【CLAIMS】

【Claim 1】

A filter needle for a syringe including a syringe needle ~~(200)~~ having a needle ~~(210)~~, a fixing member ~~(220)~~ for fixing the needle ~~(210)~~ and an inner space ~~(230)~~ formed in the fixing member ~~(220)~~, and a syringe body ~~(100)~~ having a cylinder ~~(110)~~, a piston ~~(120)~~ and a front end ~~(130)~~ separably installed in the inner space ~~(230)~~ of the fixing member ~~(220)~~ of the syringe needle ~~(200)~~, the filter needle comprising:

a filter structure ~~(10)~~ installed in and coupled to the inner space ~~(230)~~ of the fixing member ~~(220)~~ of the syringe needle ~~(200)~~ so as to be prevented from being separated therefrom and including ~~an~~ one-way inlet path ~~(13)~~ having an inlet ~~(11)~~ and ~~an~~ one-way outlet path ~~(14)~~ having an outlet ~~(12)~~, each of which has a check valve function, ~~;~~ wherein the filter structure is configured to mount a filter and to provide a seal with the inner space of the fixing member such that medicament liquid passes the filter structure only through the inlet path and the outlet path; and

a filter ~~(20)~~ mounted to only the filter structure and installed in the outlet path ~~(14)~~ at a rear end of the outlet ~~(12)~~ to filter a foreign substance, which is input through the inlet ~~(11)~~ together with a medicament liquid,

from the medicament liquid such that the filtered medicament liquid is only injected into a patient through the filter and the outlet ~~(12)~~ when injecting the medicament liquid into the patient~~.~~,

- wherein the filter structure is coupled to the inner space of the fixing member so as to be prevented from being separated therefrom, changing position, or twisting.

【Claim 2】

The filter needle of claim 1, wherein the inlet path ~~(13)~~ and the outlet path ~~(14)~~ of the filter structure (10) are closed.

【Claim 3】

The filter needle of claim 1, wherein the inlet path of the filter structure ~~(10)~~ is an open inlet path ~~(13a)~~ and the outlet path of the filter structure ~~(10)~~ is a closed outlet path ~~(14)~~.

【Claim 4】

The filter needle of claim 1 ~~or 2~~, wherein the inlet path having the inlet of the filter structure is radially formed at an outside of the outlet path having the outlet such that a diameter of the outlet path is relatively larger than a diameter of the inlet path.

~~【Claim 5】~~

~~The filter needle of claim 1 or 3, wherein pillars are provided at an outside of the closed outlet path of the~~

~~filter structure by a predetermined interval to form the open inlet path (13a) and the closed inlet path is formed as the filter structure is installed in the inner space of the fixing member of the syringe needle.~~

【Claim ~~6~~5】

The filter needle of claim 4, wherein the inlet and the outlet of the filter structure are formed at inner sides thereof, through which the medicament liquid is exhausted, with inner curved surfaces and formed at outer sides thereof with protruded curved surfaces, and

the inlet and the outlet having the check valve function are formed on a leading edge of the filter structure by a cut line.

~~【Claim 7】~~

~~The filter needle of claim 5, wherein the closed outlet path of the filter structure includes the outlet formed by a cut line and the open inlet path includes an inclined film, which is foldable toward only one side, and is supported by a pillar to have the check valve function.~~

~~【Claim 8】~~

~~The filter needle of claim 1 or 3, wherein the open inlet path (13a) having an inclined film (11a-1) is formed at an outside of the closed outlet path of the filter structure, and a closed inlet path is formed as the filter structure is coupled to a guide groove 230b formed on an~~

~~inner wall 230a in the inner space 230 of the fixing member 220 of the syringe needle 200.~~

~~【Claim 9】~~

~~The filter needle of claim 8, wherein the guide groove is formed across a step protrusion of the inner wall in the inner space, and an upper surface of the inclined film is closed to a lower end of the step protrusion 240a formed with the guide groove, so that the check valve function is achieved.~~

【Claim ~~10~~6】

The filter needle of claim 1, wherein the filter of the filter structure has a plane shape, a partition wall for fixing the filter protrudes more than the outlet path, and a radial opening is formed in the protruded partition wall to guide a liquid flow.

~~【Claim 11】~~

~~The filter needle of claim 1, wherein the filter installed into the outlet path of the filter structure is formed of a tubular body that forms the inner space.~~

~~【Claim 12】~~

~~The filter needle of claim 5, wherein the pillar of the filter structure protrudes more than a protruded curved surface where the outlet formed at a rear end of the outlet path is formed.~~