CLAIMS

[Claim 1] A cleaning member comprising:

a nonwoven structure, whose shape is retained by entanglement between single fibers having a median fiber diameter of from 100 nm to 2000 nm, and which has an apparent density of from 0.05 g/cm^3 to 0.60 g/cm^3, wherein the nonwoven structure has a contact point where the single fibers contact one another but are not bonded together, and wherein a cross-sectional shape of at least one of the single fibers at a contact point between the single fibers is deformed into a shape that is different from the cross-sectional shape of the single fiber at a non-contact point.

[Claim 2] The cleaning member according to claim 1, wherein the single fibers has the median fiber diameter of from 250 nm to 900 nm.

[Claim 3] The cleaning member according to claim 1, being used for cleaning a semiconductor substrate after polishing.

[Claim 4] The cleaning member according to any one of claims 1 to 3, wherein:

the nonwoven structure has a porosity of from 30% to 75%; and

in a pore volume distribution wherein cumulative pore volume is differentiated with respect to a logarithm of pore size, the nonwoven structure has a distribution including a top peak within a pore size range of 50 μm or less and including no top peak within a pore size range of above 50 μm.

[Claim 5] The cleaning member according to any one of claims 1 to 4, wherein the nonwoven structure is a compression-molded product of a deposit formed by entanglement between the single fibers.

[Claim 6] The cleaning member according to any one of claims 1 to 5, further comprising a support, wherein the support and the nonwoven structure are arranged in contact with one another.

[Claim 7] The cleaning member according to any one of claims 1 to 6, wherein:

the nonwoven structure has a sheet-like shape; and

permeation time of a water droplet to permeate into the nonwoven structure is 1 minute or less.

[Claim 8] The cleaning member according to any one of claims 1 to 7, wherein:

permeation time of a water droplet to permeate into the nonwoven structure is 0 or more and 45 second or less.

[Claim 9] The cleaning member according to any one of claims 1 to 8, wherein:

the single fiber contains a thermoplastic resin; and

the thermoplastic resin is at least one type selected from the group consisting of polyolefin resins including polyethylene, polypropylene, ethylene-α-olefin copolymer and ethylene-propylene copolymer, polyester resins including polyethylene terephthalate, polyamide resins including polyamide 6 and polyamide 66, vinyl resins including polyvinyl chloride and polystyrene, and acrylic resins including polyacrylate and polymethyl methacrylate.

[Claim 10] The cleaning member according to claim 9, wherein a content of the thermoplastic resin is from 70 to 98 parts by mass with respect to 100 parts by mass of all constituent components of the single fiber.

[Claim 11] The cleaning member according to any one of claims 1 to 10, wherein the single fiber contains an ionic surfactant.

[Claim 12] The cleaning member according to claim 11, wherein a content of the ionic surfactant is from 2 to 10 parts by mass with respect to 100 parts by mass of all constituent components of the single fiber.

[Claim 13] The cleaning member according to any one of claims 1 to 12, wherein the nonwoven structure has an apparent density of from 0.10 g/cm^3 to 0.55 g/cm^3.

[Claim 14] The cleaning member according to any one of claims 1 to 13, wherein the nonwoven structure has an apparent density of from 0.10 g/cm^3 to 0.4 g/cm^3.

[Claim 15] The cleaning member according to any one of claims 1 to 14, wherein the nonwoven structure has a porosity of from 40% to 70%.

[Claim 16] The cleaning member according to any one of claims 1 to 15, wherein the nonwoven structure has a cumulative pore volume of from 0.8 mL/g to 20 mL/g.

[Claim 17] A method of manufacturing the cleaning member according to any one of claims 1 to 16, the method comprising:

a step of discharging a solution or a melt of an electrospinning composition into an electric field and spinning the solution or the melt by electrospinning, and thereby forming a deposit of a single fiber; and

a step of pressing the deposit, and thereby forming a nonwoven structure having an apparent density of from 0.05 g/cm^3 to 0.60 g/cm^3.

[Claim 18] The method for manufacturing the cleaning member according to claim 17, wherein, in the step of forming a deposit of a single fiber, the melt of the electrospinning composition is discharged into an electric field and the melt is spun by electrospinning.