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PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

EXAMINER

NGUYEN, TUAN VAN

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ELECTRONIC

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DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Priority

1. This application is a continuation of U.S. Patent Application No. 17/498,642, filed on October 11, 2021, which is a continuation of U.S. Patent Application No. 16/258,344, filed on January 25, 2019, which is now issued as U.S. Patent No. 11,154,314, which claims the benefit of U.S. Provisional Patent Application No. 62/622,691, filed on January 26, 2018.

Claim Rejections - 35 USC § 112

2. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 10, which is dependent on claim 9, which is in turn dependent on claim 1, is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention. Claim 10 recites the limitation "*the second*

end portion" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.

3. Claim(s) 1-3, 6 and 9 is/are rejected under 35 U.S.C. 102(a)(1) as being anticipated Grooters (US 5,197,485).

4. Referring to claim 1, Grooters discloses an aspiration system (Figs. 1-2), comprising:

a vacuum source (claim 1, col. 5, ln 45);

connection tubing 30 (Figs. 1-2) fluidically coupled to the vacuum source (claim 1);

a filter chamber 14 and 24 coupled to the connection tubing 30 at a location apart from the vacuum source, and the filter chamber comprising a housing and a filter 26

within the housing (col. 4, ln 19-22: "a removable filter trap 26 with a porosity sufficient to permit blood to flow freely while straining any particulate debris.");

a catheter 12 fluidically coupled to the vacuum source via the filter chamber along a flow path (Fig. 2 shows a flow path extend from the tip of the cannula 12 through the handle 14 and tubing 30); and

a flow controller (check valve 16 as shown in Fig. 2. Col. 3, ln 58-66: *"The valve outlet includes resilient lips 16c tapering together to a normally closed state to prevent backflow of fluid to the cannula 12. This check valve helps to insure against flow of air into the cannula, which could result in the generation of an air embolism, with possibly disastrous consequences."*

In alternative valve 18 as shown in Fig. 2) fluidically coupling the filter chamber to the catheter, wherein the flow controller is along the flow path between the filter chamber (14 and 24) and the catheter 12 such that flow from the catheter to the filter chamber is controlled proximate to the catheter.

5. Referring to claim 2, Grooters discloses the aspiration system of claim 1 wherein:

the housing (14 and 24) has a first end portion, a second end portion, a port (at lead line 14 as shown in Fig. 2) at the first end portion configured to be fluidically coupled to the catheter, and a fluid connector 24d (Fig. 2) at the second end portion configured to be coupled to the connection tubing 30; and

the filter 26 is in the housing along a flow path between the port and the fluid connector.

6. Referring to claim 3, Grooters discloses the aspiration system of claim 1 wherein the flow controller comprises a flow control unit between the filter chamber and the catheter (Fig. 2 shows check valve 16 is located between filter chamber 24 and catheter 12. Fig. 2 also shows valve 18 is located between filter chamber 24 and catheter 12).

7. Referring to claim 6, Grooters discloses the aspiration system of claim 1 wherein:
the housing (14 and 24 as shown in Fig. 2) has a first end portion (at lead line 14 as shown in Fig. 2), a second end portion (at lead line 24d as shown in Fig. 2), a port at the first end portion (at lead line 14 as shown in Fig. 2) configured to be fluidically coupled to the catheter 12, and a fluid connector 24d at the second end portion configured to be coupled to the connection tubing 30;

the filter 26 is in the housing along a flow path between the port at the first end portion (at lead line 14 as shown in Fig. 2) and the fluid connector 24d at the second end portion; and

the system further comprises a check valve 16 in the housing along the flow path, the check valve being configured to allow flow in a direction from the port toward the fluid connector but prevent flow in a direction from the fluid connector to the port (Col. 3, ln 58-66: *"The valve outlet includes resilient lips 16c tapering together to a normally closed state to prevent backflow of fluid to the cannula 12. This check valve helps to insure against flow of air into the cannula, which could result in the generation of an air embolism, with possibly disastrous consequences."*)

8. Referring to claim 9, Grooters discloses the aspiration system of claim 1, further comprising a check valve 16 (Fig. 2).

9. Claim(s) 1 and 3-4 is/are rejected under 35 U.S.C. 102(a)(1) as being anticipated Garrison (US 20150173782).

10. Referring to claim 1, Garrison discloses an aspiration system (Fig. 34), comprising:

a vacuum source 3430 (Fig. 34, para [0132]);

connection tubing fluidically coupled to the vacuum source (Fig. 34 shows a connection tubing is connecting valve 3419 to aspiration source 3430);

a filter chamber 3418 coupled to the connection tubing at a location apart from the vacuum source 3430, and the filter chamber comprising a housing and a filter within the housing (para [0131]: "A filter 3418 and/or a check valve 3419 may be coupled with flow line 2025." Filter 3418 inherently has a housing for storing filter net/mesh);

a catheter 2010 and 2025 fluidically coupled to the vacuum source via the filter chamber 3418 along a flow path (Fig. 2 shows a flow path extend from the distal end of the catheter 2010 through the filter 3418 and tubing); and

a flow controller 3325 (Fig. 34, para [0131]: "A valve 3325 controls which device is connected to the aspiration source 3430. The valve may enable one device, the other device, both devices, or neither device to be connected to the aspiration source at any given time. The valve may be a 3-way or 4-way stopcock. Alternately, the valve may be a flow controller with a simple actuation which selects the configuration as described above.") fluidically coupling the filter chamber to the catheter,

wherein the flow controller is along the flow path between the filter chamber 3418 and the catheter 2010 and 2025 such that flow from the catheter to the filter chamber is controlled proximate to the catheter.

11. Referring to claims 3-4, Garrison discloses the aspiration system of claim 1 wherein the flow controller comprises a flow control unit between the filter chamber and the catheter and wherein the flow control unit comprises a stopcock valve (para [0131]: “A valve 3325 controls which device is connected to the aspiration source 3430. The valve may enable one device, the other device, both devices, or neither device to be connected to the aspiration source at any given time. The valve may be a 3-way or 4-way stopcock. Alternately, the valve may be a flow controller with a simple actuation which selects the configuration as described above.”).

Claim Rejections - 35 USC § 103

12. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

13. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim(s) 5 is/are rejected under 35 U.S.C. 103 as being unpatentable over Garrison in view of Quick (US 2015/0352325, which is cited in the IDS filed on 09/06/22) and further in view of Raju et al. (US 8,057,497).

16. Referring to claim 5, Garrison discloses the aspiration system of claim 3 wherein the flow control unit is a stopcock valve instead of a clamp. However, in the same field of endeavor, which is an aspiration system for treating a blockage in a blood vessel, Quick discloses Y-connector 308 (Fig. 4A) can be used to connect two side branches to a main tubing 302b. Furthermore, in the same field of endeavor, which is an aspiration system for treating a blockage in a blood vessel, Raju discloses that stopcock can be replaced with clamp (Fig. 3A, col. 4, ln 15-27).

17. Referring again to claim 5, it would have been obvious to one of ordinary skill in the art, before the effective filing date of the application, to have substitute 3-way stopcock as suggested by Garrison with a y-connector and two clamps for controlling

the fluid flow through the two branches. This simple substitution does not require a leap of inventiveness since it has been held that simple substitution of one known element for another to obtain predictable results (KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 415-421, 82 USPQ2d 1385, 1395-97 (2007)).

Allowable Subject Matter

1. Claims 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
2. Claim 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN V NGUYEN whose telephone number is (571)272-5962. The examiner can normally be reached Monday - Friday 8:30 AM - 5:30 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on 571-272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/TUAN V NGUYEN/
Primary Examiner, Art Unit 3771