WHAT IS CLAIMED IS:

1. A cleaning device, comprising:

a cleaning frame;

a cleaning member having one end attached to the cleaning frame and the other end that is a free end, the cleaning member coming into contact with an image bearing member so as to remove a developer remaining on the image bearing member after transfer of a developer image from the image bearing member, the image bearing member being capable of rotating and bearing the developer image formed of the developer; and

a sheet member having flexibility and having one end attached to the cleaning frame and the other end that comes into contact with the image bearing member at an upstream side of a contact position between the cleaning member and the image bearing member in a rotation direction of the image bearing member;

wherein a work function W (D) of the developer and a work function W (S) of the sheet member satisfy Expression (A) below, and the developer includes inorganic particles, in which at least one kind of the inorganic particles has an average primary particle diameter of 50 nm or larger.

$$0 \leq W(D) - W(S) \leq 0.23 \quad \text{... (A)}$$

2. The cleaning device according to claim 1,

wherein the other end of the sheet member is a free end;

a contact pressure P of the sheet member calculated in accordance with Expression (B) is at least 1.32×10^{-5} and not more than 1.74×10^{-2}, where δ is a deflection amount of the sheet member, E is the Young's modulus of the sheet member, h is a thickness of the sheet member, L is a distance from the one end of the sheet member to a contact nip between the sheet member and the image bearing member, and ν is the Poisson's ratio of the sheet member.

$$P = \delta E h^3 / \{4L^3(1-\nu^2)\} \quad \text{... (B)}$$

3. The cleaning device according to claim 1 or 2,

wherein the other end of the sheet member is a free end;

a direction extending from the one end of the sheet member to the other end of the sheet member is the same as the rotation direction of the image bearing member at a region where the other end of the sheet member is in contact with the image bearing member.

4. The cleaning device according to any one of claims 1 to 3,

wherein a direction from the one end of the cleaning member to the other end of the cleaning member is a reverse direction of the rotation direction of the image bearing member at a region where the other end of the cleaning member is in contact with the image bearing member.

5. The cleaning device according to any one of claims 1 to 4,
wherein a base material of the sheet member is polyphenylene sulfide (PPS).

6. The cleaning device according to any one of claims 1 to 4,
wherein a base material of the sheet member is polytetrafluoroethylene (PTFE).

7. The cleaning device according to any one of claims 1 to 6,
wherein the sheet member has a thickness of 50 μm to 100 μm.

8. The cleaning device according to any one of claims 1 to 7,
wherein the inorganic particles include a silicon oxide particle and a titanium oxide particle.

9. The cleaning device according to any one of claims 1 to 8,
wherein at least one kind of the inorganic particles has the average primary particle diameter of 50 nm to 200 nm.

10. A process cartridge, comprising:
an image bearing member capable of rotating and bearing a developer image formed of a developer;
a cleaning frame;
a cleaning member having one end attached to the cleaning frame and the other end that is a free end, the cleaning member coming into contact with the image bearing member so as to remove the developer remaining on the image bearing member after transfer of the developer image from the image bearing member; and
a sheet member having flexibility and having one end attached to the cleaning frame and the other end that comes into contact with the image bearing member at an upstream side of a contact position between the cleaning member and the image bearing member in a rotation direction of the image bearing member;
wherein a work function W (D) of the developer and a work function W (S) of the sheet member satisfy Expression (A) below and the developer has inorganic particles, in which at least one kind of the inorganic particles has an average primary particle diameter of 50 nm or larger.
$0 \leq W(D) - W(S) \leq 0.23$ ... (A)

11. An image forming apparatus, comprising:
an image bearing member capable of rotating and bearing a developer image formed of a developer;
a transfer member configured to transfer the developer image borne on the image bearing member to a transferring material;

a cleaning frame;

a cleaning member having one end attached to the cleaning frame and the other end that is a free end and coming into contact with the image bearing member so as to remove the developer remaining on the image bearing member after transfer of the developer image from the image bearing member; and

a sheet member having flexibility, and having one end attached to the cleaning frame and the other end that comes into contact with the image bearing member at an upstream side of a contact position between the cleaning member and the image bearing member in a rotation direction of the image bearing member;

wherein a work function W (D) of the developer and a work function W (S) of the sheet member satisfy Expression (A) below and the developer has inorganic particles, in which at least one kind of the inorganic particle has an average primary particle diameter of 50 nm or larger.

$0 \leq W(D) - W(S) \leq 0.23$ ... (A)

12. A cleaning device, comprising:

a cleaning frame;

a cleaning member having one end attached to the cleaning frame and the other end that is a free end, the cleaning member coming into contact with an image bearing member so as to remove a developer remaining on the image bearing member after transfer of a developer image from the image bearing member, the image bearing member being capable of rotating and bearing the developer image formed of the developer;

a charging member, which is attached to the cleaning frame and which charges the image bearing member; and

a sheet member having flexibility and having one end attached to the cleaning frame and the other end that comes into contact with the image bearing member at an upstream side of a contact position between the cleaning member and the image bearing member in a rotation direction of the image bearing member;

wherein an AC voltage is applicable to the charging member; and

a work function W (D) of the developer and a work function W (S) of the sheet member satisfy Expression (A) below.

$0 \leq W(D) - W(S) \leq 0.23$ ... (A)

13. The cleaning device according to claim 12,

wherein the other end of the sheet member is a free end;

a contact pressure P of the sheet member calculated in accordance with Expression (B) is at least 1.32×10^{-5} and not more than 1.74×10^{-2}, where δ is a deflection amount of the sheet member, E is the Young's modulus of the sheet member, h is a thickness of the sheet member, L is a distance from the one end of the sheet member to a contact nip between the sheet member and the image bearing

member, and ν is the Poisson's ratio of the sheet member.

$$P = \delta E h^3 / \{4L^3(1-\nu^2)\} \quad \text{... (B)}$$

14. The cleaning device according to claim 12 or 13,

wherein the other end of the sheet member is a free end;

a direction extending from the one end of the sheet member to the other end of the sheet member is the same as the rotation direction of the image bearing member at a region where the other end of the sheet member is in contact with the image bearing member.

15. The cleaning device according to any one of claims 12 to 14,

wherein a direction from the one end of the cleaning member to the other end of the cleaning member is a reverse direction of the rotation direction of the image bearing member at a region where the other end of the cleaning member is in contact with the image bearing member.

16. The cleaning device according to any one of claims 12 to 15,

wherein a base material of the sheet member is polyphenylene sulfide (PPS).

17. The cleaning device according to any one of claims 12 to 15,

wherein a base material of the sheet member is polytetrafluoroethylene (PTFE).

18. The cleaning device according to any one of claims 12 to 17,

wherein the sheet member has a thickness of 50 μm to 100 μm.

19. The cleaning device according to any one of claims 12 to 18,

wherein, the sheet member, which is attached to the cleaning frame constituting an accommodating part that accommodates the developer removed by the cleaning member, and which also functions as a sealing member to prevent the developer removed by the cleaning member from leaking out of the accommodating part.

20. The cleaning device according to any one of claims 12 to 19,

wherein, the charging member is applied with an AC voltage during a non-image forming state, a peak-to-peak voltage value of the AC voltage applied during the non-image forming state is greater than that during an image forming state.

21. The cleaning device according to any one of claims 12 to 19,

wherein the developer contains an external additive.

22. A cartridge attachable to and detachable from a main body of an image forming apparatus,

the cartridge comprising:

an image bearing member capable of rotating and bearing a developer image formed of a developer;

a cleaning frame;

a cleaning member having one end attached to the cleaning frame and the other end that is a free end, the cleaning member coming into contact with the image bearing member so as to remove the developer remaining on the image bearing member after transfer of the developer image from the image bearing member;

a charging member attached to the cleaning frame and which charges the image bearing member; and

a sheet member having flexibility and having one end attached to the cleaning frame and the other end that comes into contact with the image bearing member at an upstream side of a contact position between the cleaning member and the image bearing member in the rotation direction of the image bearing member;

wherein an AC voltage is applicable to the charging member; and

a work function W (D) of the developer and a work function W (S) of the sheet member satisfy Expression (A) below.

$0 \leq W(D) - W(S) \leq 0.23$ ... (A)

23. An image forming apparatus, comprising:

an image bearing member capable of rotating and bearing a developer image formed of a developer;

a transfer member that transfers the developer image borne on the image bearing member to a transferring material;

a cleaning frame;

a cleaning member having one end attached to the cleaning frame and the other end that is a free end, the cleaning member coming into contact with the image bearing member so as to remove the developer remaining on the image bearing member after transfer of the developer image from the image bearing member;

a charging member attached to the cleaning frame and which charges the image bearing member; and

a sheet member having flexibility and having one end attached to the cleaning frame and the other end that comes into contact with the image bearing member at an upstream side of a contact position between the cleaning member and the image bearing member in a rotation direction of the image bearing member;

wherein an AC voltage is applicable to the charging member; and

a work function W (D) of the developer and a work function W (S) of the sheet member satisfy Expression (A) below.

$$0 \leq W(D) - W(S) \leq 0.23 \quad \text{... (A)}$$