CLAIMS

The invention claimed is:

1. An ink cartridge mountable to a cartridge mounting portion provided with an ink receiving tube, an electrical connecting portion and a locking lever, in a mounting direction crossing with a direction of gravity, said ink cartridge comprising:

a casing including an ink accommodating chamber configured to accommodate ink to be supplied to the ink receiving tube, said casing including a front surface at a leading side with respect to the mounting direction, an upper surface and a bottom surface;

a tube inserting portion into which the ink receiving tube is insertable and which is provided at said front surface in a position closer to said bottom surface than to said upper surface;

an electrical contact electrically connectable to the electrical connecting portion and provided in a position above said tube inserting portion, said electrical contact including an area crossing with the mounting direction;

an engaging portion provided in a position closer to said electrical contact than to said tube inserting portion, said engaging portion being engageable with the locking lever to maintain a inserted state in which the ink receiving tube is inserted in said tube inserting portion and a connected state in which said electrical contact is connected with the electrical connecting portion; and

a force receiving portion capable of receiving, from an urging spring provided in the cartridge mounting portion, the urging force for urging said ink cartridge in a dismounting direction which is opposite to the mounting direction, said force receiving portion being provided in a position above said tube inserting portion and below said electrical contact,

wherein said engaging portion is engageable with said locking lever to maintain the inserted state and the connected state against the urging force.

2. An ink cartridge according to claim 1, wherein said force receiving portion is capable of receiving the urging force to release the inserted state and the connected state with release of an engaged state between said engaging portion and the locking lever.

3. An ink cartridge according to claim 1, wherein a part of said front surface functions as said force receiving member.

4. An ink cartridge according to claim 1, wherein said engaging portion is disposed in a position closer to said upper surface than to said bottom surface.

5. An ink cartridge according to claim 1, wherein said engaging portion is disposed at said upper surface.

6. An ink cartridge according to claim 1, wherein said engaging portion is a recess engageable with a projection of said locking lever.

7. An ink cartridge according to claim 1, further comprising an elastically deformable elastic portion configured to move said engaging portion relative to said casing.

8. An ink cartridge according to claim 1, further comprising a substrate provided with said electrical contact.

9. An ink cartridge according to claim 8, wherein said substrate is provided at said front surface.

10. An ink cartridge according to claim 8, wherein said substrate is provided on said casing so as to be inclined relative to said front surface and said upper surface.

11. An ink cartridge according to claim 8, wherein said substrate is supported on said upper surface so that said electrical contact has an area crossing with the mounting direction.

12. An ink cartridge according to claim 8, further comprising moving means configured to move said substrate relative to said casing.

13. An ink cartridge mountable to a cartridge mounting portion provided with an ink receiving tube, an electrical connecting portion and a locking lever, in a mounting direction crossing with a direction of gravity, said ink cartridge comprising:

a casing including an ink accommodating chamber configured to accommodate ink to be supplied to the ink receiving tube, said casing including a front surface at a leading side with respect to the mounting direction, an upper surface and a bottom surface;

a tube inserting portion into which the ink receiving tube is insertable and which is provided at said front surface in a position closer to said bottom surface than to said upper surface;

an electrical contact electrically connectable to the electrical connecting portion and provided in a position above said tube inserting portion, said electrical contact including an area crossing with the mounting direction; an engaging portion provided in a position closer to said electrical contact than to said tube inserting portion, said engaging portion being engageable with the locking lever to maintain a inserted state in which the ink receiving

tube is inserted in said tube inserting portion and a connected state in which said electrical contact is connected with the electrical connecting portion; and

a positioning portion engageable with a positioning member provided in the cartridge mounting portion to limit movement of said casing in a direction perpendicular to the mounting direction, said positioning portion being provided in a position above said tube inserting portion and below said electrical contact, and a force receiving portion capable of receiving, from an urging spring provided in the cartridge mounting portion, the urging force for urging said ink cartridge in a dismounting direction which is opposite to the mounting direction, said force receiving portion being provided in a position above said tube inserting portion and below said electrical contact,

wherein said engaging portion is engageable with said locking lever to maintain the inserted state, the connected state and a engaged state between said positioning portion and the positioning member against the urging force.

14. An apparatus according to claim 13, wherein said force receiving portion is capable of receiving the urging force to release the inserted state the connected state and the engaged state between said positioning portion and the positioning member with release of a engaged state between said engaging portion and the locking lever.

15. An ink cartridge according to claim 13, wherein said positioning portion is disposed in a position close to said electrical contact than to said tube inserting portion.

16. An ink cartridge according to claim 13, wherein said positioning portion is disposed at said front surface.

17. An ink cartridge according to claim 13, wherein said positioning portion includes a positioning opening into which the positioning member is inserted.

18. An ink cartridge according to claim 13, wherein the direction perpendicular to the mounting direction is a direction away from said bottom surface toward said upper surface.

19. An apparatus according to claim 13, wherein the direction perpendicular to the mounting direction is a direction along said front surface.

20. An ink cartridge mountable to a cartridge mounting portion provided with an ink receiving tube, an electrical connecting portion and a locking lever, in a mounting direction crossing with a direction of gravity, said ink cartridge comprising:

a casing including an ink accommodating chamber configured to accommodate ink to be supplied to the ink receiving tube, said casing including a front surface at a leading side with respect to the mounting direction, an upper surface and a bottom surface;

a tube inserting portion into which the ink receiving tube is insertable and which is provided at said front surface in a position closer to said bottom surface than to said upper surface;

an electrical contact electrically connectable to the electrical connecting portion and provided in a position above said tube inserting portion, said electrical contact including an area crossing with the mounting direction;

an engaging portion provided in a position closer to said electrical contact than to said tube inserting portion, said engaging portion being engageable with the locking lever to maintain a inserted state in which the ink receiving tube is inserted in said tube inserting portion and a connected state in which said electrical contact is connected with the electrical connecting portion; and

a positioning portion provided in a position above said tube inserting portion and below said electrical contact and engageable with a positioning member provided in the cartridge mounting portion to limit movement of said casing in a direction perpendicular to the mounting direction,

wherein said engaging portion is engageable with the locking lever to maintain an engaged state between said positioning portion and the positioning member.