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*Attorneys for Plaintiff Telebrands Corp.
(additional counsel listed on signature page)*

**IN THE UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY**

TELEBRANDS CORP.,)	Civil Action No. _____
)	
Plaintiff,)	<u>JURY TRIAL DEMANDED</u>
)	
v.)	
)	
ZURU LTD.)	
)	
Defendant.)	
)	

COMPLAINT

Plaintiff Telebrands Corp. ("Telebrands"), by and through its attorneys, for its Complaint against defendant Zuru Ltd. ("Zuru"), hereby alleges as follows:

NATURE OF ACTION

1. This is an action for a declaratory judgment that no claim of U.S. Patent No. 9,242,749 ("the '749 patent"), owned by Tinnus Enterprises LLC and exclusively licensed to

defendant Zuru, is infringed by two products being marketed by Telebrands under the names “BATTLE BALLOONS” and “BATTLE BALLOONS COLOR COMBAT.”

2. This is also an action for a declaratory judgment that the ’749 patent is unenforceable due to inequitable conduct.

PARTIES

3. Plaintiff Telebrands is a corporation organized and existing under the laws of the State of New Jersey, having a place of business at 79 Two Bridges Road, Fairfield, New Jersey 07004.

4. On information and belief, Zuru is a Chinese corporation that has a place of business at Room 1202 12/F, Energy Plaza, 92 Granville Rd, TST East, Kowloon, Hong Kong. On information and belief, Zuru is doing business throughout the United States and within the State of New Jersey, and within this Judicial District.

JURISDICTION AND VENUE

5. These claims arise under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202, *et seq.*, and the Patent Laws of the United States, Title 35 of the United States Code, 35 U.S.C. § 1, *et seq.* Based on the allegations set forth herein, there is an actual and justiciable controversy between Telebrands and Zuru regarding the non-infringement and unenforceability of the ’749 patent.

6. Jurisdiction of this Court is founded on 28 U.S.C. §§ 1331, 1338, and 2201-02.

7. Venue is proper within this Judicial District under 28 U.S.C. Sections 1391(b) and (c), and 1400(b).

8. Zuru has consented to venue and jurisdiction in this Court by commencing another action in this District regarding its intellectual property rights against Telebrands, as set forth in Zuru's Complaint in Case No. 2:15-cv-00548-CCC-MF (the "Zuru Action").

BACKGROUND

9. Telebrands is a direct marketing company and is engaged in the business of marketing and selling a wide variety of consumer products in this Judicial District and elsewhere, through direct response advertising, catalogue, mail order, and Internet sales, and through national retail stores.

10. For over thirty years, Telebrands has been a leading developer and marketer of consumer products. Telebrands is widely known through the retail industry for its success in driving retail sales through its nationwide advertising programs. For many years, Telebrands has expended enormous human and financial resources in cultivating relationships with a wide variety of retailers, *e.g.*, large retail chains, catalogs, and retail websites, which buy its products.

11. On June 9, 2015, U.S. Patent No. 9,051,066 ("the '066 patent"), entitled "System and Method for Filling Containers with Fluids" issued to Tinnus Enterprises, LLC ("Tinnus"). A copy of the '066 patent is attached as Exhibit A. On information and belief, Zuru is the exclusive licensee of the '066 patent, and has exclusive rights to use on a worldwide basis any rights under the '066 patent.

12. On January 26, 2016, the '749 patent, entitled "System and Method for Filling Containers with Fluids," issued to Tinnus. On information and believe, Zuru is the exclusive licensee of the '749 patent, and has exclusive rights to use on a worldwide basis any rights under the '749 patent.

13. The '749 patent is a continuation of the '066 patent, and has the identical

specification.

14. The '749 patent issued with only a single claim, which reads as follows:

An apparatus comprising:

a housing comprising an opening at a first end and a plurality of holes extending through a common face of the housing at a second end;

a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing;

a plurality of containers, each container removably attached to a respective one of the hollow tubes; and

a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube, and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with a fluid and (2) shaking the housing;

wherein the apparatus is configured to fill the containers substantially simultaneously with the fluid.

15. Claim 1 of the '749 patent is nearly identical to claim 1 of the '066 patent, as shown

in the following chart:

Claim 1 of U.S. Patent No. 9,051,066	Claim 1 of U.S. Patent No. 9,242,749
A apparatus comprising:	An apparatus comprising:
a housing comprising an opening at a first end and a plurality of holes extending through a common face of the housing at a second end;	a housing comprising an opening at a first end and a plurality of holes extending through a common face of the housing at a second end;
a plurality of flexible hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing;	a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing;
a plurality of containers, each container removably attached to a respective one of the	a plurality of containers, each container removably attached to a respective one of the

hollow tubes; and	hollow tubes; and
a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a corresponding hollow tube,	a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube,
and each elastic fastener configured to provide a connecting force that is not less than a weight of one of the containers when substantially filled with water and to automatically seal its respective one of the plurality of containers upon detaching the container from its corresponding hollow tube, such that shaking the hollow tubes in a state in which the containers are substantially filled with water overcomes the connecting force and causes the containers to detach the hollow tubes thereby causing the elastic fastener to automatically seal the containers;	and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with a fluid and (2) shaking the housing;
wherein the apparatus is configured to fill the containers substantially simultaneously with the fluid.	wherein the apparatus is configured to fill the containers substantially simultaneously with the fluid.

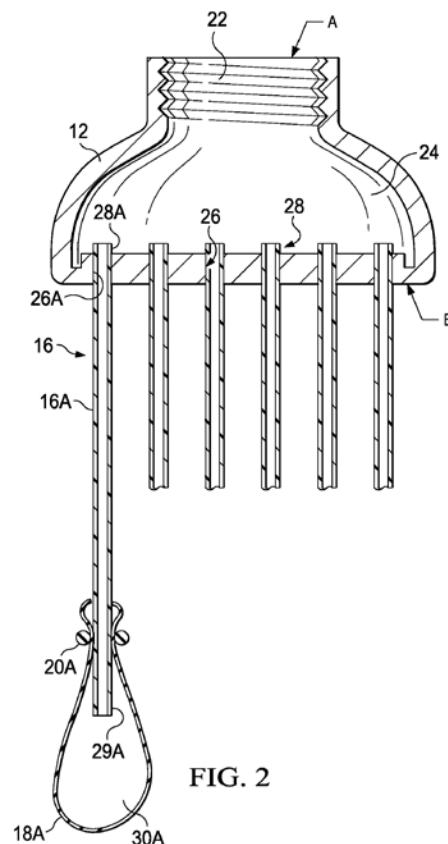
16. During prosecution of the '749 patent, claim 1 was rejected on the ground of double patenting over claim 1 of the '066 patent, because the claims are not patently distinct from each other. Instead of amending the claim, the applicant overcame this rejection by filing a terminal disclaimer with respect to the '066 patent.

17. Mr. Joshua Malone ("Malone") is the named inventor of each of the '066 patent and the '749 patent. Additionally, on information and belief, Malone is the owner and President of Tinnus. Malone assigned his rights in the '066 patent and the '749 patent to Tinnus, which exclusively licensed its rights to Zuru.

18. Telebrands designed and developed two water balloon-filling products that it recently began marketing, which it refers to as BATTLE BALLOONS and BATTLE BALLOONS

COLOR COMBAT (collectively, the “BATTLE BALLOONS Products”). BATTLE BALLOONS and BATTLE BALLOONS COLOR COMBAT have connectors with substantially similar configurations; the latter product is designed to fill the balloons with colored water.

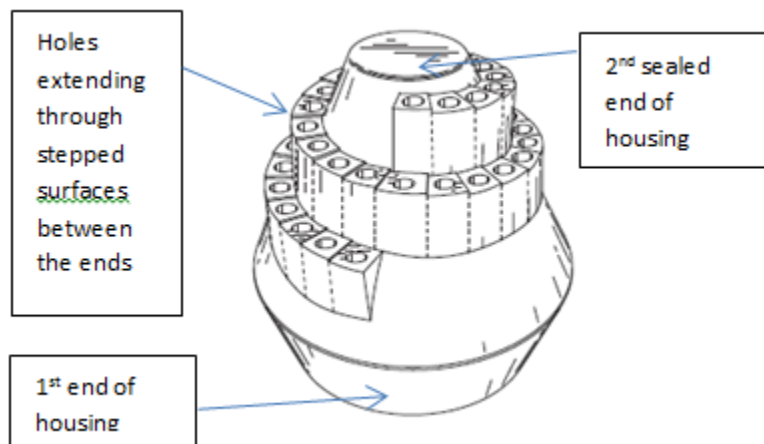
19. The BATTLE BALLOONS Products do not infringe any claim of the '749 patent. Among other things, the '749 patent includes a single independent claim having numerous limitations that are missing from the BATTLE BALLOONS Products, including, *inter alia*, the following limitation: “a housing comprising an opening at a first end, and ***a plurality of holes extending through a common face of the housing at a second end.***” Figure 2 of the '749 patent, reproduced below, illustrates this feature:



Specifically, the '749 patent discloses that the housing (12) includes an opening (22) at a first end (A) for connection to a water supply, and a plurality of holes (26) extending through a common

face of the housing at a second end (B) for connection to tubes (16) that conduct fluid to fill balloons (18A).

20. The BATTLE BALLOONS Products do not include “a plurality of holes extending through *a common face of the housing at a second end,*” as claimed in the ’749 patent. As illustrated in the drawing of the housing of the BATTLE BALLOONS Products below, one end of the housing (the end on the bottom that is not readily visible) has an internal opening that fastens to a faucet or hose coupling. The other end surface (shown at the top of the drawing) is a flat face with no holes. A specially designed helical, structure winds around the longitudinal axis of the housing in between the two ends of the housing. The helical structure has multiple stepped faces through which holes extend for connecting to tubes (not shown) for filling water balloons. Each stepped face includes a single hole. Thus there are not “a plurality of holes extending through a common surface of the housing at a second end” in the BATTLE BALLOONS Products.



21. Another limitation of claim 1 of the ’749 patent requires “a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing.” The BATTLE BALLOONS Products do not include this feature of the claims either for at least reasons similar to those discussed above. Other limitations of independent claim

1 also are not present in the BATTLE BALLOONS Products. Because the BATTLE BALLOONS Products are missing at least one limitation of the sole claim 1 of the '749 patent, there can be no literal infringement of the '749 patent.

22. During prosecution of the '066 patent, the claims were amended to recite the claimed limitation of “**a plurality of holes extending through a common face of the housing** at a second end.” In addition, during its prosecution of the '066 patent, the applicant argued that this claim limitation distinguished its invention from the prior art. Because the '749 patent is a continuation of the '066 patent, the doctrine of prosecution history estoppel precludes Zuru for asserting that “**a plurality of holes extending through a common face of the housing** at a second end” is present in the BATTLE BALLOONS Products under the doctrine of equivalents with respect to the '749 patent.

23. On December 16, 2015, *after* Telebrands filed a declaratory judgment action in this judicial district, seeking a declaration of non-infringement of the '066 patent, *Telebrands Corp. v. Zuru Ltd.*, Civil Action No. 2:15-cv-08675-CCC-MF (D.N.J.), Zuru and Tinnus sued Telebrands in the Eastern District of Texas, *Tinnus Enterprises, LLC, et al. v. Telebrands Corp.*, Civil Action No. 6:15-cv-1154-RWS-JDL (E.D. Tex.), alleging that Telebrands' BATTLE BALLOONS Products infringe the '066 patent. Zuru has not articulated any basis for asserting that the BATTLE BALLOONS Products infringe the '066 patent.

24. Because Zuru has asserted that the BATTLE BALLOONS Products infringe the '066 patent, Zuru undoubtedly will assert that the BATTLE BALLOONS Products infringe the '749 patent, whose sole independent claim is nearly identical to the independent claim of the '066 patent.

25. Accordingly, there is a substantial controversy between Telebrands and Zuru,

whose legal interests are adverse and of sufficient immediacy and reality to warrant the issuance of a declaratory judgment as to whether Telebrands' BATTLE BALLOONS Products infringe the '749 patent, and whether the '749 patent is unenforceable.

26. The attorney of record for the prosecution of the patent application that issued as the '749 patent is Mr. Brett Mangrum ("Patent Counsel").

27. On May 28, 2015, Tinnus filed application serial no. 14/723,953, which issued as the '749 patent, as a continuation of application serial no. 14/492,487, which issued as the '066 patent.

28. 37 C.F.R. § 1.56(a) sets forth that, "Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability."

29. Additionally, 37 C.F.R. § 1.56(a) sets forth that, "The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98."

30. 37 C.F.R. § 1.56(b) defines "information that is material to patentability" as follows:

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

31. Each of Patent Counsel, Malone and Tinnus is subject to the duty of disclosure set

forth in 37 C.F.R. § 1.56(a).

32. On June 22, 2015, Telebrands filed a petition for post-grant review (“PGR Petition”) of the ’066 patent at the U.S. Patent and Trademark Office before the Patent Trial and Appeals Board (“Board”), asserting, *inter alia*, that all claims of the patent were invalid under 35 U.S.C. §§ 112 and/or 103.

33. Neither Patent Counsel, Malone nor Tinnus promptly disclosed the PGR Petition to the Examiner who was examining the application that issued as the ’749 patent, and made no such disclosure at any time before issuance of a notice of allowance.

34. On September 1, 2015, a notice of allowance issued in connection with the application that resulted in the ’749 patent. The issue fee was paid on September 2, 2015.

35. On September 14, 2015, Patent Counsel filed a petition, which was granted that same day, withdrawing the application that resulted in the ’749 patent from issuance. The petition was accompanied by an Information Disclosure Statement (“IDS”), disclosing Telebrands’ PGR Petition, nearly three months after it was filed.

36. On December 14, 2015, a supplemental notice of allowance was issued in connection with the application that resulted in the ’749 patent. Since the issue fee had already been paid previously, it did not have to be paid again.

37. On January 4, 2016, prior to issuance of the ’749 patent but *after* payment of the issue fee, the Board issued its decision instituting post-grant review of the ’066 patent (“PGR Decision”). In its decision, the Board determined that “it is more likely than not that Petitioner [Telebrands] would prevail in showing that claims [1-6, 8, and 10-14 of the ’066 patent] are unpatentable,” under 35 U.S.C. § 112(b) and/or 35 U.S.C. § 103(a). A copy of the PGR Decision is attached as Exhibit B.

38. The PGR Decision is material to patentability of the '749 patent. The PGR Decision is material for at least the following reasons: (i) the applicant filed a terminal disclaimer in the '749 patent because the Examiner found that the claims of the '749 patent are not patentably distinct from the claims of the '066 patent; and (ii) the sole allowed claim of the '749 patent is nearly identical to the sole independent claim of the '066 patent. Accordingly, the claim of the '749 patent is more likely than not invalid for at least the reasons stated in the PGR Decision, and this was known to Patent Counsel, Malone and Tinnus.

39. Prior to issuance of the '749 patent, on January 7, 2016 and January 25, 2016, counsel for Telebrands contacted Patent Counsel, provided him with a copy of the PGR Decision, and reminded him of his duty of disclosure.

40. Tinnus, a party to the PGR proceeding with respect to the '066 patent, and Malone, the owner and President of Tinnus, were also aware of the PGR Decision prior to issuance of the '749 patent.

41. On January 21, 2016, Patent Counsel submitted an Applicant Summary of Examiner Interview to the USPTO, in which he stated that on January 11, 2016, an Examiner Interview was conducted and the Examiner was aware of the PGR Decision. The PGR Decision was not made of record, and there is no indication that the Examiner of the application that issued as the '749 patent considered it.

42. Neither Patent Counsel, Malone, nor Tinnus submitted the PGR Decision to the USPTO in the manner prescribed by §§ 1.97(b)-(d) and 1.98 prior to issuance of the '749 patent. Additionally, the USPTO did not cite the PGR Decision prior to issuance of the '749 patent.

43. Patent Counsel, Malone, and Tinnus knew that by failing to submit the PGR Decision to the USPTO in the manner prescribed by §§ 1.97(b)-(d) and 1.98, the application that

resulted in the '749 patent would not be withdrawn from issuance.

44. The failure of Patent Counsel, Malone, and Tinnus to disclose the PGR Decision in accordance with 37 C.F.R. § 1.56 was done with a specific intent to deceive the USPTO, and was intended to prevent and did prevent withdrawal of the application that resulted in the '749 patent from issuance.

COUNT ONE
DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '749 PATENT

45. Telebrands repeats and realleges all of the factual allegations made above and incorporates them herein by reference.

46. Telebrands has not infringed and does not infringe, directly or indirectly, either literally or under the doctrine of equivalents, any claim of the '749 patent through the manufacture, use, sale, offer to sell, or importation of the BATTLE BALLOONS Products.

47. Accordingly, Telebrands seeks a declaratory judgment, pursuant to 28 U.S.C. §§ 2201-02 that no claim of the '749 patent is infringed by Telebrands' manufacture, use, sale, offer to sell, or importation of the BATTLE BALLOONS Products.

48. Telebrands has no adequate remedy at law.

49. Accordingly, Telebrands seeks a declaratory judgment, pursuant to 28 U.S.C. §§ 2201-02 that the '749 patent is not infringed.

COUNT TWO
DECLARATORY JUDGMENT OF UNENFORCEABILITY OF THE '749 PATENT

50. Telebrands repeats and realleges all of the factual allegations made above and incorporates them herein by reference.

51. The '749 patent is unenforceable due to Patent Counsel's, Malone's, and Tinnus' inequitable conduct before the USPTO.

52. Patent Counsel, Malone, and Tinnus had a general duty of candor and good faith in its dealings with the USPTO. Pursuant to 37 C.F.R. § 1.56, an inventor has an affirmative obligation to disclose to the USPTO all information that he knows to be material to the examination of his pending patent application. The inventor's duty extends to his representatives, such as his attorneys, and all others who are substantially involved in the preparation and prosecution of the patent application.

53. Patent Counsel, Malone, and Tinnus knew of their duty of candor and good faith in connection with the '749 patent.

54. Patent Counsel, Malone, and Tinnus breached their duty of candor and good faith before the USPTO.

55. Patent Counsel, Malone, and Tinnus knew the PGR Decision was material to patentability of the '749 patent prior to issuance of the application that resulted in the '749 patent.

56. Patent Counsel, Malone, and Tinnus acted with the specific intent to deceive the USPTO by failing to disclose the PGR Decision to the USPTO in accordance with 37 C.F.R. § 1.56.

57. Telebrands has no adequate remedy at law.

58. Accordingly, Telebrands seeks a declaratory judgment, pursuant to 28 U.S.C. §§ 2201-02 that the '749 patent is unenforceable.

PRAYER FOR RELIEF

WHEREFORE, Telebrands demands judgment as follows:

- a. Entering judgment in Telebrands' favor and against Zuru on its claims;
- b. Declaring that the BATTLE BALLOONS Products do not infringe any claim of the '749 patent;

- c. Declaring that the '749 patent is unenforceable;
- d. Preliminarily and permanently enjoining Zuru, its agents, factories, servants, employees and attorneys and all those acting in concert or participation with them from falsely representing or suggesting in the U.S. that the BATTLE BALLOONS Products infringe the '749 patent;
- e. Declaring this case an exceptional case and awarding Telebrands its attorneys' fees; and
- f. Granting such other and further relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Telebrands demands a jury trial on all issues and claims so triable.

Respectfully submitted,

Dated: January 26, 2016

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CERTIFICATION PURSUANT TO L. CIV. R. 11.2

Pursuant to Local Civil Rule 11.2, I hereby certify that the matter in controversy is related to the following actions:

(1) The action filed on January 27, 2015 and pending in the United States District Court for the District of New Jersey: *Zuru, Ltd. v. Telebrands Corp.*, No. 2:15-cv-00548-CCC-MF;

(2) The action filed on June 9, 2015 and pending in the United States District Court for the Eastern District of Texas: *Tinnus Enterprises, LLC, et al. v. Telebrands Corp., et al.*, No. 6:15-cv-00551 (RWS)(JDL);

(3) The action filed on December 15, 2015 and pending in the United States District Court for the District of New Jersey: *Telebrands Corp. v. Zuru, Ltd.*, No. 2:15-cv-08675-CCC-MF; and

(4) The action filed on December 16, 2015 and pending in the United States District Court for the Eastern District of Texas: *Tinnus Enterprises, LLC, et al. v. Telebrands Corp.*, No. 6:15-cv-01154 (RWS)(JDL).

January 26, 2016

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Attorneys for Plaintiff Telebrands Corp.

CERTIFICATION PURSUANT TO L. CIV. R. 201.1

Pursuant to Local Civil Rule 201.1, Telebrands, through its attorneys, certifies that the above captioned matter is not subject to compulsory arbitration.

January 26, 2016

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EXHIBIT A

US009051066B1

(12) **United States Patent**
Malone

(10) **Patent No.:** **US 9,051,066 B1**
(45) **Date of Patent:** **Jun. 9, 2015**

(54) **SYSTEM AND METHOD FOR FILLING CONTAINERS WITH FLUIDS**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(71) Applicant: **TINNUS ENTERPRISES, LLC**, Plano, TX (US)

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2,553,941	A *	5/1951	Raab	446/186

(72) Inventor: **Joshua Malone**, Plano, TX (US)

(73) Assignee: **TINNUS ENTERPRISES, LLC**, Plano, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(Continued)

(21) Appl. No.: **14/492,487**

FOREIGN PATENT DOCUMENTS

(22) Filed: **Sep. 22, 2014**

FR	2911512	*	7/2008
GB	294273		7/1928

(Continued)

Related U.S. Application Data

OTHER PUBLICATIONS

(60) Provisional application No. 61/942,193, filed on Feb. 20, 2014, provisional application No. 61/937,083, filed on Feb. 7, 2014.

Balloon Powered Boat, May 17, 2011, <http://alittlelearningfortwo.blogspot.com/>.*

(Continued)

(51) **Int. Cl.**
B65B 3/04 (2006.01)
B65B 3/28 (2006.01)
A63H 27/10 (2006.01)

Primary Examiner — Kevin P Shaver
Assistant Examiner — Andrew Stclair

(52) **U.S. Cl.**
CPC ... **B65B 3/04** (2013.01); **B65B 3/28** (2013.01);
A63H 2027/1041 (2013.01); **A63H 27/10** (2013.01)

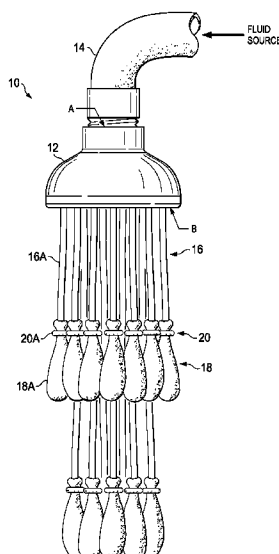
(57) **ABSTRACT**

(58) **Field of Classification Search**
CPC A63H 27/10; A63H 2027/1041; A63H 2027/105; A63H 2027/1033; B65B 3/04; B65B 3/28
USPC 141/234–248, 10, 114; 383/3, 71; 446/220–226

An example embodiment of an apparatus includes a housing with an opening at a first end and a plurality of holes at a second end, a plurality of hollow tubes attached to the plurality of holes, a plurality of containers removably attached to the hollow tubes, and a plurality of elastic fasteners, each elastic fastener clamping each container to a corresponding hollow tube, such that when the containers are filled with fluid and detached from the corresponding hollow tubes, each elastic fastener seals each container with the fluid inside.

See application file for complete search history.

14 Claims, 6 Drawing Sheets



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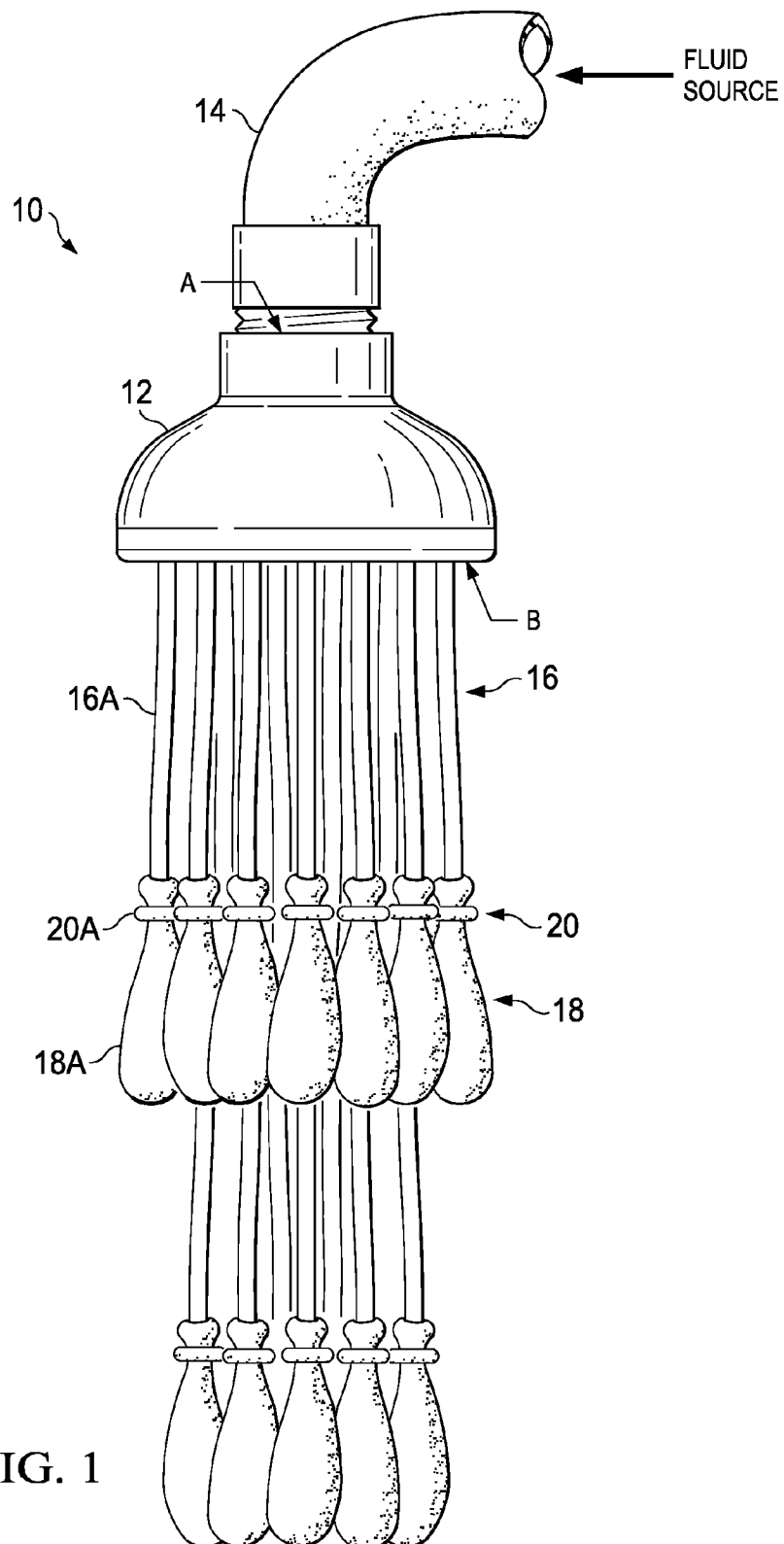
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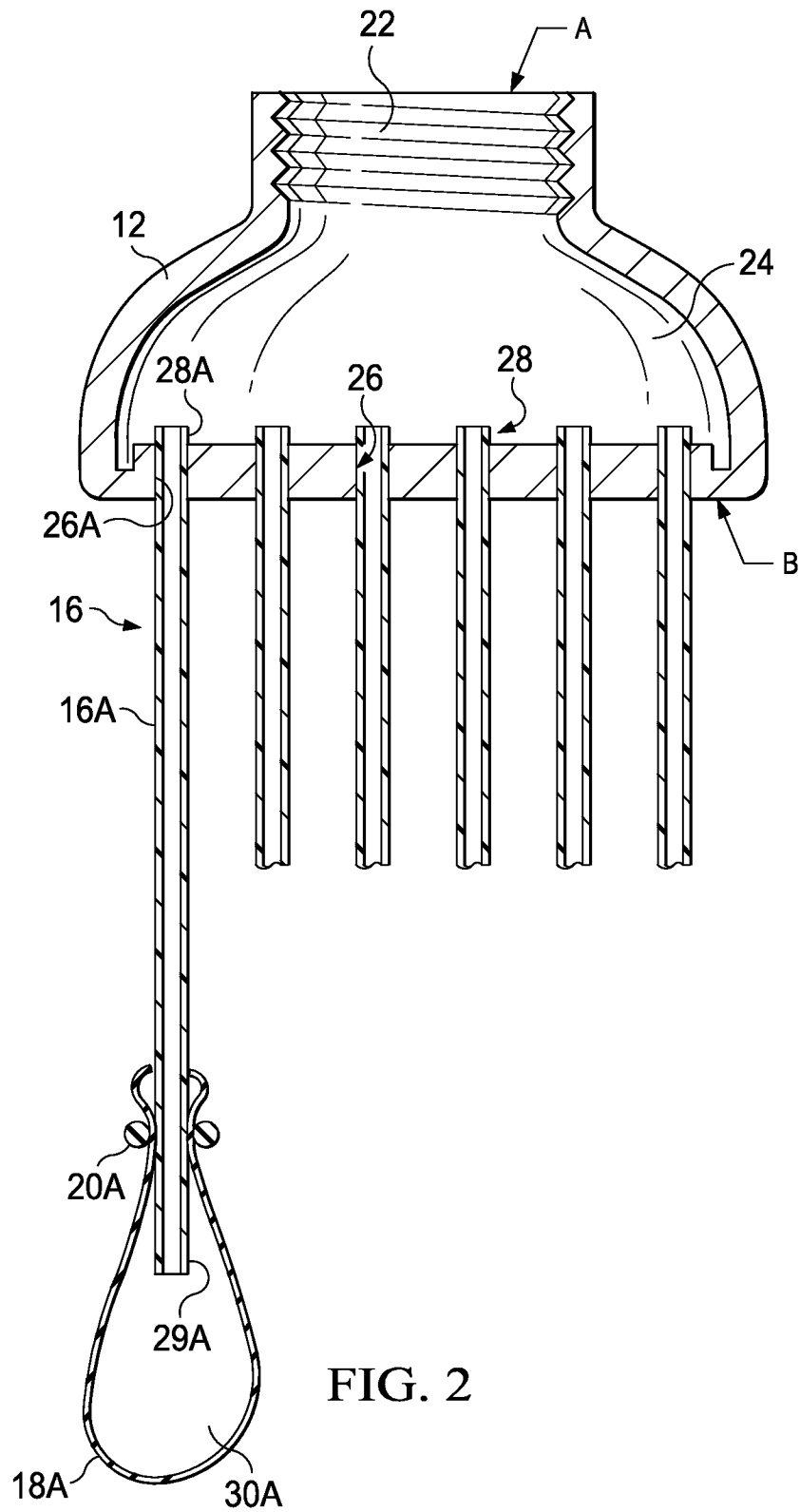


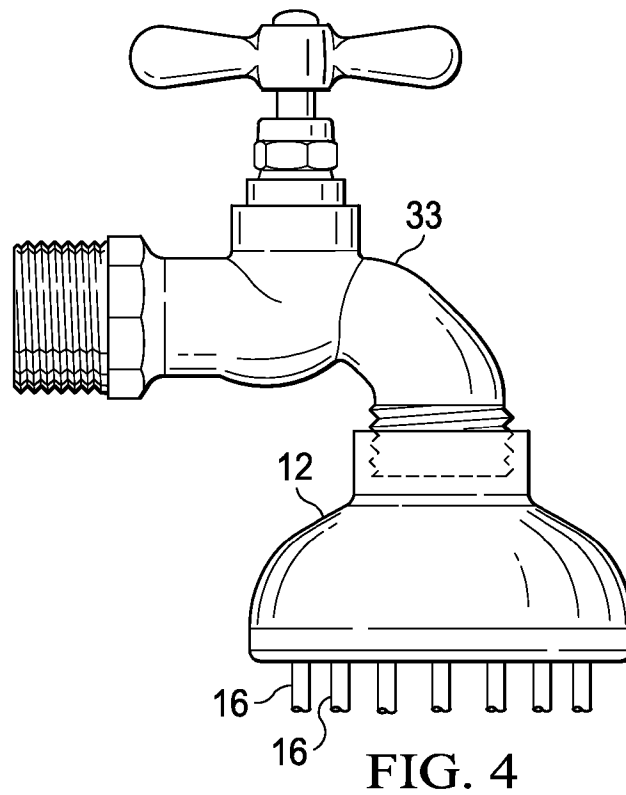
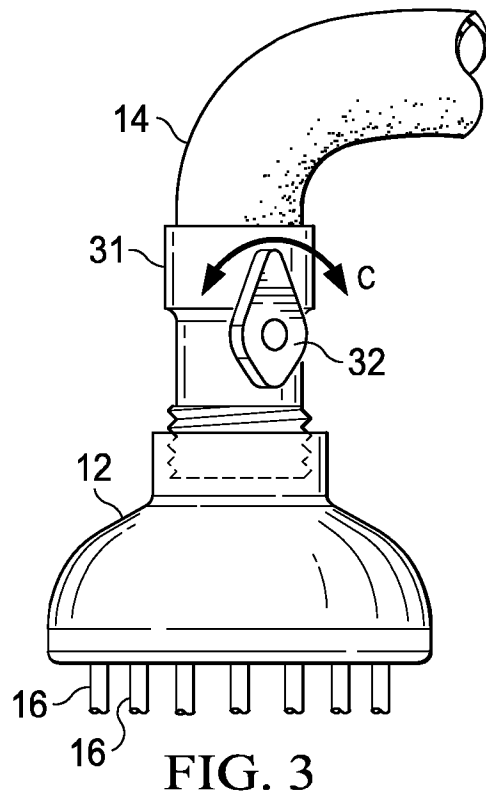
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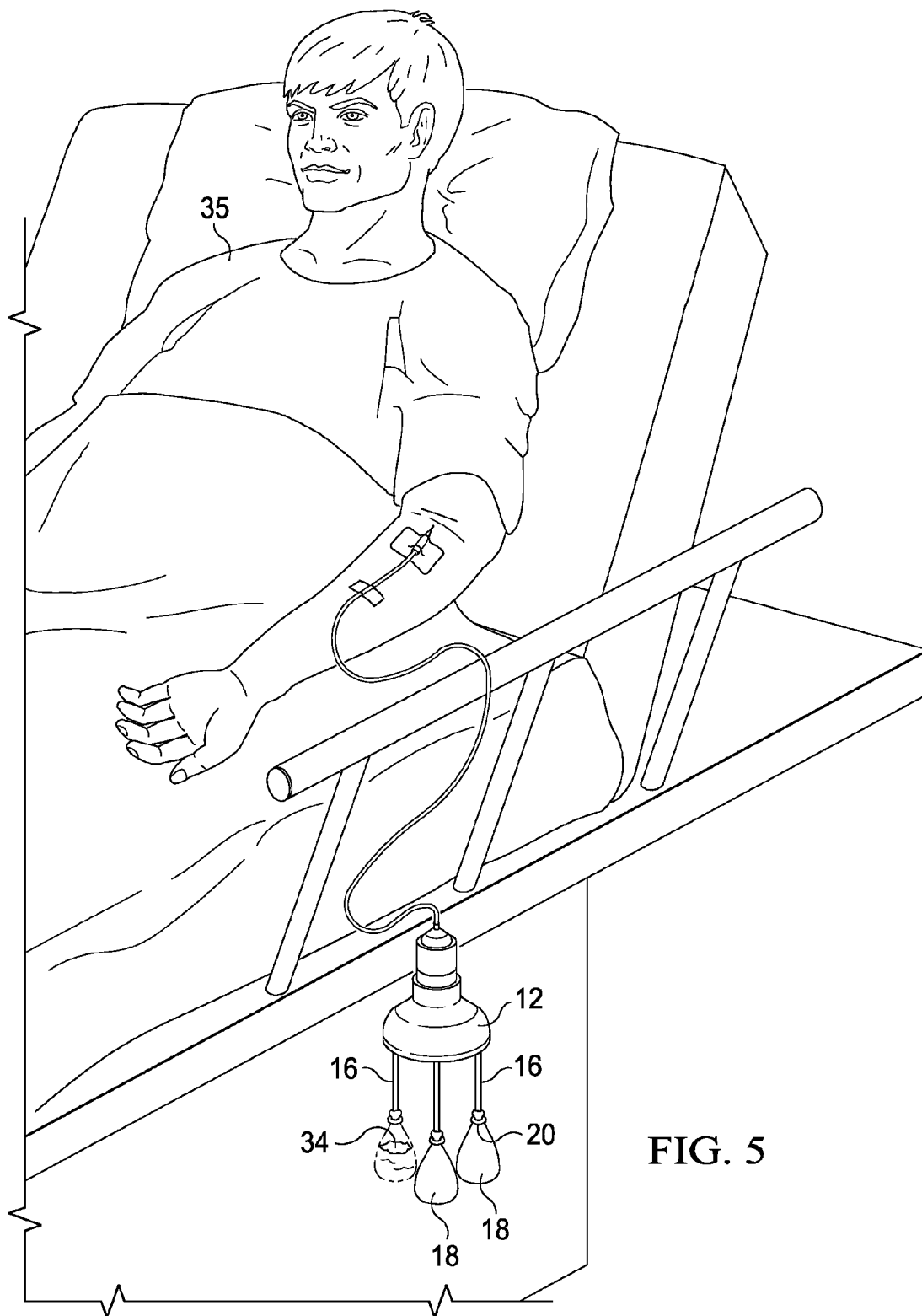


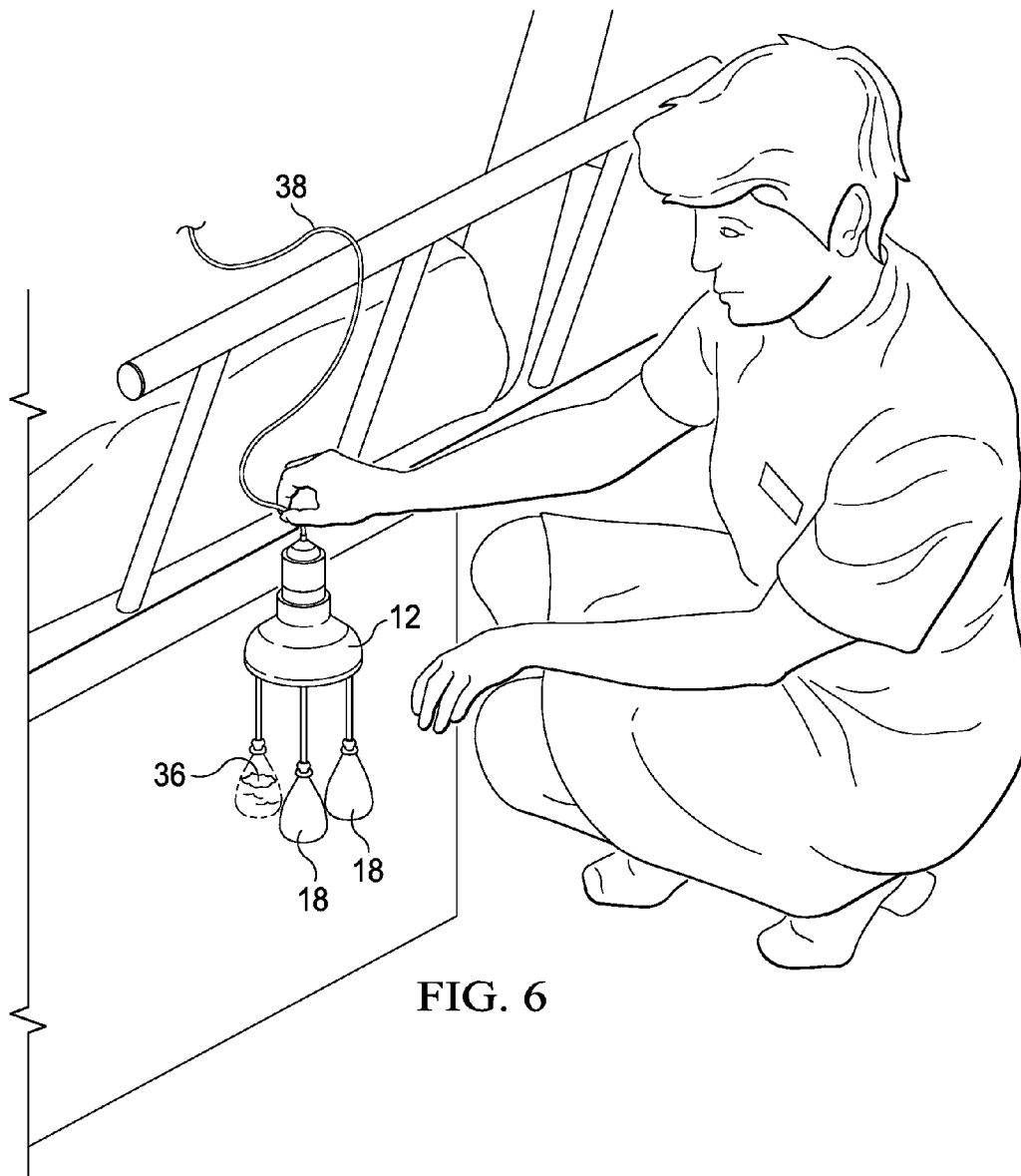
FIG. 5

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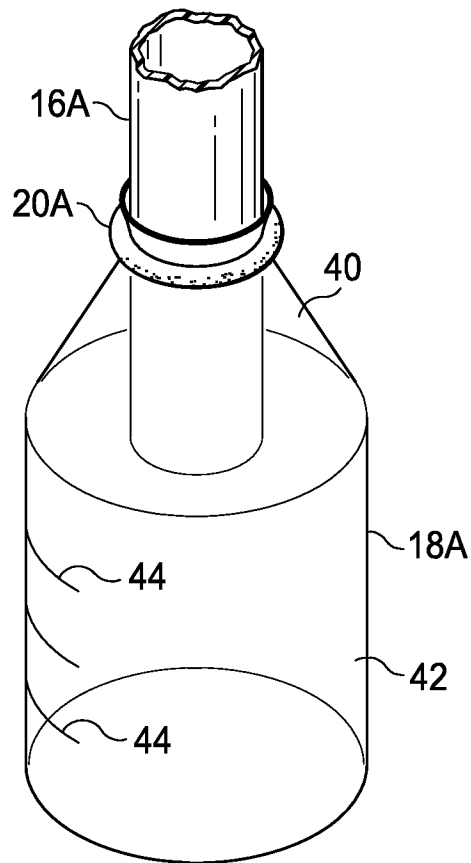


FIG. 7

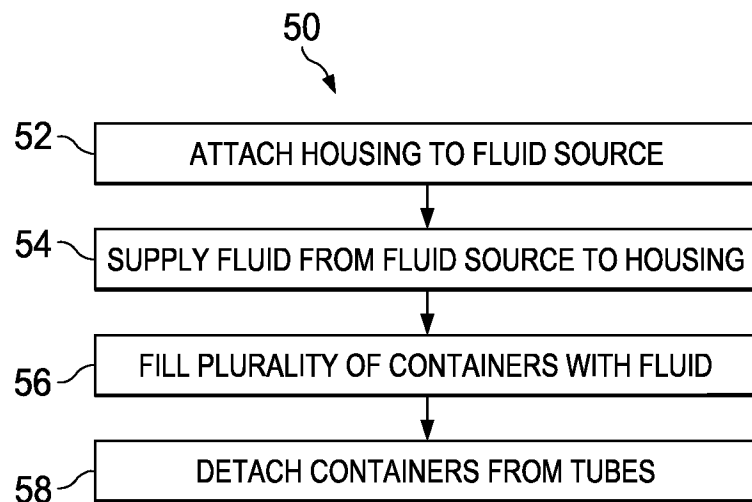


FIG. 8

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**SYSTEM AND METHOD FOR FILLING
CONTAINERS WITH FLUIDS****CROSS-REFERENCE TO RELATED
APPLICATIONS**

This application claims the benefit of priority under 35 U.S.C. §119(e) to U.S. Provisional Application Ser. No. 61/937,083 entitled "SYSTEM AND METHOD FOR FILLING INFLATABLE CONTAINERS WITH LIQUID" filed Feb. 7, 2014 and to U.S. Provisional Application Ser. No. 61/942,193 entitled "SYSTEM AND METHOD FOR FILLING INFLATABLE CONTAINERS WITH FLUIDS" filed Feb. 20, 2014, which are hereby incorporated by reference in their entireties.

TECHNICAL FIELD

The present disclosure relates generally to fluid inflatable systems and more particularly, to a system and method for filling containers with fluids.

BACKGROUND

Inflatable containers such as balloons can be filled with a variety of fluids, such as air, helium, water, medicines, etc. In some cases, a lot of inflatable containers may need to be filled with fluids. For example, balloons used as props in conventions, large parties, etc. may number in the hundreds and may require substantial human effort to fill them all in a timely manner. In another example, water balloons used as kids' toys may need to be filled in large numbers to aid in various games. Various methods may be employed to fill such inflatable containers. For example, an individual may blow up and tie each balloon by hand or use a tank of compressed air or helium to inflate the balloon, which then has to be tied. In another example, an individual may fill water balloons with water by hand one at a time, and then tie the balloons, which can all be quite time-consuming. Moreover, the inflatable containers may be damaged or filled to different volumes.

BRIEF DESCRIPTION OF THE DRAWINGS

To provide a more complete understanding of the present disclosure and features and advantages thereof, reference is made to the following description, taken in conjunction with the accompanying figures, wherein like reference numerals represent like parts, in which:

FIG. 1 is a simplified perspective view illustrating an example configuration of an embodiment of a system for filling containers with fluids;

FIG. 2 is a simplified diagram illustrating a cross-sectional view of example details of an embodiment of the system;

FIG. 3 is a simplified diagram illustrating other example details of an embodiment of the system;

FIG. 4 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 5 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 6 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 7 is a simplified diagram illustrating yet other example details of an embodiment of the system; and

FIG. 8 is a simplified flow diagram illustrating example operations that may be associated with an embodiment of the system.

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**DETAILED DESCRIPTION OF EXAMPLE
EMBODIMENTS****Overview**

5 An example embodiment of an apparatus includes a housing (e.g., casing, covering, etc. with a cavity inside) with an opening at a first end and a plurality of holes at a second end, a plurality of hollow tubes attached to the plurality of holes, a plurality of containers (e.g., receptacles, vessels, ampules, test-tubes, balloons, etc.) removably attached to the hollow tubes, and a plurality of elastic fasteners, each elastic fastener clamping each container to a corresponding hollow tube, such that when the containers are filled with fluid and detached from the corresponding hollow tubes, each elastic fastener seals each container with the fluid inside.

Example EMBODIMENTS

It is to be understood that the following disclosure describes several example embodiments for implementing different features, structures, or functions of the system. Example embodiments of components, arrangements, and configurations are described herein to simplify the present disclosure. However, these example embodiments are provided merely as examples and are not intended to limit the scope of the invention.

The present disclosure may repeat reference numerals and/or letters in the various exemplary embodiments and across the Figures provided herein. This repetitions is for the purpose of simplicity and clarity and does not in itself indicate a relationship between the various exemplary embodiments and/or configurations discussed in the various Figures.

FIG. 1 is a simplified diagram illustrating an example embodiment of a system 10 for filling containers with fluids. System 10 includes a housing 12 removably attached to a hose 14 (e.g., tube, pipe, etc.) on a first end A and to a plurality of hollow tubes 16 on a second end B. As used herein, the term "housing" encompasses a hollow space enclosed by a rigid or semi-rigid casing (e.g., covering, skin, sleeve, sheath, etc.). In some embodiments, end A may include a threaded opening configured to mate with corresponding threads on hose 14. In some embodiments, end A may be smaller in circumference or area than end B. Hose 14 may be connected to a fluid source, such as a water tank, gas tank, water supply line, etc. on end A. End B may include a plurality of holes (e.g., configured in an array), configured to fit tubes 16. In some embodiments, tubes 16 may be permanently attached (e.g., welded, brazed, stuck with adhesives, press-fitted, etc.) to housing 12. In other embodiments, tubes 16 may be removably attached (e.g., with threads, pressure, etc.) to housing 12.

A plurality of containers 18 may be clamped (e.g., attached, fastened, held, clinched, secured, etc.) to plurality of tubes 16 using elastic valves 20. As used herein, the term "container" refers to an object that can hold something, such as fluids. The term "valve" refers to an object that regulates, directs, or controls the flow of fluids, by opening, closing, or partially obstructing passageways of fluid flow. In an example embodiment, elastic valves 20 comprise elastic fasteners, such as O-rings. In another example embodiments, elastic valves 20 comprise corrugations, smocking, elastic fibers, etc. fabricated into the necks of containers 18 such that force is required to pull open the necks of containers 18, and removal of the force causes the necks to constrict and close. In yet another example embodiment, elastic valves comprise internal or external plugs affixed to the necks of containers 18, through which tubes 16 may be pushed through to clamp containers 18 thereto.

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Note that each of containers **18** have an opening to facilitate clamping to tubes **16** and a cavity for containing fluid. For example, one end of an example tube **16A** may be fitted through a hole in end B of housing **12**, and the other end of tube **16A** may be inserted into an example container **18A**. An example elastic valve **20A** (e.g., O-ring, comprising a mechanical gasket typically in a toroid shape; elastic ring, such as a rubber-band) of sufficient size to expand and clamp around tube **16A** may be disposed around (e.g., placed over) a neck (e.g., portion just below opening) of container **18A**, clamping and sealing container **18A** to tube **16A**. Thus, elastic valve **20A** may be in an open configuration when container **18A** is attached to tube **16A**; in elastic valve **20A**'s open configuration, the neck of container **18A** is open, allowing container **18A** to fill with fluid. After container **18A** is filled with fluid, it may be removed from tube **16A**, whereupon elastic valve **20A** closes, thereby closing the neck of container **18A** and sealing the fluid inside.

In one example embodiment, containers **18** may comprise inflatable balloons that may be filled with fluids such as water, air or helium. In another example embodiment, containers **18** may comprise flexible (e.g., stretchy, springy, etc.) elastic containers that may be filled with gaseous or liquid medications. As used herein, the term "elastic" is meant to refer to a property of a material that allows the material to resume its normal shape spontaneously after contraction, dilation, or distortion. In an example, an elastic material may be stretched to 200% of its original length, and the material may return to its original length when the stretching force is removed.

In yet another example embodiment, containers **18** may comprise flexible containers that may be filled with body fluids (e.g., urine, blood) for example, to collect multiple samples simultaneously for testing. Virtually any type and kind of fluid may be used within the broad scope of the embodiments. Note that in some embodiments, containers **18** need not be inflatable or flexible in their entireties. For example, a bottom portion of containers **18** may be inelastic (e.g., glass, plastic, metal, etc., of fixed shape and size), and a top portion may be flexible enough to be inserted around tubes **16** and clamped thereon.

When the fluid source is turned on, fluid may flow through housing **12**, tubes **16** and fill containers **18**. In some embodiments, when housing **12** is connected to a stream of liquid, containers **18** may be filled with the liquid. In some embodiments, the fluid may be supplied at high pressure. Virtually any mechanism that facilitates fluid flow through tubes **16** at sufficient pressure to fill containers **18** may be used within the broad scope of the embodiments. After containers **18** have reached a desired size or volume, they may be detached from tubes **16**. In one example embodiment, filled containers **18** may be detached by pulling them away from tubes **16**.

In another example embodiment, the connecting force holding filled containers **18** to tubes **16** may be overcome by an upward acceleration on tubes **16**, for example, when they are shaken. Thus, filled containers **18** may be detached by shaking housing **12** (or tubes **16**) sufficiently vigorously to cause containers **18** to fall off from tubes **16**. In some embodiments, the connecting force holding filled container to its corresponding tube is not less than the weight of the filled container; in a specific embodiment, the connecting force holding each container to its corresponding tube is exactly equal to the weight of the filled container. The connecting force may be provided by a combination of constricting forces and friction forces from elastic valves **20**.

In yet other embodiments, containers **18** may fall off under gravity; for example, when filled containers **18** reach a threshold weight, they slip off tubes **16** due to gravity. The threshold

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weight may be based upon the tightness of elastic valves **20**, friction between tubes **16** and containers **18**, and force from the weight of containers **18** (among other parameters). In various embodiments, containers **14** may slide off tubes **16** and elastic valves **20** may constrict the necks of containers **18**, sealing them. In some embodiments, containers **18** may be marked with volumetric measurements, and fluid flow may be turned off when the fluid has filled containers **18** to a desired volume.

In some embodiments, hollow tubes **16** may be made of a rigid material (e.g., steel, glass); in other embodiments, tubes **16** may be made of a flexible material (e.g., thin plastic). In some embodiments, tubes **16** may be thick, short and rigid; in other embodiments, tubes **16** may be slender, long and flexible. Thus, hollow tubes **16** may be flexible, semi-rigid, or rigid, based on its material of construction, design, or a combination thereof. Note that tubes **16** may be of different lengths, for example, to prevent crowding and to accommodate a larger number of containers **18** than would be possible if tubes **16** were of the same length. Thus, at least some of hollow tubes **16** may be of different lengths than the others.

Also, tubes **16** may be flexible to enable containers **18** to expand. Thus, as containers **18** fill with fluid and expand, they may push against each other, flexing tubes **16**. The outermost tubes **16** may be flexed more than the innermost tubes **16** (outer and inner being in reference to a center-point of housing **12**, with the inner tubes **16** being closer to the center-point, and the outer tubes **16** being farther from the center-point).

Turning to FIG. 2, FIG. 2 is a simplified cross-sectional view of a portion of an embodiment of system **10**. Housing **12** comprises a threaded opening **22** at end A, an internal cavity **24**, and an array of holes **26** at end B. Internal cavity **24** facilitates distributing the fluid entering at threaded opening **22** to array of holes **26** at end B. In some embodiments, threaded opening **22** may be configured for attaching to a fluid supply hose **14** (e.g., garden hose, plastic tube, etc.). In other embodiments, threaded opening **22** may be attached to corresponding threads in a valve. Array of holes **26** may be configured for connecting first ends **28** of tubes **16** by any suitable means. In some embodiments, first ends **28** of tubes **16** may be connected to corresponding holes **26** by compressing or gluing. In some embodiments, a number of holes **26** in housing **12** and a number of tubes **16** can correspond to a number of containers **18** that are desired to be filled and sealed substantially simultaneously.

To clarify further, only one example tube **16A** is shown in the figure. A first end **28A** of tube **16A** is fitted through a corresponding hole **26A** in housing **12**. A second end **29A** of tube **16A** is inserted into container **18A**. Elastic valve **20A** may be placed around the neck of container **18A** clamping the neck to tube **16A**. An internal volume **30A** of container **18A** may be filled with fluid appropriately.

To fill and seal containers **18**, housing **12** may be attached to a fluid supply tube (e.g., garden hose) and the fluid supply may be turned on. The fluid enters housing **12**, is distributed to holes **26**, travels down tubes **16**, and fills containers **18**. Containers **18** may be filled and may expand substantially simultaneously. When containers **18** have reached a desired size and/or they are filled with the desired volume of fluid, they may be removed from tubes **16**. They can be removed by falling off, by shaking them off, by pulling them off by hand, etc. As each container **18A** is removed from corresponding tube **16A**, respective elastic valve **20A** may constrict and close the neck of container **18A**, sealing it with the fluid inside.

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Turning to FIG. 3, FIG. 3 is a simplified diagram illustrating example details of a valve 31 that may be attached between hose 14 and housing 12 according to an embodiment of system 10. One end of valve 31 may be attached to hose 14 and the other end may be attached to threaded opening 22 of housing 12 (e.g., using threads). A lever 32 may be turned from one side (of valve 31) to another (e.g., as indicated by arrow C) to turn on and turn off fluid flow to housing 12. For example, to turn on the fluid flow, lever 32 may be turned to a first position; lever 32 may be turned to a second position (e.g., different from the first position) to turn off fluid flow.

Turning to FIG. 4, FIG. 4 is a simplified diagram illustrating example details of an embodiment of system 10. Housing 12 may be attached to a spigot 33 (e.g., nozzle, faucet, outlet, etc.) that connects to the fluid source. Spigot 33 may be turned on or turned off to start or stop fluid flow to housing 12.

Turning to FIG. 5, FIG. 5 is a simplified diagram illustrating example details of an application of an embodiment of system 10. Embodiments of system 10 may be used in a variety of applications, such as for collecting numerous blood samples substantially simultaneously. Blood 34 may be drawn from a human (or animal) and blood 34 may collect substantially simultaneously in plurality of containers 18. The substantial simultaneous collection of blood in such manner can ease patient pain, speed up sampling time, and enable taking multiple samples substantially simultaneously without cross-contamination from one container to another or messy transfers between containers.

Turning to FIG. 6, FIG. 6 is a simplified diagram illustrating example details of an application of an embodiment of system 10. Embodiments of system 10 may be used in a variety of applications, such as for collecting numerous urine samples substantially simultaneously. Urine 36 may be drawn from a human (or animal) through a suitable catheter 38, and may collect substantially simultaneously in plurality of containers 18.

Turning to FIG. 7, FIG. 7 is a simplified diagram illustrating example details of an embodiment of system 10. Example container 18A may comprise a flexible portion 40 and an inflexible portion 42. Flexible portion 40 may be clamped on to example tube 16A using example elastic valve 20A. In some embodiments, container 18A may comprise volumetric measurement markings 44. When fluid fills container 18A to a desired volume, for example, as indicated by volumetric measurement marking 44, container 18A may be detached from tube 16A, whereupon elastic valve 20A may close container 18A, sealing the fluid inside.

Turning to FIG. 8, FIG. 8 is a simplified flow diagram 50 illustrating example operations that may be associated with an embodiment of system 10. At 52, housing 12 may be attached to a fluid source (e.g., through hose 14, spigot 33, etc.) At 54, fluid may be supplied from the fluid source to housing 12. At 56, plurality of containers 18 may be filled with the fluid. At 58, containers 18 may be detached from corresponding tubes 16.

Note that in this Specification, references to various features (e.g., elements, structures, modules, components, steps, operations, characteristics, etc.) included in "one embodiment", "example embodiment", "an embodiment", "another embodiment", "some embodiments", "various embodiments", "other embodiments", "alternative embodiment", and the like are intended to mean that any such features are included in one or more embodiments of the present disclosure, but may or may not necessarily be combined in the same embodiments.

The elements described herein may be made of any suitable materials, including metal (e.g., stainless steel, copper, brass,

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bronze, aluminum, etc.), plastic, glass, elastomers, or any suitable combination thereof. Each element may also be made of a combination of different materials (e.g., housing and tubes may be made of plastic and containers may be made of elastic rubber; housing and tubes may be made of stainless steel and containers may be made of a combination of glass and flexible plastic; etc.). Any suitable material or combination of materials may be used for the components described herein without departing from the broad scope of the present disclosure.

In addition, the shapes shown and illustrated in the various FIGURES are for example purposes only. Various other shapes may be used herein without changing the scope of the present disclosure. For example, housing 12 may be conical, cylindrical, pyramidal, etc., without departing from the broad scope of the embodiments. Likewise, tubes 16 may be rigid, or flexible 18 without departing from the scope of the broad embodiments.

While the disclosure references several particular embodiments, those skilled in the art will be able to make various modifications to the described embodiments without departing from the true spirit and scope of the disclosure. It is intended that all elements or steps which are insubstantially different from those recited in the claims but perform substantially the same functions, respectively, in substantially the same way to achieve the same result as what is claimed are within the scope of the disclosure.

What is claimed is:

1. An apparatus comprising:

- a housing comprising an opening at a first end, and a plurality of holes extending through a common face of the housing at a second end;
 - a plurality of flexible hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing;
 - a plurality of containers, each container removably attached to a respective one of the hollow tubes; and
 - a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a corresponding hollow tube, and each elastic fastener configured to provide a connecting force that is not less than a weight of one of the containers when substantially filled with water, and to automatically seal its respective one of the plurality of containers upon detaching the container from its corresponding hollow tube, such that shaking the hollow tubes in a state in which the containers are substantially filled with water overcomes the connecting force and causes the containers to detach from the hollow tubes thereby causing the elastic fasteners to automatically seal the containers,
- wherein the apparatus is configured to fill the containers substantially simultaneously with a fluid.

2. The apparatus of claim 1, wherein the first end of the housing has an outermost perimeter that is smaller in length than an outermost perimeter of second end.

3. The apparatus of claim 1, wherein the opening at the first end of the housing has a threaded inner surface.

4. The apparatus of claim 1, wherein each container comprises an expandable balloon portion.

5. The apparatus of claim 1, wherein each container comprises a rigid portion and a flexible portion, the flexible portion disposed between the clamp and the respective one of the plurality of tubes.

6. The apparatus of claim 1, wherein each container comprises a volumetric measurement marking providing a visual reference for filling the container to a desired volume.

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7. The apparatus of claim 1, wherein the clamp is disposed outwardly from the container and clamps an inner surface of the container against an outer surface of the respective one of the plurality of tubes.

8. The apparatus of claim 1, wherein the fluid comprises one or more of water, air and helium. 5

9. The apparatus of claim 1, wherein each clamp comprises an O-ring configured to automatically seal the container in response to a force applied to the container in a direction away from the housing. 10

10. The apparatus of claim 1, wherein the plurality of tubes comprise a first set of tubes each having a first length, and a second set of tubes each having a second length longer than the first length.

11. The apparatus of claim 1, wherein the housing is attached to a valve coupled to a fluid source, wherein the valve is configured to control delivery of the fluid to fill the plurality of containers. 15

12. The apparatus of claim 11, wherein the valve includes a lever that can be turned to a first position to turn on the valve and allow fluid flow to the housing, wherein the lever can be turned to a second position to turn off the valve and stop fluid flow to the housing. 20

13. The apparatus of claim 11, wherein one end of the valve is connected to a hose attached to a water supply, and the other end is threaded to the housing. 25

14. The apparatus of claim 1, wherein each hole at the second end of the housing extends through an outer surface of the housing, the outer surface opposing the opening at the first end of the housing. 30

* * * * *

EXHIBIT B

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Paper 7
Entered: January 4, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TELEBRANDS CORP.,
Petitioner,

v.

TINNUS ENTERPRISES, LLC,
Patent Owner.

Case PGR2015-00018
Patent 9,051,066 B1

Before PHILLIP J. KAUFFMAN, RICHARD E. RICE, and
TIMOTHY J. GOODSON, *Administrative Patent Judges*.

RICE, *Administrative Patent Judge*.

DECISION
Institution of Post-Grant Review
37 C.F.R. § 42.208

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I. INTRODUCTION

Telebrands Corp. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) for post-grant review of claims 1–14 of U.S. Patent No. 9,051,066 B1 (Ex. 1001, “the ’066 Patent”). Tinnus Enterprises, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 324, which provides that a post-grant review may be instituted only if “the information presented in the petition . . . demonstrate[s] that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” We determine that the information presented in the Petition demonstrates that it is more likely than not that Petitioner would prevail in showing that the challenged claims, except claims 7 and 9, are unpatentable.¹ Pursuant to 35 U.S.C. § 324, we authorize a post-grant review to be instituted as to claims 1–6, 8, and 10–14 of the ’066 Patent.

A. *Related Proceedings*

We are informed that Petitioner is named as a defendant in a federal district court case involving the ’066 Patent (*Tinnus Enterprises, LLC v. Telebrands Corp.*, Civil Action No. 6:15-cv-00551-RWS-JDL (E.D. Tex.)). Pet. 3; Prelim. Resp. 7.

B. *The ’066 Patent*

The ’066 Patent, titled “System and Method for Filling Containers with Fluids,” issued from U.S. Application No. 14/492,487, filed Sept. 22,

¹ Patent Owner has filed a statutory disclaimer under 35 U.S.C. § 253(a) in compliance with 37 C.F.R. § 1.321(a), disclaiming claims 7 and 9. *See* Prelim. Resp. 62; Ex. 2011; 37 C.F.R. § 42.207(e).

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2014. Ex. 1001, at (54), (21), (22). The '066 Patent claims the benefit of U.S. Provisional Application No. 61/942,193, filed Feb. 20, 2014, and U.S. Provisional Application No. 61/937,083, filed Feb. 7, 2014 (collectively, “the Provisional Applications”). *Id.* at (60).

Figure 1 of the '066 Patent is reproduced below.

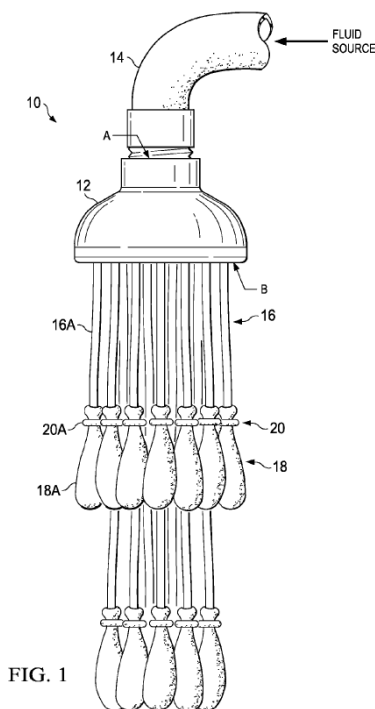


Figure 1 is a simplified diagram illustrating an example embodiment of a system for filling containers with fluids. *Id.* at 2:33–34. As shown in Figure 1, system 10 includes housing 12 removably attached to hose 14 at end A and to a plurality of hollow tubes 16 at end B. *Id.* at 2:35–37. A plurality of containers 18, such as water balloons, may be clamped to plurality of tubes 16 using elastic valves 20, which may comprise elastic fasteners such as O-rings. *Id.* at 2:51–59, 3:19–20. In one embodiment, housing 12 or tubes 16 may be shaken to detach filled containers 18 from tubes 16. *Id.* at 3:55–57. The elastic valves or fasteners may constrict the

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necks of containers 18, sealing them, when the containers slide off tubes 16.
Id. at 4:3–6.

C. Illustrative Claim

Claim 1, which is the sole independent claim, is illustrative of the claimed subject matter, and is reproduced below:

1. An apparatus comprising:
 - a housing comprising an opening at a first end, and a plurality of holes extending through a common face of the housing at a second end;
 - a plurality of flexible hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing;
 - a plurality of containers, each container removably attached to a respective one of the hollow tubes; and
 - a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a corresponding hollow tube, and each elastic fastener configured to provide a connecting force that is not less than a weight of one of the containers when substantially filled with water, and to automatically seal its respective one of the plurality of containers upon detaching the container from its corresponding hollow tube, such that shaking the hollow tubes in a state in which the containers are substantially filled with water overcomes the connecting force and causes the containers to detach from the hollow tubes thereby causing the elastic fasteners to automatically seal the containers,
- wherein the apparatus is configured to fill the containers substantially simultaneously with a fluid.

Id. at 6:30–53.

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D. The Asserted References

Petitioner relies upon the following references (Pet. 14–15):

Reference	Patent or Pub. No. or Description	Date	Exhibit No.
Cooper	US 5,826,803	Oct. 27, 1998	Ex. 1009
Saggio	US 2013/0118640 A1	May 16, 2013	Ex. 1010
Lee	US 2005/0004430 A1	Jan. 6, 2005	Ex. 1011
Harter	WO 2015/027187 A2	Feb. 26, 2015 (claiming priority to Aug. 23, 2013)	Ex. 1013
Berardi	US 8,479,776 B2	July 9, 2013	Ex. 1014
ZORBZ Replicator video	YouTube video showing prototype of ZORBZ Replicator	Aug. 19, 2014 ²	Ex. 1012 and Ex. 1018 ³

Petitioner also relies on the Declarations of Dr. Ken Kamrin (Ex. 1015), Dr. Greg Saggio (Ex. 1016), and Kendall Harter (Ex. 1017).

E. The Asserted Grounds⁴

Petitioner challenges claims 1–6, 8, and 10–14 of the '066 Patent on the following grounds (Pet. 14–15, 24–26):

² This is the publication date asserted by Petitioner. *See* Pet. 34; Ex. 1012, 1; Ex. 1017 ¶ 25.

³ Exhibit 1018 is the ZORBZ Replicator video; Ex. 1012 is a compilation of still frames from the video, with annotations (shown in red).

⁴ Petitioner also challenges claims 7 and 9, but we need not address these claims in view of Patent Owner's disclaimers, as mentioned in footnote 1 above.

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Reference(s)	Basis	Claims Challenged
	§ 112(a) ⁵	1–6, 8, and 10–14
	§ 112(b)	1–6, 8, and 10–14
Cooper and Saggio	§ 103(a)	1–4, 8, and 14
Cooper, Saggio, and Berardi	§ 103(a)	11–13
Cooper, Saggio, and Lee	§ 103(a)	1–4, 8, and 14
Cooper, Saggio, Lee, and Berardi	§ 103(a)	11–13
Zorbz Replicator video and one of either Harter, Saggio, or Lee	§ 103(a)	1–4, 8, and 14
Zorbz Replicator video, Berardi, and one of either Harter, Saggio, or Lee ⁶	§ 103(a)	11–13

II. ANALYSIS

We turn now to Petitioner’s asserted grounds of unpatentability to determine whether Petitioner has met the threshold of 35 U.S.C. § 324 for instituting review.

A. Claim Construction

As a first step in our analysis, we determine the meaning of the claims. In a post-grant review, the Board gives claim terms in an unexpired patent their broadest reasonable interpretation in light of the specification of

⁵ Although Petitioner cites only 35 U.S.C. § 112(b) in listing its grounds on page 14 of the Petition, Petitioner presents non-enablement arguments under 35 U.S.C. § 112(a) on pages 24–26 of the Petition.

⁶ The omission of the ZORBZ Replicator video from this ground as listed on page 15 of the Petition is an obvious clerical error. *See* Pet. 77–78.

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the patent in which they appear. 37 C.F.R. § 42.200(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278, 1279 (Fed. Cir. 2015). Under the broadest reasonable interpretation standard, and absent any special definition, claim terms are given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art (“POSA”) in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Petitioner contends that a POSA “would have been a person having a general knowledge about and experience with expandable containers, including without limitation balloons, and at least an associate’s degree in science or engineering.” Pet. 15–16 (citing Ex. 1015 ¶¶ 10–13 and Ex. 1016 ¶¶ 10–13). At this stage of the proceeding, Patent Owner does not dispute Petitioner’s definition of a POSA. *See, e.g.*, Prelim. Resp. 40. For purposes of this Decision, we adopt Petitioner’s definition.

1. “elastic fastener”

Petitioner contends that the claim term “elastic fastener,” which appears in independent claim 1, should be construed to mean an “elastic valve.” Pet. 17–18 (citing Ex. 1001, 2:55–57; Ex. 1015 ¶¶ 34–39). Patent Owner disagrees, arguing that as described in the Specification an elastic fastener is not an elastic valve, but rather may be a component of an elastic valve. Prelim. Resp. 20 (citing Ex. 1001, 2:57–59). Relying on dictionary definitions for “fasten” and “elastic,” Patent Owner contends that the term “elastic fastener” should be construed as “a resilient device that attaches two separate elements.” *Id.* at 20–21.

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As the parties do not appear to dispute the meaning of “elastic,” for purposes of this Decision, we determine that the broadest reasonable interpretation consistent with the Specification of “elastic fastener” is its ordinary and customary meaning, i.e., an elastic element for attaching things together. We do not agree with Petitioner’s proposed construction of “fastener,” as meaning a valve, because it is not consistent with the ordinary and customary meaning of the term, and the Specification does not set forth a special definition.

2. “*not less than*”

Claim 1 recites that each elastic fastener is “configured to provide a connecting force that is *not less than* a weight of one of the containers when substantially filled with water.” Ex. 1001, 6:42–44 (emphasis added). Petitioner does not propose an express construction for “not less than,” but implicitly argues that this claim term means “greater than.” Pet. 25. Patent Owner responds, and we agree, that the ordinary meaning of “not less than” is “equal to or greater than,” and such meaning is consistent with the Specification. Prelim. Resp. 15 (citing Ex. 1001, 3:57–62).

Accordingly, for purposes of this Decision, we determine that the broadest reasonable interpretation consistent with the Specification of “not less than” is equal to or greater than.

3. “*container*”

Petitioner contends that the claim term “container,” which appears in each of the challenged claims, should be construed to mean “an object for holding a fluid that expands in response to fluid flow therein.” Pet. 17. Patent Owner responds that the Specification explicitly defines the term “container” as “an object that can hold something, such as fluids.” Prelim.

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Resp. 25 (quoting Ex. 1001, 2:53–55). Nevertheless, Patent Owner proposes to construe “container” somewhat differently, as an object for holding a fluid.”

For purposes of this Decision, we determine that the special definition in the Patent is controlling. Accordingly, the broadest reasonable interpretation consistent with the Specification of “container” is an object that can hold something, such as fluids.

4. Other claim terms

At this stage of the proceeding, none of our determinations regarding Petitioner’s proposed grounds of unpatentability requires us to interpret expressly any other claim term. We, however, do discuss Patent Owner’s proposed construction of “substantially filled” *infra* in Section II.B.2.

B. Challenge under 35 U.S.C. § 112(a), (b)

1. Petitioner’s Contentions

Petitioner contends that the claim term “substantially filled” as set forth in claim 1 is indefinite under 35 U.S.C. § 112(b). Pet. 20–24. Petitioner first focuses its arguments on the term “filled.” *Id.* at 21–23. Petitioner argues that “an expandable container can be considered ‘filled’ at any time prior to when the expandable container reaches its expansion limit and explodes.” *Id.* at 22 (citing Ex. 1015 ¶ 57). Petitioner also argues that the Specification “sets forth that the expandable containers are only ‘filled’ when an individual subjectively determines that a ‘desired size’ of a container has been reached.” *Id.* at 23 (citing Ex. 1001, 3:48–49; 4:60–62). Petitioner further argues that “[t]he lack of clarity of the term ‘filled’ is further enhanced by the modifier, ‘substantially,’ which is a term of degree.” *Id.* at 24. Petitioner concludes that “[t]he specification and prosecution

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history do not provide objective boundaries for those of ordinary skill in the art for the term ‘filled,’ let alone the term ‘substantially filled.’” *Id.*

Additionally, Petitioner contends that the claim term “connecting force” is non-enabled and indefinite under 35 U.S.C. § 112(a), (b). *Id.* at 24–26. According to Petitioner, the term “connecting force” in claim 1 is “inconsistent with the basic laws of physics.” *Id.* at 25. Petitioner argues that “[i]f the true connecting force is not less than a weight of one of the containers, i.e., greater than the weight of the container, the connecting force would cause the container to move upwards on the hollow tube.” *Id.* at 25 (citing Ex. 1015 ¶ 73). Petitioner also argues:

Because the specification of the ‘066 Patent does not provide an objective boundary for when an expandable container is “substantially filled,” it follows that a person of ordinary skill in the art at the time of the invention of the ‘066 Patent would not be able to determine, with reasonable certainty, the amount of the connecting force that the elastic fastener is configured to provide.

Id. (citing Ex. 1015 ¶ 60).

2. Patent Owner’s Contentions

Patent Owner relies on dictionary definitions for “substantially” and “filled” in arguing that “substantially filled” means “by and large holding as much as is conveniently contained.” Prelim. Resp. 18–20. Patent Owner contends that “claim 1 of the ‘066 Patent provides that the containers are substantially filled with water when the ‘water overcomes the connecting force and causes the containers to detach from the hollow tubes.”” *Id.* at 28–29 (citing Ex. 1001, 6:48–52). According to Patent Owner, “the claimed invention is capable of being used to fill various containers,” and “[o]ne of ordinary skill would understand that each of these different containers could

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be filled with a different volume of fluid depending on the size, shape and characteristics of the container.” *Id.* at 30 (citing Ex. 1001, 3:19–40).

3. Analysis

As an initial matter, we are *not* persuaded by Petitioner’s non-enablement/indefiniteness argument that “the connecting force would cause the container to move upwards on the hollow tube” if “the true connecting force is not less than a weight of one of the containers, i.e., greater than the weight of the container.” *See* Pet. 25. Petitioner’s argument relies on an erroneous construction of “not less than” as meaning greater than. *See supra* Section II.A.2. Petitioner apparently does not contend, and in any event has not shown, that the connecting force would cause the container to move upwards on the hollow tube if the true connecting force were *equal* to a weight of one of the containers, as permitted by the claims and described in the Specification. *See* Ex. 1001, 3:60–62 (“[I]n a specific embodiment, the connecting force holding each container to its corresponding tube is exactly equal to the weight of the filled container.”). A POSA would have understood that an elastic fastener, such as an O-ring or rubber-band, could be configured to clamp a container to a flexible hollow tube with sufficient constrictive force to hold the container to the tube, i.e., to generate a friction force or connecting force equal to the weight of the container when the container is filled to a desired volumetric level.

Turning to Petitioner’s additional indefiniteness arguments, we are persuaded at this stage of the proceeding that the following claim language (referred to hereinafter as the “shake-to-detach” feature) is indefinite:

each elastic fastener configured to provide a connecting force that is not less than a weight of one of the containers when substantially filled with water, . . . *such that shaking the hollow*

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tubes in a state in which the containers are substantially filled with water overcomes the connecting force and causes the containers to detach from the hollow tubes.

Ex. 1001, 6:41–50 (emphasis added). The standard for indefiniteness that we have applied in reaching this conclusion is whether the claim language is “cast in clear—as opposed to ambiguous, vague, indefinite—terms.” *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir. 2014); *see* Manual of Patent Examining Procedure (“MPEP”) § 2173.02(II) (Rev. 07.2015, Nov. 2015) (advising Examiners that the indefiniteness standard is whether “the language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement”) (citation omitted). We have analyzed the claim language in light of: (1) the ’066 Patent disclosure; (2) the teachings of the prior art; and (3) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. *See* MPEP § 2173.02(II).

On the current record, we are not persuaded that the Specification or prior art provides any objective standard for measuring the scope of “filled” or “substantially filled.” The Specification teaches that containers 18 may be considered “filled” when an individual user subjectively determines that a desired size or volume has been reached. Ex. 1001, 3:48–51; 4:6–9, 60–64. “In some embodiments, containers 18 may be marked with volumetric measurements, and fluid flow may be turned off when the fluid has filled containers 18 to a desired volume.” *Id.* at 4:6–9.

Further, the Specification provides no limit on the amount of “shaking” needed to detach a “filled” container. *Id.* at 3:52–55 (“[T]he

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connecting force holding filled containers 18 to tubes 16 may be overcome by an upward acceleration on tubes 16, for example, when they are shaken.”); *id.* at 3:55–57 (“Thus, filled containers 18 may be detached by shaking housing 12 (or tubes 16) sufficiently vigorously to cause containers 18 to fall off from tubes 16.”); 4:60–63 (“When containers 18 have reached a desired size and/or they are filled with the desired volume of fluid, they may be removed from tubes 16. They can be removed . . . by shaking them off.”).

The force required to detach the containers varies based on numerous factors. For example, the force required to detach the containers varies based on the static friction force between the containers and tubes (which depends on the materials comprising the tubes and containers as well as the compressive elastic strength of the elastic fasteners) and the weight of the containers. *See id.* at 4:1–3.

Thus, the current record indicates that a container may be “filled” to any desired volumetric level and detached by “shaking” the housing or tube sufficiently vigorously to overcome the connecting force holding the container to the tube. As such, a POSA could not interpret the metes and bounds of the shake-to-detach feature so as to understand how to avoid infringement. Due to the ambiguity in both how much volume a container holds when it is “substantially filled” and how much “shaking” the hollow tubes must be subjected to, a skilled artisan would be unable to determine whether a given apparatus does or does not have the shake-to-detach feature required by the claims.

We are not persuaded by Patent Owner’s argument that “substantially filled” means “by and large holding as much as is conveniently contained.”

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See Prelim. Resp. 18–20. As understood at this stage of the proceeding, Patent Owner’s argument is not supported by the teachings in the Specification, discussed above, and is not consistent with dependent claim 6, which recites: “The apparatus of claim 1, wherein each container comprises a volumetric measurement marking providing a visual reference *for filling the container to a desired volume.*” Ex. 1001, 6:65–67 (emphasis added). Rather, as Petitioner argues, the level to which a container is “filled” is subjective. *See id.* at 3:49, 4:8–9; Pet. 22–23.

Nor are we persuaded by Patent Owner’s argument that “the containers are substantially filled with water when the ‘water overcomes the connecting force and causes the containers to detach from the hollow tubes.’” Prelim. Resp. 28–29. Although the Specification describes an embodiment in which containers 18 “fall off under gravity” (Ex. 1001, 3:65–66), the shake-to-detach feature plainly requires “shaking” to detach the containers.

For these reasons, Petitioner has demonstrated a reasonable likelihood of prevailing under 35 U.S.C. § 112(b) with respect to its challenge to claims 1–6, 8, and 10–14 as unpatentable for indefiniteness.

C. Effective Filing Date of the ’066 Patent

Petitioner contends that the effective filing date of claims 1–4, 8, and 11–14 is September 22, 2014, i.e., the actual filing date of the ’066 Patent, because the earlier-filed Provisional Applications purportedly do not provide written description support for the limitation “a plurality of *flexible* hollow tubes,” as recited in claim 1. Pet. 12; *see* 35 U.S.C. § 100(i)(1). Petitioner argues that the Provisional Applications “explicitly disclose that the tubes are made of ‘relatively rigid materials like metal, hard plastic, etc.’” (*id.* at

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12, citing Ex. 1002, 5 and Ex. 1003, 5), and that “rigid” means deficient in or devoid of flexibility (*id.*). Relying on the Declaration of Dr. Kamrin, Petitioner asserts that “[o]ne skilled in the art would not understand the February 7, 2014 Provisional to teach that the tubes are flexible.” *Id.* (citing Ex. 1015 ¶ 19).

Patent Owner responds that the Provisional Applications do not state that the tubes “are rigid in some absolute sense, [but] merely that they are ‘relatively rigid.’” Prelim. Resp. 56. Patent Owner argues that “[t]he tubes could be ‘relatively rigid’ but still capable of bending or being bent.” *Id.* Patent Owner also argues that a POSA would understand from Figure 1 of the Provisional Applications that the tubes could be flexible “in order to bend and accommodate the changing size of the balloons as they filled.” *Id.* at 58. Patent Owner further argues: “If these tubes were not flexible, the balloons would have no room to expand, and the device would not provide its intended function.” *Id.*

Although we agree with Petitioner that “rigid” means deficient in or devoid of flexibility, we are persuaded by Patent Owner that the Provisional Applications adequately disclose the “flexible” tube limitation. Dr. Kamrin’s testimony is not persuasive on this point because it focuses on the meaning of “rigid,” rather than the term “relatively rigid” used in the Provisional Applications. Ex. 1015 ¶¶ 18–19.

As the term “relatively” means “somewhat,”⁷ the term “relatively rigid” used in the Provisional Applications does not mean absolutely rigid,

⁷ See MERRIAM WEBSTER’S COLLEGIATE DICTIONARY 987 (10th ed. 1993) (Ex. 3001).

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but rather means somewhat rigid. Indeed, the statement in the Provisional Applications that the tubes may be made of “relatively rigid materials” immediately follows a sentence stating that the containers “may be made of elastic materials, like rubber, silicone, etc.,” indicating that “relatively rigid” means rigid in comparison to elastic materials such as rubber. *See* Ex. 1002, 5; Ex. 1003, 5. We are persuaded that a material that is somewhat rigid as disclosed in the Provisional Applications is not absolutely deficient in or devoid of flexibility. The Provisional Applications thus disclose hollow tubes that are flexible to some degree, which is all the flexibility that claim 1 of the ’066 Patent requires. *See Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1369 (Fed. Cir. 2012) (agreeing with appellants’ argument that “flexible” means “capable of being flexed,” rather than “capable of being noticeably flexed with ease” as determined by the district court).

Accordingly, Petitioner has not persuaded us that the effective filing date of claims 1–4, 8, and 11–14 is September 22, 2014.

*D. Challenges under 35 U.S.C. § 103(a) Based in Part on ZORBZ Replicator Video*⁸

Petitioner contends that claims 1–4, 8, and 11–14 would have been obvious over the ZORBZ Replicator video and one or more of Harter, Saggio, Lee, or Berardi. *See supra* Section I.E. Petitioner asserts that the

⁸ We reach Petitioner’s obviousness grounds at this stage of the proceeding, for two reasons, despite determining that the challenged claims are unpatentable for indefiniteness. First, our indefiniteness determination is only preliminary at this stage of the proceeding. Second, the shake-to-detach feature determined to be indefinite is a functional limitation that would appear to be met by any prior art that also meets the structural limitations of the claims, as discussed *infra* in Section II.E.2.

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ZORBZ Replicator video is prior art to the challenged claims because it was made available to the public on the Internet at least as early as August 19, 2014, and the effective filing date of the challenged claims is September 22, 2014. Pet. 62–63. As discussed above, however, Petitioner has failed to persuade us that the effective filing date of the challenged claims is September 22, 2014.

Accordingly, we conclude, on this record, that it is more likely than not that Petitioner would *not* prevail on the ground that claims 1–4, 8, and 11–14 would have been obvious over the ZORBZ Replicator video and one or more of Harter, Saggio, Lee, or Berardi.

E. Challenges under 35 U.S.C. § 103(a) Based in Part on Cooper

A claim is unpatentable for obviousness “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.” 35 U.S.C. § 103.⁹ A patent claim composed of several elements, however, is not proved obvious merely by demonstrating that each of its elements was known, independently, in the prior art. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). In analyzing the obviousness of a combination of prior art elements, it can be important to identify a reason that would have prompted one of skill in the art to combine the elements in the way the claimed invention does. *Id.* A precise teaching

⁹ Pub. L. No. 112-29, effective March 16, 2013, changed § 103. Because the earliest-possible effective filing date of the challenged claims is not prior to March 16, 2013, we have quoted the changed version of § 103.

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directed to the specific subject matter of a challenged claim is not necessary to establish obviousness. *Id.* Rather, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* at 420. The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations, when in evidence. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Petitioner contends that claims 1–4, 8, and 11–14 would have been obvious over Cooper and one or more of Saggio, Lee, and Berardi. *See supra* Section I.E.

1. Overview of Prior Art

Cooper discloses a lawn and garden sprinkler that may be attached by female connector nut 16 to a garden hose. Ex. 1009, 2:20–26, Fig. 1. The sprinkler includes manifold 11, which is supplied water through inlet 15, and multiple flexible tube assemblies 18. *Id.* at 2:22–34. Figure 4 of Cooper is reproduced below.

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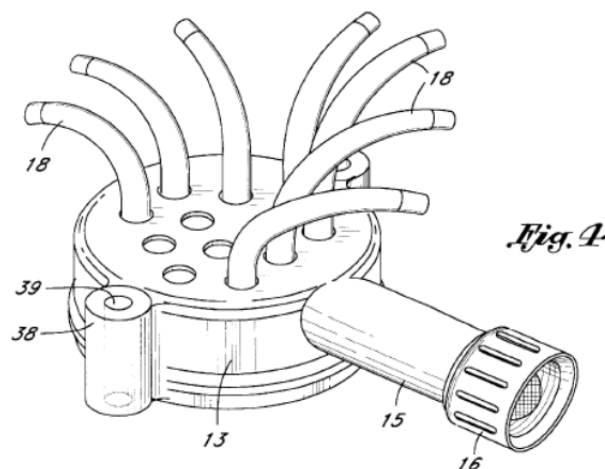
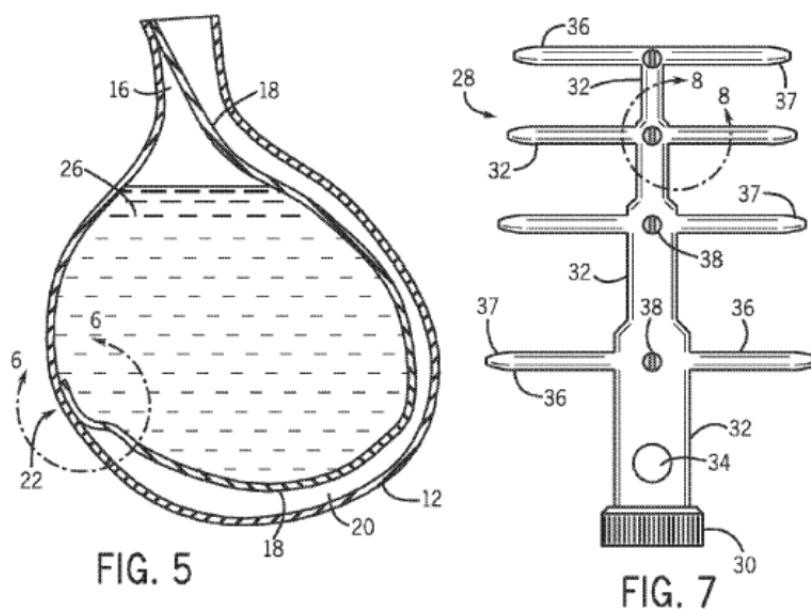


Figure 4 is a perspective view of Cooper's sprinkler. *Id.* at 2:8–9, 3:20–22. As shown in Figure 4, the “tubes may be bent . . . by the user into any desired curve.” *Id.* at 3:20–22.

Saggio discloses a system for filling a plurality of tie-less water balloons. Ex. 1010 ¶ 7. Saggio also discloses a tie-less water balloon including “a one-way valve . . . inside the balloon that allows water to enter the balloon but not escape it.” *Id.* Figures 5 and 7 of Saggio are reproduced below:



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Figure 5 is a cross-sectional view showing Saggio's tie-less water balloon filled with water. *Id.* ¶ 13. Figure 7 is a front elevation view of a multi-balloon filling assembly. *Id.* ¶ 15.

As shown in Figure 7, the multi-balloon filling assembly includes water supply fitting 30, main conduit 32, lateral conduits 36, and plurality of conduit tips 37. *Id.* ¶ 22. The water supply fitting is adapted to connect to a hose. *Id.* ¶ 23. Conduit tips 37 are adapted to engage the necks of the balloons, such that a large number of balloons may be filled simultaneously. *Id.* ¶ 24.

As shown in Figure 5, the tie-less water balloon is filled with water 26 through one-way channel 20 formed by outer wall 12 and inner membrane 18. *Id.* ¶ 19. After filling, the water inside the balloon presses the distal end of inner membrane 18 against outer wall 12 to close channel 20 and to prevent the water from escaping. *Id.* ¶¶ 7, 19. As such, inner membrane 18 functions as a one-way valve.

Lee relates to an endoscopic balloon insertion device for treatment of obesity. Ex. 1011 ¶ 2. Lee's insertion device includes inner guide pipe 3 and outer guide pipe 4. *Id.* ¶ 31. "[A] rubber band 2 with a high elastic force surrounds the inner guide pipe 3 for stably binding an opening of the balloon when the balloon 1 is expanded." *Id.* ¶ 33. Figure 6 of Lee is reproduced below.

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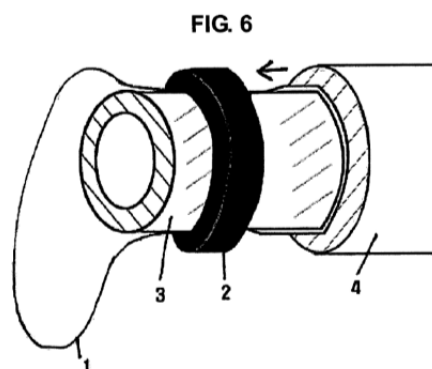


Figure 6 is a cross-sectional view illustrating a front end of inner guide pipe 3 and a movement of rubber band 2. *Id.* ¶¶ 24, 34. As illustrated in Figure 6, Lee discloses expanding the balloon through inner guide pipe 3 and then pushing outer guide pipe 4 in the direction of the front end to move the rubber band and release it from the inner guide pipe. *Id.* ¶ 33.

“Therefore, the escaped rubber band seals and releases the balloon from the guide pipe for thereby inserting the balloon in the stomach in a state that the balloon is tied by the rubber band.” *Id.*

Berardi discloses a garden hose valve with an on/off lever, a threaded inlet coupler, and a threaded outlet coupler. Ex. 1014, 7:48–66, Figs. 8, 9.

2. Analysis

Petitioner first contends that claims 1–4, 8, and 14 would have been obvious over Cooper and Saggio, and that claims 11–13 would have been obvious over Cooper, Saggio, and Berardi. With respect to these challenges, Petitioner asserts that inner membrane 18 of Saggio’s tie-less water balloon is an “elastic fastener” as required by claim 1. Pet. 44. According to Petitioner, “[w]hen the water balloon is attached to a corresponding hollow tube of Cooper, the elastic internal membrane will press up against the

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hollow tube, clamping the balloon to the hollow tube.” *Id.* (citing (Ex. 1016 ¶ 39).

Petitioner has not persuaded us, however, that inner membrane 18 attaches the balloon to the hollow tube, as required under our interpretation of “elastic fastener.” *See supra* II.A.1; Prelim. Resp. 48. In particular, Petitioner has not explained sufficiently why the inner membrane would press up against the hollow tube or, if it did, why the pressing of the inner membrane against the hollow tube would clamp or attach the balloon to the tube. As taught by Saggio, inner membrane 18 functions simply as a one-way valve. *See supra* Section II.E.1.

For these reasons, Petitioner has *not* demonstrated a reasonable likelihood of prevailing with respect to its challenges to claims 1–4, 8, and 14 as obvious over Cooper and Saggio and claims 11–13 as obvious over Cooper, Saggio, and Berardi.

Alternatively, Petitioner contends that claims 1–4, 8, and 14 would have been obvious over Cooper, Saggio, and Lee, and that claims 11–13 would have been obvious over Cooper, Saggio, Lee, and Berardi. As motivation to combine Cooper and Saggio, Petitioner points to Saggio’s teaching of filling multiple water balloons at one time. Pet. 43. Petitioner argues that it would have been obvious for a POSA “to removably attach the balloons of Saggio to the flexible tubes of Cooper.” *Id.* at 42. Petitioner further argues: “In designing an apparatus that can fill multiple water balloons at one time, one skilled in the art . . . would have thought to place water balloons at the end of a hose attachment apparatus that has multiple hollow tubes and dispenses water,” such as disclosed in Cooper. *Id.* at 43–44.

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Petitioner additionally argues that it would have been obvious “to modify Cooper in view of Saggio by using the rubber band of Lee to clamp the containers on to corresponding hollow tubes and automatically seal the containers upon [detaching] the container from its corresponding hollow tube.” *Id.* at 57. Petitioner states: “It was well-known to those skilled in the art prior to the effective filing date of the ’066 Patent that a rubber band was capable of sealing a fluid within a balloon.” *Id.* at 56 (citing Ex. 1016 ¶ 75). Petitioner further argues that “while Lee teaches a system for use in treating obesity, Lee is analogous art to Saggio because both Saggio and Lee teach mechanisms for automatically sealing a balloon when a balloon is filled with fluid and detached from a hollow tube.” *Id.* at 57 (citing Ex. 1016 ¶ 77). Petitioner asserts that the combination of Cooper, Saggio, and Lee teaches all limitations of claims 1–4, 8, and 14. *Id.* at 55–60.

As to claims 11–13, Petitioner contends that it would have been obvious to connect Berardi’s valve to Cooper’s housing, so as to provide an on/off lever for controlling delivery of water. *Id.* at 54 (citing Ex. 1016 ¶ 116). Petitioner asserts that the combination of Cooper, Saggio, Lee, and Berardi teaches all limitations of claims 11–13. *Id.* at 52–54, 62.

In response, Patent Owner argues that it would not have been obvious to combine Cooper and Saggio because combining their teachings would add nothing “other than being able to pose the self-closing balloons in desired locations.” Prelim. Resp. 51. Patent Owner additionally argues that Lee is not analogous art to the claimed invention because it is directed to an endoscopic treatment for obesity. Prelim. Resp. 40–43.

On this record, we are persuaded by Petitioner that a POSA would have used Cooper’s sprinkler as a multi-balloon filling assembly as taught

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by Cooper, i.e., would have attached balloons to the ends of the flexible tubes of Cooper's sprinkler such that multiple balloons could be filled at one time. *See KSR*, 550 U.S. at 416 ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."). Further, we are persuaded, at this stage of the proceeding, that Lee is reasonably pertinent to a particular problem the inventor of the '066 Patent was trying to solve, i.e., a mechanism for clamping and sealing an inflatable container to a tube and, after filling the container with fluid, sealing the container automatically upon detachment of the container from the tube. Ex. 1001, 3:5–18; *see In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). On this record, we determine that Petitioner has provided adequate articulated reasoning with rational underpinning to support a legal conclusion of obviousness as to claims 1–4, 8, and 14 based on the combined teachings of Cooper, Saggio, and Lee. *See KSR*, 550 U.S. at 418.

Patent Owner also argues that the combination of Cooper, Saggio, and Lee does not teach the shake-to-detach feature. Prelim. Resp. 51–53. According to Patent Owner, "[Petitioner] has not pointed to a single instance in any prior art that discloses 'shaking the hollow tubes in a state in which the containers are substantially filled with water overcomes the connecting force and causes the containers to detach from [the] hollow tubes.'" Prelim. Resp. 52–53 (quoting Ex. 1001, 6:47–50); *see also id.* at 53 ("The technology presented by Lee would not inspire the shake-to-release process. Endoscopic surgical procedures would likely not involve shaking of any mechanism, which could be very harmful to the patient's interests."). As such, Patent Owner argues that, in order to satisfy the shake-to-detach

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feature, the teachings of the prior art must disclose or suggest the recited *function*.

At this stage of the proceeding, we do not find this argument to be persuasive because the challenged claims are apparatus claims, which must be distinguished from the prior art in terms of *structure* rather than function. *See In re Schreiber*, 128 F.3d 1473, 1477–78 (Fed. Cir. 1997). A claim employing functional¹⁰ terminology, such as claim 1 of the '066 Patent, covers any embodiment that meets the structural limitations of the claim and that is capable of performing the recited function. *See Swinehart*, 439 F.2d at 213 (“By its own literal terms a claim employing such [functional] language covers any and all embodiments which perform the recited function.”); *see also Schreiber*, 128 F.3d at 1477 (“It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable.”) (citations omitted).

Petitioner contends that the shake-to-detach feature is an inherent characteristic of the structure taught by the combination of Cooper, Saggio, and Lee. Pet. 57–59. Relying on testimony from Dr. Kamrin, Petitioner asserts that when the balloons in the combined structure are substantially filled with water, “one can remove the balloons from the hollow tubes by shaking the hollow tubes.” *Id.* at 59 (citing Ex. 1015 ¶ 95). In this regard, Dr. Kamrin testifies:

94. A different elastic fastener may produce a different average pressure P and thus produce a difference [sic]

¹⁰ A claim term is functional when it recites a feature “by what it does rather than by what it is” (e.g., as evidenced by its specific structure or specific ingredients). *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971).

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connecting force. However, the principles of physics remain the same. That is, it was well known to those skilled in the art prior to the effective filing date of the '066 Patent that the connecting force ($F_{\text{connecting}}$) can be overcome when the mass of the fluid in the balloon (M_{fluid}) times effective gravity ($g_{\text{effective}}$) is greater than or equal to the connecting force. Accordingly, when the mass of a substantially filled balloon (M_{fluid}) times effective gravity ($g_{\text{effective}}$) is less than the connecting force ($F_{\text{connecting}}$), the balloon will remain on the tube.

95. Additionally, it remains true that when the balloons are substantially filled with a mass of fluid that does not overcome the connecting force, instead of increasing the mass of the fluid in the balloon, an individual can remove the balloons from the hollow tubes by shaking the hollow tubes, which increases the effective value of gravity ($g_{\text{effective}}$) and overcomes the connecting force.

Ex. 1015 ¶¶ 94–95. On this record, we are persuaded that the combination of Cooper, Saggio, and Lee teaches the shake-to-detach feature.

Having considered the Petition, the Preliminary Response, and the evidence of record, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to its challenges to claims 1–4, 8, and 14 as obvious over the combination of Cooper, Saggio, and Lee, and claims 11–13 as obvious over the combination of Cooper, Saggio, Lee, and Berardi.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has established a reasonable likelihood of prevailing under 35 U.S.C. § 103(a) on its challenges to claims 1–4, 8, and 14 as obvious over the combination of Cooper, Saggio, and Lee, and claims 11–13 as obvious over the combination

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of Cooper, Saggio, Lee, and Berardi. Petitioner also has established a reasonable likelihood of prevailing under 35 U.S.C. § 112(b) with respect to its challenge to claims 1–6, 8, and 10–14 as unpatentable for indefiniteness. The Board has not made a final determination concerning patentability of any of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that a post-grant review of claims 1–6, 8, and 11–14 of the '066 Patent is granted;

FURTHER ORDERED that pursuant to 35 U.S.C. § 324(a), a post-grant review of the '066 Patent is hereby instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 324(d) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; and

FURTHER ORDERED that the trial is limited to the following grounds: (1) claims 1–4, 8, and 14 as obvious over the combination of Cooper, Saggio, and Lee, (2) claims 11–13 as obvious over the combination of Cooper, Saggio, Lee, and Berardi, and (3) claims 1–6, 8, and 10–14 for indefiniteness.

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