

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TOMMY J. SHANE

Appeal No. 2005-1115
Application 10/269,369

ON BRIEF

Before GARRIS, WARREN, and JEFFREY T. SMITH, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

Appeal No. 2005-1115
Application 09/269,369

This is a decision on an appeal which involves claims 1, 3-5, 7 and 11-13.

The subject matter on appeal relates to a diffuser for introducing a solution including dissolved carbon dioxide gas into a liquid. With reference to Figures 7 and 8 of the appellant's drawing, the diffuser 110 comprises a pair of fixed, laterally displaced nozzles 112 which are substantially oppositely-oriented relative to one another to direct the aforementioned solution passing through each of the nozzles in opposite directions, wherein the nozzles maintain system back pressure on the solution to maintain dissolved gas in the solution within the diffuser. This appealed subject matter is adequately represented by independent claim 7 which reads as follows:

7. A diffuser for introducing a solution including dissolved carbon dioxide gas into a liquid comprising:

a pair of fixed, laterally displaced nozzles, said nozzles substantially oppositely-oriented relative to one another to direct said solution including dissolved carbon dioxide gas passing through each of said nozzles in opposite directions, wherein said nozzles maintain system back pressure on said solution to maintain dissolved gas in said solution within the diffuser.

The references set forth below are relied upon by the

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examiner as evidence of obviousness:

Kinsey	695,399	Mar. 11, 1902
Vretman	2,075,384	Mar. 30, 1937
Jackson	2,592,904	Apr. 15, 1952

Claims 1, 3, 4, 7, 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jackson taken with Kinsey, and claims 5 and 13 are correspondingly rejected over these references and further in view of Vretman.

We refer to the Brief and Reply Brief and to the Answer respectively for a complete exposition of the opposing viewpoints expressed by the appellants and by the examiner concerning the above-noted rejections.

OPINION

For the reasons which follow, these rejections cannot be sustained.

According to the examiner,

Jackson (Figs. 1 and 2) substantially discloses applicant's invention as recited by instant claims 1, 3, 4, 7, 11 and 12, except for the nozzles being fixed in a stationary

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position^[1] and the specific back pressure being provided by the nozzles on the material therein. [Answer, page 3]

With respect to the "fixed" nozzles requirement of the appealed claims, the examiner expresses his obviousness conclusion as follows:

Kinsey (Fig. 2) disclose[s] an apparatus similar to that of Jackson, but wherein the oppositely oriented nozzles are fixed in a stationary position. Wherein the use of fixed nozzles would provide an apparatus that is less expensive to manufacture, operate, and maintain, than an apparatus that utilizes rotating nozzles, it would have been obvious for an artisan at the time of the invention, to provide the convergent, high pressure, nozzles of Jackson, in a fixed, stationary position, in view of Kinsey, since such would be cheaper to operate, while still maintaining highly effective liquid agitation within the tank. [Answer, page 3; emphasis in original]

We share the appellant's fundamental viewpoint that the applied prior art does not establish a prima facie case of obviousness vis-à-vis modifying Jackson's hydraulic agitator so

¹The minority's contrary claim interpretation is improper because it is not reasonable and consistent with the specification (e.g., see lines 12-15 of page 15). See In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).

that the nozzles thereof are fixed as required by all of the claims on appeal. While Kinsey may evince that fixed nozzles were known in the prior art, this alone would not provide the requisite suggestion, teaching and motivation for combining the applied references in the manner proposed by the examiner. For example, as previously indicated, the examiner contends that an artisan would have provided Jackson's nozzles in a fixed position in view of Kinsey "since such would be cheaper to operate, while still maintaining highly effective liquid agitation within the tank" (Id.). From our perspective, however, the examiner is merely speculating that a fixed nozzle arrangement would maintain agitation at a level effective for Jackson's purposes. There is simply nothing in the applied references which supports such a proposition. On the contrary, the Jackson disclosure militates against such a proposition.

This is because an explicit object of Jackson's invention is to provide an agitator tank which "delivers high velocity jets or streams of fluid in the mass to be mixed or agitated and in such [a] manner as to effectively and uniformly mix and agitate" (column 1, lines 19-22) and "which involves

few, simple parts" (column 1, line 25). This stated objective indicates that patentee's rotating nozzle assembly is necessary to achieve Jackson's desideratum "to effectively and uniformly mix and agitate" (column 1, line 22). Stated otherwise, Jackson would not have used a rotating nozzle assembly if it were possible to achieve his desire for effective and uniform agitation with an agitator tank having fewer and simpler parts (e.g., via a fixed nozzle assembly) in accordance with his aforementioned objective. In addition, it is significant that the fixed nozzle modification proposed by the examiner would have resulted in loss of the agitating function provided by paddles 90 (see Fig. 1 and the paragraph bridging columns 4 and 5). This further militates against the examiner's contention that his proposed modification would maintain "highly effective liquid agitation within the tank" (Answer, page 3) pursuant to the level of agitation desired by Jackson.

It is also appropriate to reiterate the appellant's point that the examiner's obviousness conclusion is undermined by the fact that the proposed modification of Jackson would change the principle of operation of patentee's hydraulic

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agitator. See In re Ratti, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959). Also see the Manual of Patent Examining Procedure, § 2143.01 (Eighth Edition, Rev. 2, May 2004). In essence, this point corresponds to our discussion above. That is, the examiner's proposed modification departs from Jackson's principle of operation to such an extent that it is questionable whether the resulting apparatus would be capable of achieving Jackson's disclosed objectives and desiderata.

In light of the foregoing, it is our determination that the examiner's obviousness conclusion is based upon impermissible hindsight derived from the appellant's own specification rather than some teaching, suggestion or motivation derived from the prior art. With this in mind, we emphasize that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of a teaching or motivation to combine prior art references. In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). This requirement for such a showing is not satisfied by the Jackson and Kinsey references.

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As a consequence, we hereby reverse the examiner's § 103 rejection of claims 1, 3, 4, 7, 11 and 12 as being unpatentable over Jackson taken with Kinsey. Because the deficiencies of these references are not supplied by the additionally applied Vretman reference, we also hereby reverse the examiner's § 103 rejection of claims 5 and 13 as being unpatentable over Jackson, Kinsey and Vretman.

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The decision of the examiner is reversed.

REVERSED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
)	
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)	BOARD OF PATENT
)	APPEALS AND
)	INTERFERENCES
)	
JEFFREY T. SMITH)	
Administration Patent Judge)	

BRG:psb

WARREN, *Administrative Patent Judge*, Dissenting:

I respectfully disagree with the panel's decision to reverse the decision of the examiner that appealed claims 1, 3 through 5, 7 and 11 through 13 are unpatentable over the applied prior art because I am of the view that the examiner's grounds of rejection of all of the appealed claims under 35 U.S.C. § 103(a) based on Jackson must be affirmed in view of the invention encompassed by the claims on appeal. I take this position for the following reasons.

It is well settled that in order to apply the prior art to a claim, the claim terms must first be interpreted by giving them the broadest reasonable interpretation in light of the written description in the specification as it would be interpreted by one of ordinary skill in this art, without reading into the claim any limitation or particular embodiment which is disclosed in the specification. *See, e.g., In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). The plain language of appealed independent claim 1 specifies "[a] diffuser" comprising at least "a pair of laterally displaced nozzles," which "nozzles" (1) are "substantially oppositely-oriented relative to one another;" (2) "direct [a] pressurized solution passing through each of said nozzles in opposite directions;" (3) are "fixed in a stationary position thereby *causing* the liquid and [a] pressurized solution to *commingle*;" and (4) "maintain system back pressure of approximately 45 psi to approximately 55 psi on the solution to maintain the dissolved carbon dioxide gas in the solution within the diffuser" (emphasis supplied). I note that the preambular language of claim 1 provides that the claimed "diffuser" is "for introducing a pressurized solution *including* dissolved carbon

dioxide gas into a liquid" while the fourth limitation defining the characteristics of the "nozzles" does so in the context that the nozzles must be capable of maintaining the specified system back pressure range with respect to maintaining "dissolved carbon dioxide gas in the solution *within the diffuser*" (emphasis supplied).

The plain language of appealed independent claim 7 specifies "[a] diffuser" utilizing the same preambular language as claim 1 and comprising at least "a pair of laterally displaced nozzles" the characteristics of which are defined by essentially the same four limitations used to define the "nozzles" as in claim 1, with the exception that the fourth limitation in claim 7 does not specify a back pressure psi range, only that the "system back pressure" caused by the nozzles must be sufficient to "maintain dissolved gas in said solution *within the diffuser*" (emphasis supplied). Thus, as to the latter limitation, claim 7 encompasses a diffuser in which the nozzles provide sufficient back pressure to maintain any amount of dissolved gas, however small, in solution.

The dependent claims 3 and 11 specify that the "diffuser" further comprises at least a hollow, elongated body to which the nozzles are "coupled to [the] second end in a substantially perpendicular manner." The dependent claims 4 and 12 specify that the nozzles are "at least partially defined by an elbow portion and a concentric reducer," and dependent claims 5 and 13 specify that "a pair of elbow portions substantially [define] a semicircle portion of each said nozzle."

In my view, the threshold issue in this appeal is whether the claim term "[a] diffuser" encompasses an apparatus such as "diffuser 110" *per se* illustrated in specification **FIG. 7**, which illustrates a diffuser that has nozzles falling within

the limitations of the appealed claims. In interpreting claim language, the claim terms are given their ordinary meaning unless another meaning is intended by appellant as established in the written description of the specification, mindful that limitations, including preferred embodiments, of the specification, are not read into the claims unless there is basis in the claim language or specification to do so. *See generally, Morris*, 127 F.3d at 1054-55, 44 USPQ2d at 1027; *Zletz*, 893 F.2d at 321-22, 13 USPQ2d at 1322.

In the specification, appellant describes "diffuser **71**" from his United States Patent 5,487,835 ('835 patent), of record, as having "three rectangular sides defining a triangular prismatic structure" which "is inserted normal to the direction of flow of the water stream" wherein "carbonic acid is passed through one end of the diffuser" while maintained at "elevated pressure," for which purpose, the diffuser "has a plurality of outlet holes on two of the rectangular sides" (pages 2-3). The diffuser **71** as described by appellant appears in **FIGs. 3 and 4** as described at cols. 5-6 of the '835 patent. While there is disclosure in the '835 patent with respect to the orientation that diffuser **71** can assume in a container, it is clear from the disclosure in the '835 patent and appellant's description thereof in the present application that the container in which this apparatus is positioned and any orientation of diffuser **71** therein in this respect is *not* part of diffuser **71**.

In similar manner, in the present application, the "diffuser" illustrated and described with respect to specification **FIGs. 1, 2, 3 and 5** is merely an apparatus that has injectors, outlet holes or obround outlets, respectively, which permit a pressured gas containing solution to pass into a liquid in a container without regard to the container in which this

apparatus is positioned or the orientation of that apparatus in the container (pages 3-4 and 6-15).

So it is with "diffuser **110**" of **FIG. 7**. Indeed, I find that one of ordinary skill in this art would find in the specification that "diffuser **110**" has "[a]n elongated body **114**" to which is fixed "a pair of nozzles **112**" that can "extend into the interior of a *mixing cylinder* (not shown) *which is used for receiving the carbonic acid solution from the diffuser 110,*" wherein "the carbonic acid solution *enters the diffuser 110 under pressure* and, as the solution *passes through the pair of nozzles 112*, the *pressure differential* causes excess CO₂ in the carbonic acid solution to burst forth . . . [wherein] [p]referably, the *pressure drop is approximately 45 to 55 psi*" (specification, page 15, ll. 4-9, and page 16, ll. 13-17; italics emphasis supplied). Thus, all of the disclosure refers to "diffuser **110**" without regard to the container or any diffusion system containing the same, which view is congruent with the disclosure that specification **FIG. 7** "illustrates a side view of . . . a diffuser . . . having a pair of laterally displaced nozzles *adapted to be positioned* in a fixed manner in a mixing cylinder" (page 6; emphasis supplied).

Indeed, the use of the term "diffuser" in the '835 patent and in appellant's description of "diffuser **71**" of that patent as well as in the description of specification **FIGs. 1, 2, 3, 5 and 7** in the present application agrees with the ordinary, dictionary meaning of this term: "[a] duct, chamber or section in which a high-velocity, low pressure stream of fluid (usually air) is converted into a high-velocity, high pressure flow." *McGraw-Hill Dictionary of Scientific and Technical Terms* 570 (5th ed., Sybil P. Parker, ed., New York, McGraw-Hill, Inc. 1994); see

also, e.g., *The American Heritage Dictionary, Second College Edition* 395-96 (Boston, Houghton Mifflin Company, 1982).

I cannot find in appealed claims 1 and 7 any limitation which requires a different definition of the term "a diffuser" than the written description in the specification conveys to one of ordinary skill in this art. Indeed, the limitations characterizing the "nozzles" of the claimed "diffuser" in claims 1 and 7 are found in diffuser **110** of **FIG. 7** because the nozzles **112** are fixed to elongated body **114** in the specified positioning relative to one another for the specified direction of the pressurized fluid, thus capable of "causing" a liquid and a pressurized solution "to commingle," that is, "[t]o blend or cause to blend," in any manner and to any extent, however small, in any container. See, e.g., *The American Heritage Dictionary, Second College Edition* 297. The fourth limitation characterizing the "nozzles" in claim 1 is found in diffuser **110** of **FIG. 7** because the plain language of the claims requires that the nozzles must be capable of maintaining "system back pressure" in the diffuser *per se* just as described in the specification (page 16). The limitations of appealed claims 3 through 5 and 11 through 13 are satisfied by the diffuser **110** of **FIG. 7** as well.

Further, in this respect, when the preambular language of the claims coupled with the last limitation of the "nozzles" in each (see above pp. 9-10) is considered in the context of the claimed invention as a whole, including consideration thereof in light of the written description in appellant's specification, the same constitutes an intended use of a diffuser having nozzles that are capable of maintaining system back pressure in that use as specified, and thus this claim language adds no additional structural limitation(s) to the claims. See generally, *Corning Glass Works v. Sumitomo Elect. U.S.A., Inc.*, 868 F.2d 1251, 1257,

9 USPQ2d 1962, 1966 (Fed. Cir. 1989), *In re Stencel*, 828 F.2d 751, 754-55, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987).

In light of the claim language and the disclosure with respect to diffuser **110** of **FIG. 7** which I discussed above, I am of the opinion that one of ordinary skill in this art would find no contrary definition of the term "a diffuser" in the disclosure that "elongated body **114** [of diffuser **110**] . . . extends the pair of nozzles **112** into the mixing cylinder . . . in substantially a perpendicular manner" such that the nozzles "remain fixed in a stationary position within the cylinder . . . [and] do not rotate about a central axis of the elongated body **114**" (specification, page 15, ll. 9-15). Indeed, there is no specific limitation in the appealed claims which requires that the nozzles must be fixed or adapted to be fixed in a mixing cylinder, even though the appealed claims are open to encompass "a diffuser" coupled with a mixing cylinder because of the open-ended transitional term "comprising." See generally, *Vehicular Technologies Corp. v. Titan Wheel Int'l Inc.*, 212 F.3d 1377, 1383, 54 USPQ2d 1841, 1845 (Fed. Cir. 2000); *Genentech Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 802 (CCPA 1981). Thus, the "preferred embodiment" wherein "the diffuser **110** further includes at least one support member **130** for additional structural support within the mixing cylinder and to prevent torque created" by nozzles **112** twisting elongated body **114** disclosed in the specification (page 16) is encompassed in claims 1 and 7 only to this extent.

Therefore, I cannot agree with appellant's summary of the claimed invention in the brief and thus his arguments in the brief and the reply brief, subscribed to by the majority of this panel, based on the premise that the claims require that "a

diffuser" must extend nozzles **112** into and be fixed mounted in a mixing cylinder such that "the nozzles **112** do not rotate about a central axis of the elongated body **114**" in combination with certain process conditions for the operation of "a diffuser" in this relationship (e.g., pages 3-5), because there are no such specific limitations in these respects in the appealed claims. See *In re Self*, 671 F.2d 1344, 1348-49, 213 USPQ 1, 5 (CCPA 1982). Even if there were, such "limitations" based on process, method and intended use conditions are not limitations that serve to structurally further limit the claimed apparatus or patentably distinguish that claimed apparatus over the prior art. See, e.g., *In re Yanish*, 477 F.2d 958, 959, 177 USPQ 705, 706 (CCPA 1973); *In re Casey*, 370 F.2d 576, 579-80, 152 USPQ 235, 237-39 (CCPA 1967). In this respect, "[a]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1468, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Thus, the patentability of an apparatus claim depends on the claimed structure, not on the use or purpose of that structure, *Catalina Marketing Int'l Inc. v. Coolsavings.com Inc.*, 289 F.3d 801, 808, 62 USPQ2d 1781, 1785 (Fed. Cir. 2002), or the function or result of that structure. *In re Danly*, 263 F.2d 844, 848, 120 USPQ 528, 531 (CCPA 1959).

I have compared appealed claims 1 and 7, as I have interpreted these claims above, with the disclosure, including the drawings, of Jackson and find that the reference would have reasonably described to one of ordinary skill in the art the following "diffuser." In Jackson **Fig. 1** is shown diffuser **C** which has a tubular stem **20** to which is attached at an end thereof a head **21** (col. 3, ll. 18-33). The head **21** has a body portion **25** to which is attached, through nipples **29** and angle fittings **28**, two "jet-forming" nozzles **27** which are "angularly

related" to body **25**, or "tangentially disposed, as shown in **Fig. 2**," so that fluid discharged therefrom will cause mixing and agitation of fluid in container **A** (col. 3, ll. 34-62, and col. 5, ll. 17-19). The tubular stem **20** is closed at one end by bull plug **41** joined to body **25** (col. 3, ll. 69-70, and **Fig. 4**). The other end of tubular stem **20** is adapted so that diffuser **C** can be joined to component **B** by coupling means **D** (col. 4, ll. 1-2, and **Figs. 1** and **3**). The handles **80** and paddles **90** shown attached to tubular stem **20** are optional (col. 4, ll. 61-75).

Thus, I find that as a matter of fact, Jackson describes diffuser **C** having "a pair of laterally displaced nozzles" **27** which "nozzles" (1) are "substantially oppositely-oriented relative to one another" on the head **21** assembly which includes body portion **25**; (2) "direct [a] pressurized solution passing through each of said nozzles in opposite directions" as described by Jackson; (3) are "fixed in a stationary position thereby *causing* the liquid and [a] pressurized solution to *commingle*" as described by Jackson; and (4) "maintain system back pressure" to maintain dissolved gas in the solution within the diffuser, which is all that the limitations of claim 7 require of a diffuser. Indeed, with respect to the last claim limitation, because nozzles **27** are "jet forming," one of ordinary skill in this art would have reasonably inferred that, as a matter of fact, the formation of such "jet" would necessarily, inherently cause system back pressure within diffuser **C** which would be sufficient to maintain at least some amount, however small, of dissolved gas in solution. See *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999); *In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986).

I further find, as did the examiner (answer, page 5), that as a matter of fact, diffuser **C** of Jackson has tubular stem

20 which is a hollow, elongated body at one end of which is attached head 21 that has nozzles 27 attached thereto in a substantially perpendicular manner, the nozzles 27 each having one angle fittings 28, which are "elbow portions," and one concentric reducer in the nozzle itself as seen from Jackson **Fig. 2**. Thus, diffuser C of Jackson satisfies all of the limitations of appealed claims 11 and 12 as well.

Accordingly, diffuser C as disclosed by Jackson, *prima facie*, describes each and every element of the claimed "diffuser" encompassed by appealed claims 7, 11 and 12, arranged as required by these claims, as I have interpreted these claims above, in a single prior art reference, either expressly or under the principles of inherency. *See generally, Robertson*, 169 F.3d at 745, 49 USPQ2d at 1950-51; *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997); *King*, 801 F.2d at 1326, 231 USPQ at 138; *Lindemann Maschinenfabrik v. American Hoist and Derrick*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

Therefore, based on the substantial evidence in Jackson, I would affirm the ground of rejection of appealed claims 7, 11 and 12 under 35 U.S.C. § 103(a) on the basis that, as a matter of fact, the claimed "diffuser" encompassed by each of these claims is anticipated by Jackson, and it is well settled that "anticipation is the ultimate of obviousness." *See In re Baxter Travenol Labs.*, 952 F.2d 388, 391, 21 USPQ2d 1281, 1284-85 (Fed Cir. 1991) (citing *In re Fracalossi*, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982)). I do not find it necessary to discuss Kinsey in reaching this position. *See In re Kronig*, 539 F.2d 1300, 1302-04, 190 USPQ 425, 426-28 (CCPA 1976).

The sole difference between the application of diffuser C described by Jackson and appealed claims 1, 3 and 4, involves

the limitation with respect to the system back pressure range of approximately 45 psi to approximately 55 psi which must be maintained within the diffuser, which range does not reasonably appear on this record to be necessarily, inherently provided by nozzles **27** of diffuser **C**. I agree with the examiner (answer, page 3), that, *prima facie*, one of ordinary skill in this art routinely working with diffuser **C** of Jackson would have reasonably arrived at a workable or optimum range of system back pressure within the diffuser to maintain the desired gas(es) in solution. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) ("[W]here general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). I find no evidence or argument in the record establishing the criticality of the claimed range.

Therefore, based on the substantial evidence in Jackson, I would affirm the ground of rejection of appealed claims 1, 3 and 4 under 35 U.S.C. § 103(a) because as a matter of law, the claimed "diffuser" encompassed in each of these claims would have been obvious to one of ordinary skill in this art over diffuser **C** described by Jackson.

The claimed invention encompassed by claims 5 and 13 requires that "a pair of elbow portions substantially [define] a semicircle portion of each of said nozzles." I could not find a definition for the term of degree "substantially" in the context of a nozzle pattern in the written description in the specification, and thus a reasonable, ordinary meaning of the claim language "substantially . . . a semicircle portion" includes within its scope, semicircular *per se* to largely but not wholly semicircular. See *Morris, supra; York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572-73, 40

USPQ2d 1619, 1622-23 (Fed. Cir. 1996) ("In this case, the patent discloses no novel use of claim words. Ordinarily, therefore, 'substantially' means 'considerable in . . . extent,' *American Heritage Dictionary Second College Edition* 1213 (2d ed. 1982), or 'largely but not wholly that which is specified,' *Webster's Ninth New Collegiate Dictionary* 1176 (9th ed. 1983)."); *Seattle Box Co., Inc. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984).

Jackson would have disclosed to one of ordinary skill in this art that in the preferred form of his invention, angle or elbow fittings **28** of diffuser **C** can be "pitched or angularly related to the head [**21**] in the desired manner" (col. 3, ll. 50-62, and col. 5, ll. 17-19). Thus, *prima facie*, one of ordinary skill in this art routinely following the teachings of Jackson would have pitched or angled nozzles **27** so as to mix and agitate the fluid in container **A** in any desired manner, including a "substantially" semicircular nozzle arrangement. See *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996) ("When obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. [Citation omitted.] This suggestion or motivation need not be expressly stated. [Citation omitted.]"). In this respect, the examiner cites Vretman **Fig. 3** as evidence that, *prima facie*, one of ordinary skill in the art would have used a nozzle arrangement that is more semicircular than that shown in Jackson **Fig. 2** (answer, page 4). I agree with the examiner's position. See *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) ("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention

must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art."). I am further of the opinion that one of ordinary skill in the art would have arrived at such a substantially semicircular nozzle arrangement using one or more angle or elbow fittings **28** for the same nozzle. See *In re Harza*, 274 F.2d 669, 671, 124 USPQ 378, 380 (CCPA 1960) ("It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced, and we are of the opinion that such is not the case here.").

Therefore, based on the substantial evidence in Jackson and in Vretman, I would affirm the ground of rejection of appealed claims 5 and 13 under 35 U.S.C. § 103(a) because as a matter of law, the claimed "diffuser" encompassed in each of these claims would have been obvious to one of ordinary skill in this art over the combined teachings of Jackson and Vretman.

Accordingly, I would affirm the decision of the examiner.

CHARLES F. WARREN)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES

Todd Deveau

Appeal No. 2005-1115
Application 09/269,369

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