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(54) Title: DISINFECTING CAP FOR VALVES COMPRISING A LUER-ACTIVATED SEPTUM

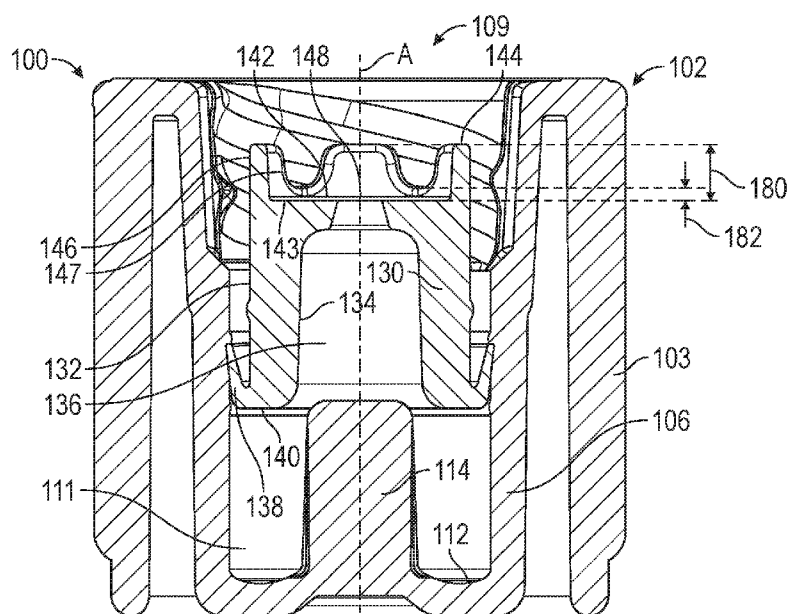


FIG. 2

(57) Abstract: A disinfecting device for a Luer-activated device having a septum is disclosed. The disinfecting device includes a cap, a plunger including a standoff and a face, and a disinfectant. When the Luer-activated device is secured to the disinfecting device, the Luer-activated devices engaged with the standoff but Luer-activated device septum does not contact the standoff or the face.

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2020/051396

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61M39/16 A61M39/20
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 9 750 929 B2 (BECTON DICKINSON CO [US]) 5 September 2017 (2017-09-05) figures 11A-11C -----	1-9,13, 14,17-19 15,16
X A	US 2017/050013 A1 (BEDOE SCOTT [US] ET AL) 23 February 2017 (2017-02-23) figures 62,64,66 -----	1-9,13, 14,17-19 15,16
A	US 2005/055008 A1 (PARADIS JOSEPH R [US] ET AL) 10 March 2005 (2005-03-10) paragraphs [0109] - [0111]; figures 6C-6F -----	15,16
A	US 2018/361003 A1 (DOMBROWSKI ALAN R [US] ET AL) 20 December 2018 (2018-12-20) the whole document -----	1-9, 13-19

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

2 June 2020

Date of mailing of the international search report

18/08/2020

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2020/051396

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-9, 13-19

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-9, 13-19

Claims 1-9, 13-19 essentially define a disinfecting device for a Luer-activated device having a septum, the disinfecting device comprising:

- 1) a cap comprising: an opening; an inner wall defining an interior cavity having an interior cavity base opposite from the opening;
- 2) a plunger within the interior cavity, the plunger comprising: a face with a perimeter, wherein the perimeter of the face is adjacent to the inner wall of the cap; a standoff adjacent the perimeter of the face and extending in the direction of the opening;
- 3) a disinfectant in the interior cavity;
- 4) wherein the plunger is movable within the interior cavity from the opening toward the interior cavity base, and wherein there is
- 5) a plurality of standoffs wherein the plurality of standoffs comprise a standoff with a first height and a second standoff with a second height, and wherein the first height is greater than the second height (cf. claims 14 and 15).

2. claims: 10, 21(completely); 23-40(partially)

Claims 10, 21 and 23-40 (when dependent on claim 21) essentially define a disinfecting device for a Luer-activated device having a septum, the disinfecting device comprising the combination of features 1) - 4) of the above first group, and wherein

- 5) the plunger comprises a skirt is frictionally engaged with the inner wall of the cap (cf. claim 10, and claim 21).

3. claims: 11, 12, 22, 41(completely); 23-40(partially)

Claims 11, 12, 22 and 23-40 (when dependent on claim 22), and 41 essentially define a disinfecting device for a Luer-activated device having a septum, the disinfecting device comprising the combination of features 1) - 4) of the above first group, and wherein

- 5) the plunger comprises a collapsible wall (cf. claim 11, and claim 22).

4. claim: 20

Claim 20 which essentially defines a disinfecting device for a Luer-activated device having a septum, the disinfecting device comprising the combination of features 1) - 4) of the above first group, and

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

5) a vent for fluid passage from the interior cavity to an atmosphere outside the disinfecting device (cf. claim 20).

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2020/051396

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