Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte LUDWIG ALBRECHT and HORST SCHREYER

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Appeal No. 2002-2336
Application 09/081,765

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HEARD: February 19, 2003

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Before COHEN, FRANKFORT, and McQUADE, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 8, 11 and 16 through 20. Claims 2 through 4, 14 and 21 stand allowed. Claims 5 through 7, 9, 10, 12 and 13, the only other claims remaining in the application, have been

objected to by the examiner as being dependent upon a rejected base claim, but are indicated to be allowable if rewritten in independent form.

As noted on page 1 of the specification, appellants' invention relates to a machinery unit with a heat barrier that separates a part that is hot during operation from a cool part of the machinery unit, while fastening means hold the two parts together and a flux of force is created between the two parts through one or more force transmitting elements. More particularly, appellants invention is directed to using metal force transmitting elements (e.g., 9 in Fig. 1) positioned between the hot (3, 5) and cool (2, 6) parts of the machinery unit, which elements have a minimal cross-sectional area that is sufficient for the transmission of the force. A copy of independent claim 1, representative of appellants' invention, can be found in the Appendix to appellants' brief (Paper No. 20).

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Kozdon	3,572,982	Mar. 30, 1971
Franke et al. (Franke)	5,626,460	May 6, 1997

Claims 1, 8, 11, 16, 17 and 20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Franke. According to the examiner, Franke discloses

> a machinery unit (Fig. 1) comprising a hot part 1, a cool part 2, a heat barrier 3 which separates the hot part from the cool part, fastening means 4 for holding the hot and cool parts together, and at least one force-transmitting metal element 10 (col. 3, lines 4-10) for producing a flux of force between the hot and cool parts, wherein the hot part an the cool part each includes a cover having a flange-like plate 7 and 8, respectively, the flange-like plates being disposed adjacent one another and spaced apart from one another, the flange-like plates being joined together by the at least one force-transmitting element through a minimal cross-sectional surface sufficient for the transmission of the force, wherein a thermal insulating material 12 fills a space between the adjacent flange-like plates, and at least one of the force transmitting element 10 is an annular body and is made in one piece with one of the flange-like plates. (final rejection, page 3).

Claims 18 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Franke in view of Kozdon.

Rather than reiterate the examiner's full commentary concerning the above-noted rejections and the conflicting viewpoints advanced by appellants and the examiner regarding those rejections, we make reference to the final rejection (Paper No. 15, mailed February 27, 2001) and examiner's answer (Paper No. 21, mailed November 30, 2001) for the reasoning in support of

the rejections, and to appellants' brief (Paper No. 20, filed September 26, 2001) and reply brief (Paper No. 22, filed January 30, 2002) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we have made the determination that the examiner's rejections will be sustained. Our reasons follow.

Each of the independent claims before us on appeal requires "at least one force-transmitting metal element for producing a flux of force between the hot and cool parts." Appellants' principal argument on appeal is that Franke does not disclose or teach any such force-transmitting metal element. More particularly, appellants contend that Franke describes force transmission through a ceramic force-transmitting element (5), which is integrated into the heat barrier (3) and positioned in the straight-line flux of force (6) to provide rigidity to the

system. While conceding that Franke also discloses an interconnection between metal flange components (7,8) defining a thin, pressure-resistant shaft passage (10) which is configured to withstand mechanical stresses while minimizing thermal conduction (col. 3, lines 4-11), appellants contend that there is no basis to conclude that element (10) transmits a flux of force between the hot and cool parts (brief, page 8). We do not agree.

While there is no doubt that the majority of the forces transmitted between the hot pump section (1, 7) and cool motor section (2, 8) of the machinery unit seen in Figure 1 of Franke are intended to be transferred through the ceramic element (5), we share the examiner's view that the welded interconnection of metal flange components (7, 8) at the shaft passage (10) provides a force-transmitting metal element for producing a flux of force between the hot and cool parts of the machinery unit therein. Franke (col. 3, lines 4-11) describes the flange components (7, 8) of the machinery unit as being in heat-conducting contact in the area of the shaft (9) where they form a thin, pressure-resistant shaft passage (10), and also indicates that the shaft passage (10) is "configured so as to withstand mechanical stress, while minimizing thermal conduction."

From our perspective, the fact that Franke describes the shaft passage (10) as being "pressure-resistant" and as being "configured so as to withstand mechanical stress" would readily convey to one of ordinary skill in the art that this welded connection between the metal flange components (7, 8) is expected to encounter and transmit some degree of force between the two flange components and would thus produce a flux of force between those parts. For example, when hot fluid first enters the pump section (1) of the centrifugal pump system of Franke and causes heating of the pump components (including flange component 7), there will be some degree of thermal expansion of the pump flange component (7) that will manifest itself in the form of mechanical stress transmitted from pump flange component (7) to motor section flange component (8), and at least some portion of that mechanical stress will be transmitted through the welded connection between metal flange components (7) and (8) at shaft passage (10). In that regard, we note that the language of appellants' independent claims 1, 8, 16, 18, 19 and 20 require no more than that the force-transmitting metal element be capable of transmitting and withstanding a flux of force and does not require that the force-transmitting metal element be capable of

transmitting and withstanding all of the flux of forces that might be transmitted between the hot and cool parts of the machinery unit.

An anticipation under 35 U.S.C. § 102 is established when a single prior art reference discloses, either expressly or under principles of inherency, each and every element or limitation of a claimed invention. See In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed Cir 1997) and RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). However, we observe that the law of anticipation does not require that the reference teach what appellants have disclosed but only that the claims on appeal "read on" something disclosed in the reference, i.e., all limitations of the claim are found in the reference. See Kalman v. Kimberly Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983). In the present case, we agree with the examiner that Franke discloses a machinery unit that is fully responsive to, i.e., reads on, that set forth in appellants' representative claim 1 on appeal and is inherently capable of functioning in the manner required in independent claim 1.

As was made clear in In re Schreiber, at 44 USPQ2d ..., by choosing to define an element functionally as in appellants' claims on appeal, appellants assume a risk, that risk being that where the U.S. Patent and Trademark Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require appellants to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon. In the present case, appellants have provided no evidence to prove that the interconnection at shaft passage (10) in Franke lacks the functionally defined limitation set forth in the claims on appeal and is therefore incapable of producing and transmitting a flux of force.

For the above reasons, we will sustain the examiner's rejection of representative claim 1 under 35 U.S.C. § 102(e) as being anticipated by Franke. In light of appellants' grouping of claims on page 6 of the brief, it follows that the examiner's rejection of claims 8, 11, 16, 17 and 20 under 35 U.S.C. § 102(e) will also be sustained.

With regard to the examiner's rejection of claims 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Franke in view of Kozdon, we note that appellants have merely argued (brief, page 14) that Franke in view of Kozdon does not show the force-transmitting metal element for producing a flux of force between the hot and cool parts, as claimed. For the reasons already set forth above, we find this argument unpersuasive. Appellants have not otherwise challenged the examiner's conclusion of obviousness. Accordingly, we also sustain the rejection of claims 18 and 19 under 35 U.S.C. § 103(a).

In summary, we have sustained both the examiner's rejection of claims 1, 8, 11, 16, 17 and 20 under 35 U.S.C. § 102(e) based on Franke, and the rejection of claims 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Franke in view of Kozdon. The decision of the examiner is accordingly affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

IRWIN CHARLES COHEN Administrative Patent Judge	)	
CHARLES E. FRANKFORT Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOHN P. McQUADE Administrative Patent Judge	)	

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