according to Claim 1, further comprising a cartridge frame rotatably supporting said developer carrying member, an end member mounted to an end of said cartridge frame, wherein said movable member is provided on said end member.