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The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROGER PETERSON

Appeal No. 96-3395
Application No. 08/347,900¹

ON BRIEF

Before BARRETT, FLEMING, and BARRY, Administrative Patent Judges.

BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the final rejection of claims 1-22. We affirm-in-part.

¹ The application was filed December 1, 1994.

BACKGROUND

The invention at issue in this appeal obtains bottled samples from a flow stream. It employs a three-way main valve having two positions. One position connects flow from a process plant to a collection bottle. The other position blocks the process flow while connecting the flow of purge gas to the system. A purge control valve switches the flow of purge gas off and on.

The invention operates in four steps. The first step sets the main valve and opens the purge valve to enable purge gas to purge the bottle and the pathways through the main valve. The second step sets the main valve to interrupt the flow of purge gas while permitting flow from the plant to fill the bottle with sample material. Any surplus overflows through a filter. The third step restores the main valve to its initial position, which blocks flow from the plant while permitting flow of the purge gas. This purges the bottle and the pathways through the main valve. The fourth step closes the purge valve to switch-off the flow of purge gas.

Claim 1, which is representative for our purposes,
follows:

1. A sample taking apparatus which comprises:

(a) a sample collection apparatus having a valve having an element movable between two positions wherein the valve has three ports, and two of the three ports provide a completed passage through said valve and valve element so that a sample from a sample source introduced to said apparatus is delivered through said apparatus for delivery to a sample receiving container;

(b) a passage through said valve element having an inlet port and a discharge port wherein the passage is deployed so that said valve element, when operated, moves to a position enabling purge fluid flow through said valve element from a remote source of a purge fluid and the purge fluid flows to the valve element and its passage through a source blocking valve; and

(c) a flow line extending from said purge fluid source blocking valve to said valve element so that purge fluid flows through said valve element clearing said valve element of any remaining sample.

The references relied on by the patent examiner in
rejecting the claims follow:

Sanford et al. (Sanford)	3,372,573	Mar. 12, 1968
Morabito et al. (Morabito)	4,962,042	Oct. 9, 1990

Spencer	4,986,138	Jan. 22, 1991
Seiden et al.	5,220,513	Jun. 15, 1993.
		(filed Feb. 19, 1991)

Claims 1-21 stand rejected under 35 U.S.C. § 103 as obvious over Spencer in view of Sanford, Morabito, and Seiden. Rather than repeat the arguments of the appellant or examiner in toto, we refer the reader to the appeal and reply briefs and the examiner's answers for the respective details thereof.

OPINION

In reaching our decision in this appeal, we considered the subject matter on appeal and the rejection and evidence advanced by the examiner. We also considered the arguments of the appellant and examiner. After considering the record before us, it is our view that the evidence and level of skill in the art would have suggested to one of ordinary skill in the art the invention of claims 1-7 and 12-17. We cannot say, however, that the evidence and level of skill in the art would have suggested the invention of claims 8-11 and 18-22. Accordingly, we affirm-in-part. Our opinion discusses the grouping and obviousness of the claims.

Grouping of the Claims

37 C.F.R. § 1.192(c)(7), as amended at 60 Fed. Reg. 14518 (Mar. 17, 1995), was controlling when the appeal brief was filed. Section 1.192(c)(7) stated as follows.

For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and, in the argument under paragraph (c)(8) of this section, appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

In addition, claims that are not separately argued all stand or fall together. In re Kaslow, 707 F.2d 1366, 1376, 217 USPQ 1089, 1096 (Fed. Cir. 1983). When the patentability of dependent claims in particular is not argued separately, the claims stand or fall with the claims from which they depend. In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983).

The appellant states that claims 8-11 stand or fall together, claims 12-17 stand or fall together, and claims 18-22 stand or fall together. (Reply Br. at 1-2.) He also opines that claims 1-7 are separately patentable. (Id. at 1.) The appellant fails to explain, however, why dependent claims 4-6 are believed to be separately patentable. His merely pointing out the differences in what the claims cover, (Appeal Br. at 13), is not an argument that the claims are separately patentable. Therefore, we find that claims 1 and 4-6 stand or fall together, with independent claim 1 as representative of the group. With this in mind, we turn to the obviousness of the claims.

Obviousness of the Claims

We begin our consideration of the obviousness of the claims by finding that the references represent the level of ordinary skill in the art. See In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995) (finding that the Board of Patent Appeals and Interference did not err in concluding that the level of ordinary skill in the art was best determined by the references of record); In re Oelrich,

579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("[T]he PTO usually must evaluate ... the level of ordinary skill solely on the cold words of the literature."). Of course, every patent application and reference relies to some extent upon knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F.2d 656, 660, 193 USPQ 12, 16 (CCPA 1977). Persons skilled in the art, moreover, must be presumed to know something about the art apart from what the references teach. In re Jacoby, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). With this in mind, we address the obviousness of claims 1-7 and 12-17 and the obviousness of claims 8-11 and 18-22 seriatim.

Obviousness of Claims 1-7 and 12-17

Regarding claims 1-7 and 12-17, the appellant "concede[s] that Sanford and Morabito combine" (Appeal Br. at 10.) He argues, however, that the references "do not combine with Spencer." (Id.) The argument is based on the "difference in scale" of the references. (Id.) In response, the examiner notes that he "relies on the secondary references to show

certain concepts" (Examiner's Answer at 6.) He concludes, "the concepts used in those secondary references would have been obvious to use in combination with the ideas represented by the primary reference because it is desirable to clean a sampler like that of Spencer, and the secondary references show and use a known way of cleaning flow lines." (Id.)

We find the appellant's argument to be unpersuasive. It is unnecessary that inventions of references be physically combinable to render obvious an invention under review. In re Sneed, 710 F.2d 1544, 1550, 218 USPQ 385, 389 (Fed. Cir. 1983). See also In re Nievelt, 482 F.2d 965, 968, 179 USPQ 224, 226 (CCPA 1972) ("Combining the teachings of references does not involve an ability to combine their specific structures.").

The test for obviousness is not whether the features of a reference may be bodily incorporated into the structure of another reference but what the combined teachings of those references would have suggested to those of ordinary skill in

the art. In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

Here, the examiner has not asserted that the features of Sanford and Morabito may be bodily incorporated into the structure of Spencer -- such an assertion would be irrelevant. Instead, he has asserted that the combined teachings of the references would have suggested to one of ordinary skill in the art the appellant's invention. Therefore, the appellant's argument "ignores the relevant combined teachings of the references." In re Andersen, 55 CCPA 1014, 391 F.2d 953, 958, 157 USPQ 277, 281 (CCPA 1968) (dismissing the argument that a combination would result in inoperative structure because it is not necessary that the structure of one substituted bodily in that of the reference with which it is combined).

Regarding claim 1, the appellant argues that the claim "is not shown by the alleged combination of *Spencer* with *Morabito* and *Sanford*, either singly or in combination." (Appeal Br. at 12.) "There is no connection," (Id.), he

explains, "of the sort recited in claim 1 to transfer the sample, connect with a purge fluid flow source, deliver the purge fluid in the requested sequence of flow, and then provide the fluid flow line." (Id.) In response, the examiner offers the following explanation.

[T]he valve element of Spencer does have three ports, when element 5 is considered to form part of the valve. Moreover, col. 5, line 3 suggests a three-way valve. Alternatively, the Sanford and Morabito references show that purging is accomplished by using multi-way valves having at least three ports; given that it would have been obvious to purge a sampler like that of Spencer, it would have been readily apparent that a valve capable of allowing the purging operation should be incorporated into the sampler. (Examiner's Answer at 6.)

During patent examination, pending claims must be given their broadest reasonable interpretation. Limitations from the specification are not to be read into the claims. In re Van Geuns, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993); In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969).

Giving claim 1 its broadest reasonable interpretation, we find that claimed invention does not define over the

references. The claim specifies "a sample taking apparatus" comprising three elements. We address the first element separately and the second and third elements collectively.

The first element is "a sample collection apparatus having a valve having an element movable between two positions wherein the valve has three ports, and two of the three ports provide a completed passage through said valve and valve element so that a sample from a sample source introduced to said apparatus is delivered through said apparatus for delivery to a sample receiving container" In short, it recites a two-position, three-port valve, one position of which connects flow from a sample source to a receiving container.

Spencer discloses sample collection apparatuses that receive samples from a flowing fluid line, such as a process line. Col. 1, ll. 19-21. One of the apparatuses employs a three-way valve 57. Col 5, ll. 38-39. Figure 6 depicts three ports of the valve. The first port is connected to a discharge line 47; the second port, to a return line 49; and

the third port, to a sample bottle 9. One position of the valve connects sample flow to the sample bottle 9. Col. 5, ll. 38-43.

The second and third elements of claim 1 are "a passage through said valve element having an inlet port and a discharge port wherein the passage is deployed so that said valve element, when operated, moves to a position enabling purge fluid flow through said valve element from a remote source of a purge fluid and the purge fluid flows to the valve element and its passage through a source blocking valve; ..." and "a flow line extending from said purge fluid source blocking valve to said valve element so that purge fluid flows through said valve element clearing said valve element of any remaining sample." In short, they require that a position of the valve connects flow from a remote source, through a second valve and a flow line, through the three-way valve to purge it of any remaining sample.

Sanford discloses an apparatus for obtaining a sample from a liquid. Col. 1, ll. 13-14, 64-66. The apparatus

includes multi-port valves 10, 11, and 12, each of which contains multiple passages. Col. 2, ll. 15-18. The valves are first positioned to collect a sample and deliver it to a receiving column. Col. 2, ll. 33-39; col. 3, ll. 15-19. They are then positioned to connect flows of a wash fluid and a drying gas through valves 11 and 12 and many flow lines (e.g., conduits 20, 22, 32, 33, 27, 41, and 44) to valve 10 in order to purge it of any remaining sample. Col. 3, l. 74 - col. 4, l. 3.

Seiden discloses a method for measuring an amount of a gas in a sealed container of fluid. Col. 4, ll. 12-13. The reference teaches connecting flow from a remote source of purge gas 17, through a valve 16 and a flow line, to a system with valves in order to purge the system. Col. 2, ll. 63-65. The appellant admits that the valve "appears to be an off/on valve." (Appeal Br. at 7.) When the teachings of the references are combined, the result in a three-way valve with a position that connects flow from a remote source, through a second valve and a flow line, through the three-way valve to

purge it of any remaining sample. Therefore, we find that the references would have suggested the elements of claim 1.

As aforementioned regarding the grouping of the claims, claims 4-6 stand or fall with claim 1. Therefore, we find that the references would have suggested the elements of claim 4-6.

Regarding claim 2, the appellant alleges, "the *Spencer* construction does not set out the filter connection specifically described in claim 2." (Appeal Br. at 12.) In response, the examiner observes, "filter 56 appears capable of precluding escape of overflow from the sample container. Please see col. 5, line 44; col. 2, line 67; and Fig. 4." (Examiner's Answer at 7.)

Giving claim 2 its broadest reasonable interpretation, we find that claimed invention does not define over the references. The claim specifies "a flow line from said sample receiving container into a filter to enable overflow from said sample container precluding discharge to the

atmosphere of overflow sample." In short, it recites an overflow line connecting the receiving container to a filter.

Spencer teaches a vent passageway 14 that vents excess sample fluids from the sample bottle 9 to a vent line opening 16 attached to a vent line 11. Vent line 11 leads to a closed waste container. Col. 3, ll. 45-50. More specifically, the container can be a filter. Col. 5, l. 44. Therefore, we find that the references would have suggested the elements of claim 2.

Regarding claim 3, the appellant states that the claim "describes an apparatus in which the first syringe delivers a purge gas flow through a purge gas control valve cooperating with a purge gas flow line." (Appeal Br. at 13.) He alleges, "[t]hat simply is not shown in *Spencer* and is not really shown in the secondary references" (Id.)

Giving claim 3 its broadest reasonable interpretation, we find that claimed invention does not define over the references. As aforementioned regarding claim 1, Sanford and

Seiden teach or would have suggested delivering a flow of purge gas through a control valve and a flow line. Spencer, furthermore, teaches a vented needle 5. Col. 1, ll. 33-36. Sampling fluid flows through the needle into the sample bottle 9. Col. 4, ll. 30-41. When the teachings of the references are combined, the needle would deliver the purge gas flow to the sample bottle. Therefore, we find that the references would have suggested the elements of claim 3.

Regarding claim 7, the appellant argues, "the apparatus of claim 7 calls for a valve with valve element having four ports. The ports are connected (1) with a purge gas flow line, (2) a sample source, (3) a sample container, (4) a filter for excess sample." (Appeal Br. at 13.) He asserts, "[t]hat structure is not shown by any of the cited references, or by any combination of the cited references." (Id.)

Claims are not interpreted in a vacuum but are part of and are read in light of the specification. Slimfold Mfg. Co. v. Kinkead Indus., Inc., 810 F.2d 1113, 1116, 1 USPQ2d 1563, 1566 (Fed. Cir. 1987). Apart from claim 7, the specification

discloses that the appellant's valve element "is provided with three ports." (Spec. at 6.) It adds that the three-port construction is used in a specific fashion. (Id.) The figures depict valve element 16 as having only three ports, a port being a hole in the valve element. Accordingly, we interpret the valve element as having three ports. We further interpret the four "ports" argued by the appellant as four connections. Giving claim 7 this interpretation, we find that claimed invention does not define over the references.

As aforementioned regarding claim 1, Sanford and Seiden disclose a connection to a purge gas flow line. As also aforementioned, Spencer discloses a valve 57 having three ports. The three ports correspond to three connections. One port connects to the discharge line 47, which is a connection to a sample source. Another port connects to the sample bottle 9. As aforementioned regarding claim 2, the reference also teaches a connection to the vent line 11, which leads to a filter for excess sample. Therefore, we find that the references would have suggested the elements of claim 7.

Regarding claim 12, the appellant notes that the claim "calls for a valve body with a valve element having three ports. The ports in the element rotate and make specific connections as recited and then sample is input through an inlet passage and the purge fluid is delivered through a source blocking valve (i.e., a second valve)." (Appeal Br. at 14.) He alleges, "*Spencer* does not show this." (Id.) "The assumed combination of *Sanford* into *Spencer*," further alleges the appellant, "does not help because the six-way valve 10, the six-way valve 11, or the six-way valve 12 do not cooperate in the fashion necessary to make such a rejection." (Id.) In response, the examiner asserts, "it would have involved only routine skill to make the necessary plumbing connections among the valve and other components, in order to combine a purging function with a *Spencer*-like sampler." (Examiner's Answer at 7.)

Giving claim 12 its broadest reasonable interpretation, we find that claimed invention does not define over the references. The claim specifies "a sample collection

apparatus" comprising four elements. We address the elements seriatim.

The first element is "a valve body housing a valve element, said valve body having first and second inlets and an outlet" The second elements adds that the valve element has three ports. As noted by the appellant, these limitations "call[] for a valve body with a valve element having three ports." (Appeal Br. at 14.) As aforementioned regarding claim 1, Spencer discloses a valve body 57 having three ports.

The second element also recites that the valve element is "rotatable between two positions for alternately delivering (1) a sample to be tested and (2) a purge fluid to said outlet" As aforementioned regarding claim 1, Sanford discloses rotating valves between two positions for alternately obtaining and delivering (1) a sample liquid and (2) a wash fluid and drying gas. The sample liquid is analyzed in a detector 29. Col. 2, ll. 50-55.

The third element recites that the "sample is delivered to said valve through an inlet passage" As aforementioned regarding claim 7, Spencer discloses that one port of the three-way valve 57 connects to the discharge line 47, which is a connection to a sample source. Accordingly, a sample is delivered to the valve through an inlet passage connected to the discharge line.

The fourth element recites that "said purge fluid [is] delivered to said valve through a purge gas flow line serially through a source blocking valve." As aforementioned regarding claim 1, Sanford discloses delivering flows of a wash fluid and drying gas through many flow lines (e.g., conduits 20, 22, 32, 33, 27, 41, and 44) and valves 11 and 12 to valve 10. As also aforementioned, Seiden teaches delivering a flow of purge gas 17, through a valve 16 and a flow line, to a system with valves in order to purge the system. Therefore, we find that the references would have suggested the elements of claim 12.

As aforementioned regarding the grouping of the claims, claims 13-17 stand or fall with claim 12. Therefore, we find that the references would have suggested the elements of claim 13-17. Accordingly, we affirm the rejection of claims 1-7 and 12-17 under 35 U.S.C. § 103. Next, we consider the obviousness of claims 8-11 and 18-22.

Obviousness of Claims 8-11 and 18-22

We begin our consideration of the obviousness of claims 8-11 and 18-22 by recalling that in rejecting claims under 35 U.S.C. § 103, the patent examiner bears the initial burden of establishing a prima facie case of obviousness. A prima facie case is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. If the examiner fails to establish a prima facie case, an obviousness rejection is improper and will be overturned. In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). With this in mind, we analyze the appellant's arguments.

Regarding claims 8-11 and 18-22, the appellant argues that the claims "are patentably distinct because the cited references, either individually or in combination, do not recite methodology for partially filling a sample container with sample liquid and filling the remaining dead space with inert purge gas." (Appeal Br. at 18.) In response, the examiner asserts, "[w]hen a purging function is added to a sampler, as described above, this means that the purge gas will follow the sample through the conduits and into any space remaining above the sample in the sample container" (Examiner's Answer at 8.)

We cannot find that Spencer, Sanford, Morabito, and Seiden teach or would have suggested steps c and e of claim 8 or steps b and d of claim 18. Step c of claim 8 recites "operating said valve to an alternate position so that a sample of specified size is delivered through said valve and is admitted into said sample container" Similarly, step b of claim 18 recites "delivering a first predetermined volume of a purge gas through a purge gas source blocking valve to said outlet"

Step e of claim 8 recites "after filling the container with sample, then (3) flowing purge fluid into said container." Similarly, step d of claim 18 recites "after filling a container to a specified volume of the sample, then delivering a second predetermined volume of a purge gas to said outlet to purge sample from the outlet so that any following tests are free of remnants of sample." Interpreting the claims in light of the specification, (Spec. at 8), they specify partially filling the container with a sample to leave a dead space above the sample and filling the remaining dead space with purge gas.

We appreciate the examiner's conclusion that, in the references, purge gas will follow the sample through the conduits and into any space remaining above the sample in the sample container. He neglected, however, to identify any teaching or suggestion of only partially filling a container with a sample to leave a dead space above the sample.

For the foregoing reasons, the examiner failed to show that Spencer, Sanford, Morabito, and Seiden teach or would

have suggested steps c and e of claim 8 and its dependent claims 9-11

or steps b and d of claim 18 and its dependent claims 19-22.

Therefore, we find the examiner's rejection does not amount to a prima facie case of obviousness. Because the examiner has not established a prima facie case, the rejection of claims 8-11 and 18-22 over Spencer in view of Sanford, Morabito, and Seiden is improper. Therefore, we reverse the rejection of the claims under 35 U.S.C. § 103.

We end our consideration of the obviousness of the claims by concluding we are not required to raise or consider any issues not argued by the appellant. Our reviewing court stated, "[i]t is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for nonobvious distinctions over the prior art." In re Baxter Travenol Labs., 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991).

37 C.F.R. § 1.192(a), as amended at 60 Fed. Reg. 14518 (Mar. 17, 1995), was controlling when the appeal brief was filed. Section 1.192(a) stated as follows.

The brief . . . must set forth the authorities and arguments on which the appellant will rely to maintain the appeal. Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences, unless good cause is shown.

Also at the time of the brief, 37 C.F.R. § 1.192(c)(8)(iv) stated as follows.

For each rejection under 35 U.S.C. 103, the argument shall specify the errors in the rejection and, if appropriate, the specific limitations in the rejected claims which are not described in the prior art relied on in the rejection, and shall explain how such limitations render the claimed subject matter unobvious over the prior art. If the rejection is based upon a combination of references, the argument shall explain why the references, taken as a whole, do not suggest the claimed subject matter, and shall include, as may be appropriate, an explanation of why features disclosed in one reference may not properly be combined with features disclosed in another reference. A general argument that all the limitations are not described in a single reference does not satisfy the requirements of this paragraph.

In summary, section 1.192 provides that just as the court is not under any burden to raise or consider issues not argued by

the appellant, the Board of Patent Appeals and Interferences is also not under any such burden.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-7 and 12-17 under 35 U.S.C. § 103 is affirmed. His rejection of claims 8-11 and 18-22 under § 103 is reversed. Accordingly, we affirm-in-part.

No period for taking subsequent action concerning this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

LEE E. BARRETT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS
Administrative Patent Judge)	AND
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