

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Re App : **Shu-Ming Chang** : Examiner : **RANADE, DIVA**  
Serial No. : **12/463,434** : Art Unit : **3763**  
Filed : **05/11/2009** : Confirmation No. : **9608**  
For : **DISPOSABLE SAFETY SYRINGE WITH RETRACTABLE NEEDLE**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO NON-FINAL OFFICE ACTION  
REQUEST FOR RECONSIDERATION**

Dear Sir:

This paper responds to the Non-Final Office Action dated 09/30/2010. Please amend the above-identified application as follows:

**IN THE DRAWINGS**

Permission is hereby requested to add reference number “15” to Figure 2, to correct the position of reference number “313” to Figures 9-16 and to delete Figures 17-20 according to the attached formal drawings.

**IN THE SPECIFICATION**

Page 4, lines 3-10 have been amended as follows:

~~FIG. 17 is an exploded view of a fifth preferred embodiment of disposable safety syringe according to the invention;~~

~~FIG. 18 is an exploded view of a sixth preferred embodiment of disposable safety syringe according to the invention;~~

~~FIG. 19 is an exploded view of a seventh preferred embodiment of disposable safety syringe according to the invention; and~~

~~FIG. 20 is an exploded view of an eighth preferred embodiment of disposable safety syringe according to the invention.~~

Page 4, lines 24-26 have been amended as follows:

A first needle assembly 10 comprises, from front to rear, a needle 11, a cylindrical needle seat 12 having ridges 121 spaced therearound, an O-ring 13, and an extension 14. The needle 11 is disposed at one end of the first needle assembly 10, and the extension 14 is disposed at the other end. And the extension 14 includes a holding space 15. The ridges 121 are secured to the distal end of the syringe barrel 40.

Page 4, line 27 to page 5, lines 1-5 have been amended as follows:

A second needle assembly 20 is a hollow cylindrical member with a central bore shaped to sealingly secure to both the first needle assembly 10 (i.e., O-ring 13 and extension 14) and the plunger 30 (i.e., connection member 31). The second needle assembly 20 comprises, from front to rear, a first coupling section 21 having two opposite L-shaped grooves 23 formed on an outer surface, an O-ring 24, and a second coupling section 22. The first coupling section 21 is disposed at one end for covering the extension 14 of the first needle assembly 10. The second coupling section 22 is disposed inside the other end. The connection member 31 of the plunger 30 is inserting in the second needle assembly 20 and engaging with the second coupling section 22. The cone 311 of the connection member 31 is fully coupling in the first needle assembly 10.

Page 8, line 5 to page 9, lines 1-5 have been amended as follows:

~~Referring to FIG. 17, a disposable safety syringe in accordance with a fifth preferred embodiment of the invention is shown. The characteristics of the fifth~~

~~preferred embodiment are detailed below. The rear portion of the first needle assembly is formed together with the second needle assembly as a needle hub 50. The needle hub 50 comprises, from front to rear, a stepped first section 51 having a central, hollow conic member 512 in communication with the rear space thereof, and two tabs 511 formed on the outer surface, an O-ring 52, and an extension 53. The L-shaped grooves 413 are formed on the inner surface of the first section 41.~~

~~Referring to FIG. 18, a disposable safety syringe in accordance with a sixth preferred embodiment of the invention is shown. The characteristics of the sixth preferred embodiment are detailed below. The rear portion of the first needle assembly is formed together with the second needle assembly as a needle hub 50. The needle hub 50 comprises, from front to rear, a stepped first section 51 having a central, hollow conic member 512 in communication with the rear space thereof, and two L-shaped grooves 511 formed on the outer surface, an O-ring 52, and an extension 53. The tabs 413 are formed on the inner surface of the first section 41.~~

~~Referring to FIG. 19, a disposable safety syringe in accordance with a seventh preferred embodiment of the invention is shown. The characteristics of the seventh preferred embodiment are detailed below. The second needle assembly and the first needle assembly are formed as a single needle assembly 60 comprising, from front to rear, a needle 61, a needle seat 62, two L-shaped grooves 63, and a sealing section 64. Further, the tabs 413 are formed on the inner surface of the first section 41.~~

~~Referring to FIG. 20, a disposable safety syringe in accordance with an eighth preferred embodiment of the invention is shown. The characteristics of the eighth preferred embodiment are detailed below. The second needle assembly and the first needle assembly are formed as a single needle assembly 60 comprising, from front to rear, a needle 61, a needle seat 62, two tabs 63, and a sealing section 64. Further, the L-shaped grooves 413 are formed on the inner surface of the first section 41.~~

**AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions, and listings, of claims in the application:

What is claimed is:

1. (Currently Amended) A disposable medical syringe comprising:

- a steeped syringe barrel comprising a proximal end, a distal end, a central bore, and two opposite mating members on an inner surface proximate the distal end;
- a plunger being reciprocable within the central bore of the syringe barrel and comprising a connection member with a protruding cone and a breakable section behind the connection member;
- a first needle assembly comprising a needle disposed at one end, and a needle hub an extension disposed at the other end and including a holding space, and at least two ridges secured to the distal end of the syringe barrel; and
- a hollow second needle assembly shaped to lockingly secure to the first needle assembly in the syringe barrel, the second needle assembly comprising a first coupling section disposed at one end for covering the extension of the first needle assembly, a second coupling section disposed inside the other end, and two opposite corresponding mating members on an outer surface, the corresponding mating members being lockingly engaged with the mating members, the connection member of the plunger inserting in the second needle assembly and engaging with the second coupling section of the second needle assembly, the cone of the connection member fully coupling in the first coupling section of the first needle assembly;

wherein the plunger may push to dispense injection liquid filled in the syringe barrel until the connection member is stopped by both the second needle assembly and the first needle assembly with the plunger, the second needle assembly, and the first needle assembly being secured together;

wherein the plunger may clockwise rotate about the syringe barrel until the mating members and the corresponding mating members are unlocked lengthwise each other; and

wherein the plunger, the second needle assembly, and the first needle assembly may move rearward to retract the needle within the syringe barrel until being stopped with the breakable section being disposed at the proximal end of the syringe barrel.

2. (Original) The disposable medical syringe of claim 1, wherein the mating members are tabs and the corresponding mating members are L-shaped grooves.

3. (Original) The disposable medical syringe of claim 1, wherein the mating members are L-shaped grooves and the corresponding mating members are tabs.

4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
- 9.(Cancelled)
- 10.(Cancelled)
- 11.(Cancelled)

**Claim Rejections**

Claims 1, 2, 4, 5, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Publication 2003/0212366 to Bang.

Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication 2003/0212366 to Bang in view of U.S. Publication 2006/0189935 to Janek et al...

**REMARKS/ARGUMENTS**

1. Please reference to Fig. 1 (shown as below first figure) of Bang, when the central projection 44 is pushed inside the space B, the medicament(liquid) is pushed through the channel A to syringe needle 21. But some medicament(liquid) still remains inside the channel A resulting in wasting the medicament(liquid).

Oppositely, the Fig. 2 and Fig. 4 (shown as below second and third figures) of this application, the protruding cone 311 of the first connection member 31 passed through the second needle assembly 20 (and the first connection member 31 engages with the second coupling section 26) and engaged with the holding space 15 (the extension 14 is disposed inside the first coupling section 25). Therefore, the medicament(liquid) is pushed through the second needle assembly 20 to the needle 11 disposed on the first needle assembly 10. There is no residue of the medicament(liquid) remained, so as not to waste the medicament(liquid).

Obviously, the structure and skill of claim 1 (independent claim) of this application is different from Bang.

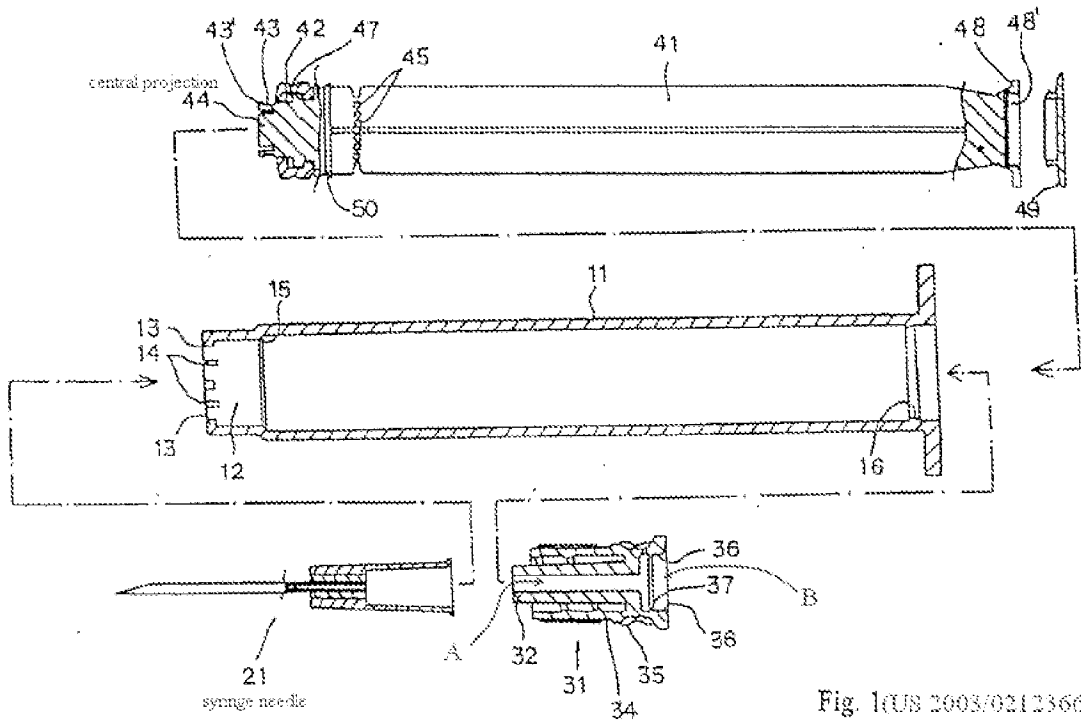


Fig. 1 (US 2003/0212366)

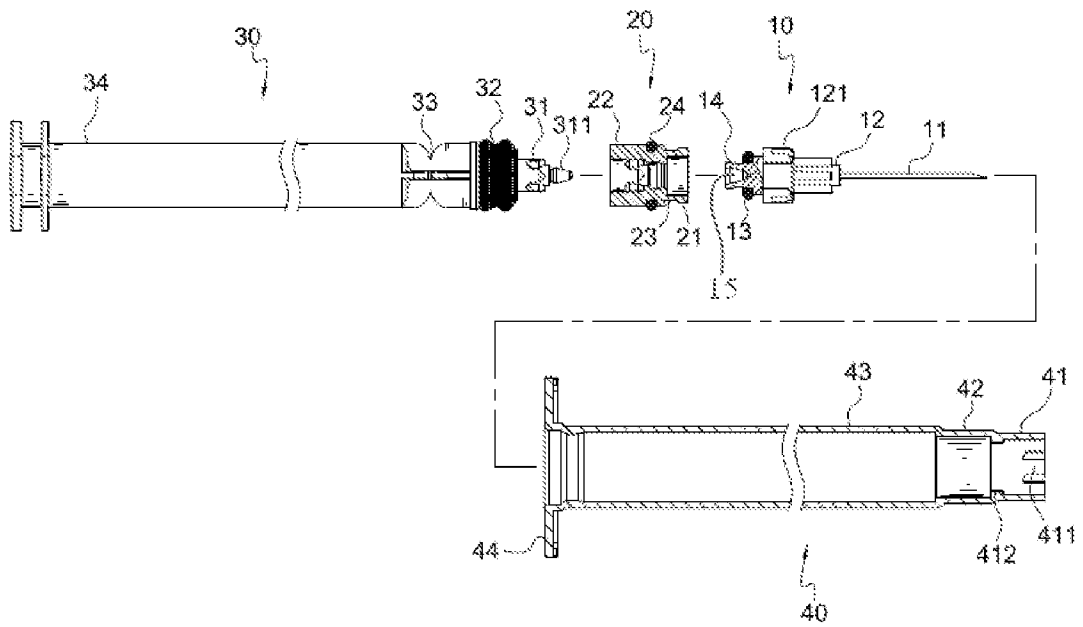


FIG. 2 (this application)



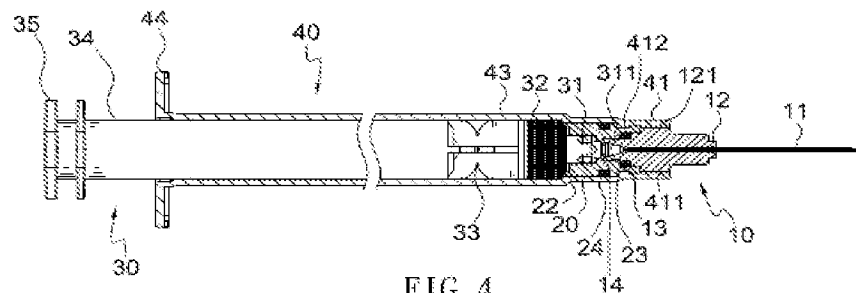


FIG. 4  
(this application)

2. In order to make the difference between this application and Bang more obviously, the applicant decides to amend the claim 1 as below.

“1. A disposable medical syringe comprising:

- a stepped syringe barrel comprising a proximal end, a distal end, a central bore, and two opposite mating members on an inner surface proximate the distal end;
- a plunger being reciprocable within the central bore of the syringe barrel and comprising a connection member with a protruding cone and a breakable section behind the connection member;
- a first needle assembly comprising a needle disposed at one end, and a needle hub an extension disposed at the other end and including a holding space, and at least two ridges secured to the distal end of the syringe barrel; and
- a hollow second needle assembly shaped to lockingly secure to the first needle assembly in the syringe barrel, the second needle assembly comprising a first coupling section disposed at one end for covering the extension of the first needle assembly, a second coupling section disposed inside the other end, and two opposite corresponding mating members on an outer surface, the corresponding mating members being lockingly engaged with the mating members, the connection member of the plunger inserting in the second needle assembly and engaging with the second coupling section of the second needle assembly, the cone of the connection member fully coupling in the first coupling section of the first needle assembly;

wherein the plunger may push to dispense injection liquid filled in the syringe barrel until the connection member is stopped by both the second needle assembly and the first needle assembly with the plunger, the second needle assembly, and the first needle assembly being secured together;

wherein the plunger may clockwise rotate about the syringe barrel until the mating members and the corresponding mating members are unlocked lengthwise each other; and

wherein the plunger, the second needle assembly, and the first needle assembly may move rearward to retract the needle within the syringe barrel until being stopped with the breakable section being disposed at the proximal end of the syringe barrel.”

Therefore, the amended claim 1 of this application is able to overcome the 35 U.S.C. 102(b) issue in view of Bang. And the amended claim 1 of this application is patentable.

3. Because the amended claim 1 of this application is patentable, the dependent claims (claims 2 and 3) depended on patentable amended claim 1 are also patentable.
4. Furthermore, to make the object more clearly, the applicant decides to cancel claims 4-11. Therefore, this application is able to overcome the 35 U.S.C. 102(b) issue in view of Bang and the 35 U.S.C. 103(a) issue in view of Janek et al..

Respectfully submitted,  
Shu-Ming Chang

/Shu-Ming Chang/