Claims

1. A process cartridge which is mountable to and dismountable from a main assembly of an electrophotographic image forming apparatus having an a spacing force applying member and a retracting force applying member, said process cartridge comprising:

(1) an electrophotographic photosensitive drum;

(2) a developing roller movable between a contact position in which said developing roller is in contact with said electrophotographic photosensitive drum to develop an electrostatic latent image formed on said electrophotographic photosensitive drum and a spacing position in which said developing roller is spaced from said electrophotographic photosensitive drum;

(3) a frame supporting said electrophotographic photosensitive drum and said developing roller; and

(4) a projectable member capable of taking a projected position in which said projectable member projects outwardly of said frame and a retracted position in which said projectable member is inwardly retracted from the projected position, said projectable member including,

(4-1) a spacing force receiving portion for receiving, from the spacing force applying member, a spacing force for moving said developing roller from the contact position to the spacing position in a state that said process cartridge is mounted to the main assembly and the projectable member is in the projected position, and

(4-2) a retracting force receiving portion for receiving from the retracting force applying member a retracting force for moving said projectable member toward the retracted position, when dismounting said process cartridge in the state that said projectable member is in the projected position.

2. A process cartridge according to Claim 1, wherein said process cartridge is capable of passing through an opening provided at the main assembly in an entering direction to enter the main assembly, and

wherein said spacing force receiving portion is disposed downstream of said projectable member in the entering direction, and said retracting force receiving portion is disposed upstream of said projectable member in the entering direction.

3. A process cartridge according to Claim 1 or 2, wherein said frame includes a developing frame supporting said developing roller and a drum frame supporting said photosensitive drum.

4. A process cartridge according to Claim 3, further comprising:

an urging portion for urging said projectable member toward the projected position; and

an engaging portion movable between an engagement position where it is engaged with said projectable member to position said projectable member in the retracted position against a an urging force of said urging portion, and a release position where it is released from said projectable member to project said projectable member.

5. A process cartridge according to Claim 4, wherein said engaging portion is provided on said developing frame.

6. A process cartridge according to Claim 4, wherein said engaging portion is provided on said drum frame.

7. A process cartridge according to Claim 4, wherein said engaging portion is disengaged from said projectable member by a releasing force from a releasing portion provided in the main assembly.

8. A process cartridge according to Claim 7, further comprising a releasing member for releasing said projectable member from said engaging portion by being moved by a releasing force received from the releasing portion provided in the main assembly.

9. A process cartridge according to Claim 8, wherein said engaging portion and said releasing member are integral with each other.

10. A process cartridge according to Claim 8, wherein said releasing member is movably provided on said developing frame.

11. A process cartridge according to Claim 9, wherein said releasing member is movably provided on said developing frame.

12. A process cartridge according to Claim 4, further comprising a gear for releasing said engaging portion from said projectable member by moving said engaging portion by being rotated by a driving force received from the

main assembly in the state that said process cartridge is mounted.

13. A process cartridge according to Claim 4, wherein said engaging portion is urged in a direction of engagement with said projectable member to hold said projectable member in the retracted position.

14. A process cartridge according to Claim 3, wherein said developing frame is rotatable relative to said drum frame, and said projectable member is projected away from an axis of rotation of said developing frame relative to said drum frame when said projectable member moves from the retracted position to the projected position.

15. A process cartridge according to Claims 1 or 2, further comprising:

an urging portion for urging said projectable member toward the projected position; and

an engaging portion movable between an engagement position where it is engaged with said projectable member to position said projectable member in the retracted position against an urging force of said urging portion, and a release position where it is released from said projectable member to project said projectable member.

16. An electrophotographic image forming apparatus, comprising:

a main assembly having an a spacing force applying member and a retracting force applying member; and

a process cartridge which is mountable to and dismountable from said main assembly, said process cartridge having:

(1) an electrophotographic photosensitive drum;

(2) a developing roller movable between a contact position in which said developing roller is in contact with said electrophotographic photosensitive drum to develop an electrostatic latent image formed on said electrophotographic photosensitive drum and a spacing position in which said developing roller is spaced from said electrophotographic photosensitive drum;

(3) a frame supporting said electrophotographic photosensitive drum and said developing roller; and

(4) a projectable member capable of taking a projected position in which said projectable member projects outwardly of said frame and a retracted position in which said projectable member is inwardly retracted from the projected position, said projectable member including,

(4-1) a spacing force receiving portion for receiving, from said

spacing force applying member, a spacing force for moving said developing roller from the contact position to the spacing position in a state that said process cartridge is mounted to said main assembly and said projectable member is in the projected position, and

(4-2) a retracting force receiving portion for receiving from said retracting force applying member a retracting force for moving said projectable member toward the retracted position, when dismounting said process cartridge in the state that said projectable member is in the projected position.

17. An electrophotographic image forming apparatus according to Claim 17, wherein said process cartridge is capable of passing through an opening provided at said main assembly in an entering direction to enter said main assembly, and

wherein said spacing force receiving portion is disposed downstream of said projectable member in the entering direction, and said retracting force receiving portion is disposed upstream of said projectable member in the entering direction.

18. An electrophotographic image forming apparatus according to Claim 16 or 17, further comprising:

an urging portion for urging said projectable member toward the projected position; and

an engaging portion movable between an engagement position where it is engaged with said projectable member to position said projectable member in the retracted position against an urging force of said urging portion, and a release position where it is released from said projectable member to project said projectable member.

CLAIMS

1. A process cartridge which is mountable in a mounting direction to a main assembly of a electrophotographic image forming apparatus having an a spacing force applying member and a retracting force applying member and which is demountable from the main assembly in a direction opposite to the mounting direction, the process cartridge comprising:

an electrophotographic photosensitive drum on which an electrostatic latent image is formed;

a developing roller movable between a contact position in which the developing roller is in contact with the electrophotographic photosensitive drum to develop the electrostatic latent image and a spacing position in which the developing roller is spaced from the electrophotographic photosensitive drum;

a cartridge frame supporting the electrophotographic photosensitive drum and the developing roller; and

a projectable member capable of taking a projected position in which the projectable member projects outwardly of the cartridge frame and a retracted position in which the projectable member is inwardly retracted from the projected position, the projectable member including a spacing force receiving portion for receiving, from the spacing force applying member, a spacing force for moving the developing roller from the contact position to the spacing position in a state that process cartridge is mounted to the main assembly and the projectable member is in the projected position, and a retracting force receiving portion for receiving from the retracting force applying member a retracting force toward the retracted position, when dismounting the process cartridge in the state that the projectable member is in the projected position.

2. A process cartridge according to Claim 1, wherein the spacing force receiving portion is disposed downstream of the projectable member in the mounting direction, and the retracting force receiving portion is disposed upstream of the projectable member in the mounting direction.

3. A process cartridge according to Claim 1 or 2, wherein the cartridge frame includes a drum frame supporting the photosensitive drum and a developing frame supporting the developing roller.

4. A process cartridge Claim 3, further comprising a urging portion for urging the projectable member toward the projected position, and an engaging portion movable between an engagement position where it is engaged with the projectable member to position the projectable member in the retracted position against a urging force of the urging portion, and a release position where it is released from the projectable member to project the projectable member.

5. A process cartridge according to Claim 4, wherein the engaging portion is provided on the developing frame.

6. A process cartridge according to Claim 4, wherein the engaging portion is provided on the drum frame.

7. A process cartridge according to any one of Claims 4 to 6, wherein the engaging portion is disengaged from the projectable member by a releasing force from a main assembly releasing member provided in the main assembly.

8. A process cartridge according to Claim 7, further comprising a cartridge releasing member for releasing the projectable member from the engaging portion by being moved by the releasing force received from the main assembly releasing member.

9. A process cartridge according to Claim 8, wherein the engaging portion and the cartridge releasing member are integral with each other.

10. A process cartridge according to Claim 8 or 9, wherein the cartridge releasing member is movably provided on the developing frame.

11. A process cartridge according to Claim 4, further comprising a gear for releasing the engaging portion from the projectable member by moving the engaging portion by being rotated by a driving force received from the main assembly in the state that the process cartridge is mounted

12. A process cartridge according to Claim 4, wherein the engaging portion is urged in a direction of engagement with the projectable member to hold the projectable member in the retracted position.

13. A process cartridge according to Claim 4, wherein the developing frame is rotatable relative to the drum frame, and the projectable member is projected away from an axis of rotation of the developing frame relative to the drum frame when the projectable member moves from the retracted position to the projected position.

14. An electrophotographic image forming apparatus, comprising:
a process cartridge according to any one of Claims 1 to 13; and
the main assembly .