UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANTON NEUMEIER and REINHARD EFFENBERGER

Appeal 2008-3851
Application 10/897,693
Technology Center 3700

Decided: January 16, 2009

Before: WILLIAM F. PATE, III, MICHAEL W. O'NEILL and STEFAN STAICOVICI, *Administrative Patent Judges*.

PATE, III, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1-10. We have jurisdiction under 35 U.S.C. § 6(b).

The claims are directed to a method and apparatus for extinguishing fires.

Claim 1 is illustrative of the claimed subject matter and reproduced below:

> 1. A process for extinguishing metal fires by applying an extinguishing agent to a fire source, comprising the steps of using a totally water-free liquid extinguishing agent which reacts with the burning metal while binding the air oxygen and forming a non-flammable compound, and applying the liquid extinguishing agent to the fire source substantially from above in the form of a multitude of fine jets of the extinguishing agent.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Livingston	3,698,482	Oct., 17, 1972
Hengesbach	3,727,841	Apr. 17, 1973
Barker	5,124,367	Jun. 23, 1992
Wedlake	5,607,787	Mar. 04, 1997
Nakagami	5,871,673	Feb., 16,1999
Huang	US 6,540,163 B1	Apr. 01, 2003
Chen	US 6,719,331 B1	Apr. 13, 2004

Claims 1-3 stand rejected under 35 USC § 103(a) as being unpatentable over Livingston in view of Wedlake. Claim 4 stands rejected under 35 USC § 103(a) as being unpatentable over Livingston in view of Wedlake and further in view of Barker. Claim 5 stands rejected under 35 USC § 103(a) as being unpatentable over Livingston in view of Wedlake

and further in view of Nakagami. Claims 6, 7 and 9 stand rejected under 35 USC § 103(a) as being unpatentable over Chen. Claim 8 stands rejected under 35 USC § 103(a) as being unpatentable over Chen in view of Huang. Claims 6 and 10 stand rejected under 35 USC § 103(a) as being unpatentable over Hengesbach. The rejection of all of the claims is appealed. Appellants concede that claims 4, 5 and 8-10 will stand or fall with the claims from which they depend (Brief p. 7).

ISSUES

Have Appellants established that the Examiner erred in rejecting claims 1-3 under 35 USC § 103(a) as being unpatentable over Livingston in view of Wedlake?

Have Appellants established that the Examiner erred in rejecting claims 6 and 7 under 35 USC § 103(a) as being unpatentable over Chen?

Have Appellants established that the Examiner erred in rejecting claim 6 under 35 USC § 103(a) as being unpatentable over Hengesbach?

FINDINGS OF FACT

1. Livingston discloses a process for extinguishing fires (Col. 2, l. 28), by applying an extinguishing agent to a fire (Col. 2, l. 32 et seq.) substantially from above (Fig. 2) in the form of a multitude of fine jets (via 28,30).
2. Livingston further discloses water as an exemplary extinguishing agent (Col. 3, l. 9), but recognizes that other suitable extinguishing agents are known in the art (Col. 1, l. 26-27), which suggests that alternative extinguishing agents may be used with the disclosed system. Livingston

does not, however, disclose any specific examples of an alternative extinguishing agent.

3. Livingston further discloses implementing the system to extinguish combustible materials or fuel piles (Col. 3, ll. 60-61). Livingston does not, however, disclose any specific example of the material composition of the combustible materials or fuel piles.
4. Wedlake teaches that it is known in the art of fire containment that alkali metals such as sodium (Col. 1, ll. 63-64) may ignite (Col. 4, ll. 62-63).
5. Wedlake further teaches deploying a protective substance containing a fire inhibiting or retarding element upon detection of an abnormal temperature rise within a battery, which may occur if a fire breaks out in the battery (Col. 4, ll. 38-55).
6. Wedlake explicitly contemplates using the protective substance for inhibiting or retarding a fire, however, since the substance may also be used to extinguish a fire by restricting the air available for combustion (Col. 4, l. 66), the substance may be considered an extinguishing agent.
7. Wedlake further teaches that it is known in the art that non-aqueous (Col. 3, l. 24) fire extinguishing agents may be employed in order to retard or prevent a metal fire (Col. 4, ll. 38-55).
8. Wedlake further teaches that it is known in the art that extinguishing agents containing a proportion of solids (Col. 3, l. 10) may be employed in order to retard or prevent a metal fire (Col. 4, ll. 38-55).
9. Wedlake further teaches that it is known in the art that non-aqueous extinguishing agents comprising polydimethyl-siloxane (Col. 3, ll. 47-48) may be employed in order to retard or prevent a metal fire (Col. 4, ll. 38-55).

10. The customary meaning of "gun" is a device that has the ability to project something under pressure. *See* THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (4th ed. 2000). Therefore, an "extinguishing gun" is any device that is capable of projecting an extinguishant.
11. Chen discloses a telescopic tube which discharges water (Col. 2, ll. 57-58) ("extinguishing gun"; *See* Fact 10), with a nozzle wand 40, 50 having a plurality of small outlet nozzles arranged adjacent to one another to form a plurality of fine jets (i.e., a sprinkler Col. 2, l. 59).
12. The sprinkler structure of Chen is disclosed only as an alternative to the brush structure 41 (Col. 1, ll. 46-47; Col. 2, ll. 58-59) and is not depicted in the figures.
13. Chen does not describe how water supplied to the brush 41 is expelled. Chen fails to disclose any particular arrangement of the nozzles on the sprinkler or the shape of the sprinkler.
14. Chen does not specify that the disclosed device may be used for fire extinguishing applications.
15. Chen does not specify that the disclosed device may be used with a non-aqueous fluid.
16. Hengesbach discloses an multiple jet fluid sprinkling, spraying, and diffusing device (Col. 3, ll. 38-40) ("extinguishing gun"; *See* Facts 10 and 19), with a nozzle wand 2, 4 having a plurality of small outlet nozzles 3, wherein the extinguishing wand is an approximately tubular (Fig. 1-3) body with an approximately flat end piece 2, protruding from the gun 1, in which the nozzles 3, are arranged on one side so that the

extinguishing agent jets emerge approximately perpendicular to the end piece (Fig. 1).

17. Hengesbach teaches that nozzles 3, may be oriented so that jets emerge from above the target of the jets (See e.g., Figs. 11, 21, and 23).
18. Hengesbach additionally teaches the end piece 2, of the tubular extinguishing wand 2, 4 may be angled slightly upwards in relation to the remaining tubular body of the extinguishing wand (See e.g., Figs 21 and 23; See also Col. 2, l. 32-38).
19. Hengesbach additionally teaches that the extinguishing gun may be used for fire extinguishing applications (Col. 5 ll. 26-28).
20. Hengesbach additionally teaches that the extinguishing gun may be supplied with water, aqueous solutions or other liquids (Col. 3 ll. 54-55), which implies Hengesbach contemplated use with non-aqueous liquids.

PRINCIPLES OF LAW

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. The key to supporting any prima facie conclusion of obviousness under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, _, 127 S. Ct. 1727, 1731 (2007) noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit. The Federal Circuit has stated that “rejections on obviousness grounds cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal

conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). *See also KSR*, 127 S. Ct., at 1741.

The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. *KSR*, 127 S. Ct., at 1739.

A prima facie conclusion of obviousness may be supported by a showing that the claims are directed to a process, machine, manufacture, or composition of matter already known in the prior art that is altered by the mere substitution of one element for another known in the field, and such modification yields a predictable result. *See Id.* (citing *United States v. Adams*, 383 U.S. 39, 40).

If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co*., 182 F.3d 1298, 1305 (Fed. Cir. 1999). If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Id.* Statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the recited purpose or intended use results in a structural difference between the claimed invention and the prior art. If so, the recitation serves to limit the claim. *See, e.g., In re Otto*, 312 F.2d 937, 938 (CCPA 1963).

ANALYSIS

The rejection of claims 1-3 under 35 USC 103(a) as being unpatentable over Livingston in view of Wedlake is affirmed.

Appellants argue that the Examiner erred in rejecting claim 1 because the claimed extinguishing agent is applied not in the form of pressure jets but in the form of fine droplets (Brief p. 5). This argument is not commensurate in scope with the claim which recites, "a multitude of fine jets." Furthermore, Appellants do not support this assertion with any discussion of how the Livingston jets differ from those recited in the claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

Appellants argue that the Examiner erred in rejecting claims 1-3 because Wedlake fails to disclose a fire extinguishing agent (Brief pp. 5-6; Reply Brief p. 2). This argument is premised on the notion that the protective substance of Wedlake contains a fire *inhibiting* or *retarding* component and is therefore not specifically concerned with *extinguishing* of fires. Despite the expressly recited intended use of the Wedlake substance, it may properly be considered an extinguishing agent within the broadest reasonable interpretation of that term (Facts 5-6).

Appellants argue that the Examiner erred in rejecting claims 2-3 because Wedlake fails to disclose that polydimethyl-siloxane used as the extinguishing agent. Appellants further argue that the Examiner erred in rejecting claim 3 because Wedlake fails to disclose that the extinguishing agent contains a proportion of solids (Brief p. 6; Reply Brief p. 1). Appellants conclude that these findings are misrepresentations on the part of

the Examiner. The only support we can find for this premise is that in paragraph 3 of the Office Action mailed August 18, 2006 the Examiner incorrectly referenced column 4 instead of column 3 to show this feature. Since a thorough reading of Wedlake would provide Appellants with sufficient notice that these claimed elements are disclosed (Facts 8-9) this does not constitute reversible error.

The rejection of claim 6 under 35 USC 103(a) as being unpatentable over Chen or Hengesbach is affirmed.

Appellants argue that the Examiner erred in rejecting claim 6 because neither Chen nor Hengesbach is concerned with the extinguishing of metal fires (Brief p. 7). This argument is not commensurate in scope with the claim which only describes extinguishing metal fires as an intended use. Appellants have not established that the recited intended use results in a structural difference between the claimed invention and the prior art. Hengesbach explicitly discloses fire extinguishing capability (Fact 19) and operation with a non-aqueous liquid (Fact 20). Though Chen does not explicitly recite such capabilities, the Examiner has reasoned that, like Hengesbach, the Chen device would be capable of performing the recited intended use. Appellants have not rebutted this assertion by setting forth any facts or arguments to establish that the Hengesbach and Chen devices would be incapable of performing the recited intended use.

The rejection of claim 7 under 35 USC 103(a) as being unpatentable over Chen is reversed.

Appellants argue that the Examiner erred in rejecting claim 7 because Chen and Hengesbach [sic] fail to disclose that the wand is a tubular body with a flat end piece, in which the nozzles are arranged so that the extinguishing agent jets emerge approximately perpendicular to the orientation of the end piece. This argument is persuasive. To support this rejection the Examiner improperly combines the features of two mutually exclusive embodiments of Chen, citing features from both the sprinkler and brush (Fact 12). Since Chen does not describe any specific shape of the sprinkler or orientation of the nozzles thereon, citing the sprinkler to meet this limitation amounts to mere speculation. Additionally, since Chen does not describe the manner in which water is expelled from the brush 41 citing the brush 41 to meet this limitation also amounts to mere speculation. There is no factual support or articulating reasoning of record to support this conclusion.

Pursuant to our authority under 37 C.F.R. § 41.50(b) we enter new grounds of rejection of claims 7-8 under 35 USC 103(a) as being unpatentable over Hengesbach.

With respect to claim 7, Hengesbach additionally discloses an extinguishing gun 1 (Col. 3, ll. 38-40), with a nozzle wand 2, 4 having a plurality of small outlet nozzles 3, wherein the extinguishing wand is an approximately tubular (Fig. 1-3) body with an approximately flat end piece 2, protruding from the gun 1, in which the nozzles 3, are arranged on one side so that the extinguishing agent jets emerge approximately perpendicular to the end piece (Fig. 1) (Fact 16).

With respect to claim 8, Hengesbach teaches, nozzles 3 may be oriented so that jets emerge from above the target of the jets (See e.g., Figs. 11, 21, and 23) (Fact 17) and that the end piece 2, of the tubular extinguishing wand 2, 4 may be angled slightly upwards in relation to the remaining tubular body of the extinguishing wand (See e.g., Figs 21 and 23). Combining features from the various embodiments of Hengesbach involves merely the combination of prior art elements according to known methods in order to yield the predictable result of obtaining the desired shower shape and size (See e.g., Col. 2 ll. 32-38) and therefore would have been obvious to one having ordinary skill in the art.

CONCLUSION OF LAW

On the record before us, Appellants have not established that the Examiner erred in, rejecting claims 1-3 under 35 USC § 103(a) as being unpatentable over Livingston in view of Wedlake; or rejecting claim 6 under 35 USC § 103(a) as being unpatentable over Chen or Hengesbach. Appellants have established that the Examiner erred in rejecting claim 7 under 35 USC § 103(a) as being unpatentable over Chen.

DECISION

For the above reasons, the Examiner's rejection of, claims 1-3 under 35 USC § 103(a) as being unpatentable over Livingston in view of Wedlake; and claim 6 under 35 USC § 103(a) as being unpatentable over Chen or Hengesbach; is affirmed. The Examiner's rejection of claims 7 and 8 under 35 USC § 103(a) as being unpatentable over Chen is reversed. Pursuant to our authority under 37 C.F.R. § 41.50(b)(2008), new grounds of rejection of

claims 7 and 8 under 35 USC § 103(a) as being unpatentable over Hengesbach is set forth above.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). See 37 C.F.R. § 1.136(a)(1)(iv) (2008).

FINALITY OF DECISION

Regarding the affirmed rejection(s), 37 C.F.R. § 41.52(a)(1) provides "Appellant may file a single request for rehearing within two months from the date of the original decision of the Board."

In addition to affirming the Examiner's rejections of one or more claims, this decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (2008). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of the appeal as to the rejected claims:

> (1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .
>
> (2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the Examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If Appellant elects prosecution before the Examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2008).

AFFIRMED-IN-PART; 37 C.F.R. § 41.50(b)

vsh

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