

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID R. JETER

Appeal 2008-1491
Application 11/343,016
Technology Center 3700

Decided: June 26, 2008

Before MURRIEL E. CRAWFORD, JENNIFER D. BAHR, and
JOSEPH A. FISCHETTI *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

David R. Jeter (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-4 and 6-18. This application is a divisional of application 10/266,229 filed October 8, 2002. In appeal 2005-2176 (Decision mailed September 21, 2005) in the parent application

10/266,229, the decision of the Examiner to reject claims 1-9 under 35 U.S.C. § 102(b) as anticipated by Reighard (US Patent No. 3,815,788, issued, Jun. 11, 1974) was affirmed as to claims 1-4 and reversed as to claims 5-9.¹ We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

THE INVENTION

The Appellant's invention is drawn towards a hotmelt adhesive dispensing system (Spec. 4, ¶ 2). The hotmelt adhesive system 10 includes a tank 22, a tank heater 34, a manifold 24, a pump 26, heated hoses 20, and adhesive guns 12, 14 (Spec. 4, ¶ 14 and fig. 1). The pump 26 includes a pump housing 60, an inlet 64 and an outlet 66 in fluid communication with a pumping chamber 62, a piston rod 72, an inlet passage 70, a filter chamber 68 which holds a filter 80, and an outlet passage 71 (Spec. 5, ¶ 17; Spec. 6, ¶ 19; and fig. 2). Molten adhesive flows from inlet passage 70 through filter 80 into outlet passage 71 and outlet 66 and into the manifold 24 to be distributed through multiple outlet ports 48 (Spec. 6, ¶ 20 and fig. 2).

Claims 1 and 10 are illustrative of the claimed invention and read as follows:

1. A pump for use in a dispensing unit of a hot melt adhesive system, the pump comprising:

a pump housing having an inlet, an outlet, and a chamber between said inlet and said outlet;

¹ The claims in the instant appeal have been amended in comparison to the claims in the appeal in the parent application 10/266,229 to include the limitations of a "pump manifold" in claim 1, and a pump housing that constitutes an "integral structure," in claim 10.

a piston slidably disposed within said housing such that motion of said piston draws the hot melt adhesive into said inlet and discharges the hot melt adhesive from said outlet;

a pump manifold coupled in fluid communication with said outlet of said pump housing, said pump manifold adapted to distribute the hot melt adhesive discharged from said outlet among a plurality of outlet ports; and

a filter removably positioned in said chamber between said inlet and said outlet, said filter configured to capture particulate material in the hot melt adhesive as the hot melt adhesive is pumped from said inlet to said outlet.

10. A pump for use in a dispensing unit of a hot melt adhesive system, the pump comprising:

a pump housing having an inlet, an outlet, and a chamber between said inlet and said outlet;

a piston slidably disposed within said housing such that motion of said piston draws the hot melt adhesive into said inlet and discharges the hot melt adhesive from said outlet; and

a filter removably positioned in said chamber between said inlet and said outlet, said filter configured to capture particulate material in the hot melt adhesive as the hot melt adhesive is pumped from said inlet to said outlet,

wherein said pump housing is an integral structure.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Rosen	US 3,585,361	Jun. 15, 1971
Reighard	US 3,815,788	Jun. 11, 1974

The Appellant seeks review of the Examiner's rejection of claims 1-4 and 6-18 under 35 U.S.C. §103(a) as being unpatentable over Reighard in view of Rosen.

The Examiner provides reasoning in support of the rejection in the Answer (mailed August 2, 2007). The Appellant presents opposing arguments in the Appeal Brief (filed April 18, 2007) and the Reply Brief (filed September 28, 2007).

FACTS

Reighard

We make the following findings of fact with respect to Reighard:

1. Reighard discloses an applicator system for melting thermoplastic material and supplying the molten or liquid material under pressure to an applicator head or gun (col. 1, ll. 8-14).
2. The system of Reighard includes a machine 10 comprising a heated reservoir 14, a pneumatic motor 15, a pump 16 and a manifold block 17. A combination filter, check valve and relief valve cartridge 18 is removably located in the manifold block 17 (col. 2, l. 67 through col. 3, l. 6 and fig. 1).
3. Molten material is supplied from the outlet port 100 of the manifold 17 to a heated dispensing gun 11 through a conduit 19 (col. 7, ll. 14-16).
4. The pump 16 includes a piston 50 on the end of a piston rod 49, actuated by the pneumatic motor 15, and a sleeve 45, the sleeve 45

- having four radial ports 70 which open into the bottom 40 of the reservoir 14 (col. 4, ll. 61-65).
5. The sleeve 45 has an outlet port 72 located in the bore 75 of the manifold block 17 and a lower flange 73 abutting the bottom of reservoir 14 (col. 5, ll. 3-10 and fig. 1).
 6. The dispensing gun 11 includes an inlet 137 for air (col. 7, ll. 47-48), an inlet for molten material (fig. 1), and an outlet 126 for the molten material (col. 7, ll. 28-29).
 7. Although Reighard teaches an outlet port 100 and a dispensing gun 11, Reighard does not teach a manifold having multiple outlet ports connecting to multiple dispensing guns.

Rosen

- We make the following findings of fact with respect to Rosen:
8. Rosen discloses a system for melting thermoplastic material and supplying the molten thermoplastic material under pressure to one or more applicators (Abstract).
 9. The system of Rosen includes a melting tank A, a pump B driven by air motor C, a manifold E, and a filter cavity F which receives filter assembly G (col. 2, ll. 44-51).
 10. Molten material is supplied from passage 13 (inlet) to manifold E where the molten material is passed through filter assembly G to remove particulate matter and flows through passage 14 to a vertical bore 16 from where it is distributed to a plurality of hose adapter

blocks H (outlets) through connecting passages 17 (col. 2, ll. 51-58 and figs. 1 and 3).

OPINION

The Appellant argues claims 1-4 and 6-9 as a group. Similarly, claims 10-18 are also argued as a group. Therefore, in accordance with 37 C.F.R. § 41.37(c)(1)(vii), we have selected claims 1 and 10 as the representative claims to decide the appeal of the obviousness rejection, with claims 2-4 and 6-9, and claims 10-18 standing or falling with claim 1 and claim 10, respectively.

Claims 1-4 and 6-9

The issue presented in the appeal of the rejection of claim 1, and claims 2-4 and 6-9 standing or falling with claim 1 is whether the Appellant has demonstrated that the Examiner erred in determining that the subject matter of claims 1-4 and 6-9 is unpatentable over Reighard in view of Rosen.

The Appellant's first argument is that the dispensing gun of Reighard and the gun-type applicator of Rosen do not constitute a "manifold" (App. Br. 5-6). The Appellant further argues that the ordinary and customary meaning of "manifold" is a "pipe with one inlet and several outlets or with one outlet and several inlets." The Examiner responds that the dispensing gun 11 of Reighard constitutes a "manifold" because it includes "multiple inlets or multiple outlets for air and hot melt respectively" (Ans. 5). Accepting the Appellant's proffered definition of a "manifold," we find that

the dispensing gun of Reighard does not constitute a “manifold” because the dispensing gun includes a single inlet and outlet for the hot melt and a single inlet for the air (Finding of Fact 6). Furthermore, we note that the Examiner did not rely on the gun-type applicator of Rosen to teach a “manifold,” but rather on the teachings of Rosen which show a “manifold” E having multiple outlets 17 connected to a plurality of applicators (dispensing guns) (Ans. 3-4). Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). While the Appellant may be correct that the dispensing gun of Reighard and the gun-type applicator of Rosen do not constitute a “manifold,” the rejection is not based on Reighard or Rosen alone, but rather on the combination of Reighard and Rosen, and as the Examiner has shown, Rosen discloses a “manifold” E having an inlet 16 and multiple outlets 17 connected to a plurality of applicators.

The Appellant’s second argument is that “there is “no motivation or suggestion to modify *Reighard* in the manner suggested by the Examiner” (App. Br. 7) (*italics in original*). For the reasons that follow we find no error in the Examiner’s determination that the proposed modification would have been obvious.

We note at the outset that while there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.* 127 S.Ct. 1727, 1741 (2007).

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. We must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Id. In this case, we agree with the Examiner that it would have been obvious to modify the dispensing device of Reighard to include the manifold of Rosen in order “to increase efficiency and throughput of the dispensing device” (Ans. 4). Reighard specifically discloses an applicator system for melting thermoplastic material and supplying the molten or liquid material under pressure to a single applicator head or gun using a single outlet (Findings of Fact 1 and 3). Similarly, Rosen discloses a system for melting thermoplastic material and supplying the molten thermoplastic material under pressure to a plurality of applicators using a manifold having a single inlet port and multiple outlet ports (dispensing guns) (Findings of Fact 8 and 10). A person of ordinary skill in the art would readily appreciate that the benefits of simultaneous distribution of molten material to a plurality of locations is not unique to the dispensing system of Rosen and that those same benefits could also be achieved in the applicator system of Reighard. As such, one ordinarily skilled in the art would have appreciated that a manifold such as that of Rosen, when implemented in the dispensing system

of Reighard, would have provided simultaneous distribution of molten material to a plurality of dispensing guns from a single source, thereby providing for improved efficiency and productivity. Therefore, we find that modifying the dispensing device of Reighard to provide the manifold of Rosen is merely a predictable use of prior art elements according to their established functions and is no more than “the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *KSR* 127 S.Ct. at 1740. Moreover, the Appellant has not provided any evidence to show that modification of Reighard to provide a manifold having a plurality of outlet ports as taught by Rosen would have been beyond the technical grasp of a person of ordinary skill in the art.

Finally, the Appellant’s third argument is that Reighard fails to disclose "a pump housing having an inlet, an outlet, and a chamber between said inlet and said outlet" (App. Br. 7). The Examiner takes the position that the manifold block 17 of Reighard should be considered part of the pump housing and the claimed inlet and outlet of the pump housing is met by the bore 75 and outlet port 100 of the manifold block 17 (Ans. 3). Furthermore, the Examiner considers the claimed filter to be met by the combination filter, check valve and relief valve cartridge 18 located in the manifold block 17, such filter thus being positioned in a chamber between the inlet and the outlet, as called for in claim 1 (Ans. 3). The Appellant argues, in essence, that Reighard's manifold block cannot be considered part of the pump housing and that the outlet 100 is thus not the outlet of the pump housing. The Appellant argues that the manifold block 17 is not a pump housing because the bore 75 merely receives one end of sleeve 45 (App. Br. 8-9).

The pump 16 includes the piston 50 and the sleeve 45 (Finding of Fact 4). The manifold block 17 is bolted to the bottom wall of reservoir 14 and receives the lower flange 73 and the outlet port 72 of sleeve 45 in the bore 75 (Finding of Fact 5). Hence, we find no error in the Examiner's reading of the pump housing as including not only the sleeve 45 but also the manifold block 17. Furthermore, akin to the filter chamber 68 of the Appellant's invention, which is downstream of the pump piston 73 and the inlet passage 70 of the Appellant's pump, Reighard's manifold block 17 holding the filter cartridge 18 is located downstream of the pump piston 50 and the bore 75 (inlet passage) (Finding of Fact 2). Therefore, we see nothing that precludes the manifold block 17 from being considered part of the pump housing.

For the foregoing reasons, the Appellant's arguments do not persuade us the Examiner erred in rejecting claim 1 as unpatentable over Reighard in view of Rosen. Therefore, the rejection of claim 1, and claims 2-4 and 6-9 standing or falling with claim 1, is sustained.

Claims 10-18

The Appellant's main argument with respect to the rejection of claim 10, and claims 11-18, standing or falling with claim 10, is that Reighard fails to disclose a pump housing that "is an integral structure" (App. Br. 12). The Appellant argues, in essence, that the sleeve 45 and the manifold 17 of Reighard are "bolted together as separate components" and as such cannot be considered to be "integral" (a complete unit; whole) (App. Br. 12-13). When construing claim terminology in the United States Patent and Trademark Office, claims are to be given their broadest reasonable

interpretation consistent with the specification, reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The ordinary and customary definition of “integral” is “formed as a unit with another part” (*MerriamWebster's Collegiate Dictionary* 607 (Tenth Edition)). Furthermore, a “unit” means a “single thing...that is a constituent of a whole” (*MerriamWebster's Collegiate Dictionary* 1292 (Tenth Edition)). The Appellant’s argument implies that the Appellant is interpreting “integral” to be the same as “unitary,” which means “undivided” (*MerriamWebster's Collegiate Dictionary* 1293 (Tenth Edition)). Contrary to the Appellant’s interpretation, the term “integral” is not synonymous with the term “unitary.” Therefore, in the dispensing system of Reighard, although the pump housing and the manifold are not “unitary,” we find that they form an “integral” structure because they are bolted together such that the manifold 17 forms a “unit” with the sleeve 45, hence together forming the pump housing. As such, the rejection of claim 10 and claims 11-18 standing or falling with claim 10, is sustained.

DECISION

The decision of the Examiner to reject claims 1-4 and 6-18 as unpatentable under 35 U.S.C. § 103(a) is affirmed.

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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) (2006).

AFFIRMED

vsh

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