Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte ANTHONY ITALO PROVITOLA

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Appeal No. 2003-0304
Application 09/703,302

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ON BRIEF

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Before FRANKFORT, NASE, and BAHR, 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 through 19. Claim 20, the only other claim remaining in the application, has been withdrawn from consideration by the examiner as being directed to a non-elected species.

Appellant's invention is directed to a gaseous-fuel breathing rocket engine. As noted on pages 1-2 of the specification, the preferred gaseous fuel is a gaseous fuel that contains hydrogen, and the reservoir containing such gaseous fuel may be the gas retaining structure of an airship, such as gas bags, wherein the gaseous fuel serves as the lifting gas. Independent claims 1, 15 and 16 are representative of the subject matter on appeal and a copy of those claims may be found in Appendix I of appellant's brief.

The sole prior art reference relied upon by the examiner in rejecting the appealed claims is:

Mirville	5,012,640	May 7, 1991

Claims 1 through 19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Mirville.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejection and the conflicting viewpoints advanced by the examiner and appellants regarding the rejection, we make reference to the examiner's answer (Paper No. 13, mailed May 30, 2002) for the reasoning in

support of the rejection, and to appellant's brief (Paper No. 12, filed April 2, 2002) and reply brief (Paper No. 14, filed June 24, 2002) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art Mirville patent, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determinations which follow.

While it is true that the schematic drawings of the present application (Figs. 1-8) and the schematic representations of the air-hydrogen turbo-jet engines of Figures 1-8 in the Mirville patent appear to be identical, we agree with appellant that when the explanation provided by the present specification is read and associated with the reference numbers in the schematic drawings of the present application, one of ordinary skill in the art would clearly differentiate the disclosed invention of the present application from that described and claimed in the

Mirville patent, because Mirville does not disclose a gaseous-fuel breathing rocket engine operating on the combustion of a gaseous fuel compressed by an oxidizer driven turbine, as in the present application.

Apparently, given the visual identity of the schematic representations of Figures 1-8 of the present application and those of Figures 1-8 of Mirville, the examiner is of the view that the respective engines represented by those drawing figures are structurally the same. In the paragraph bridging pages 5-6 of the answer, the examiner makes the following observations/comments:

> The fact that the claimed structure injects a gaseous fuel (hydrogen) in the duct 10 and liquid oxygen through injectors 17 does not make it patentable over the structure taught by Mirville for injecting air in the duct 10 and liquid hydrogen through injectors 17. ***A recitation with respect to the material intended to be worked upon by a claimed apparatus does not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the structural limitations of that claimed.*** Therefore, injecting a gaseous fuel (hydrogen) instead of air (materials to be worked upon) in the duct 10 does not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus (Mirville) satisfying the structural

> limitations of that claimed. Thus, Mirville satisfies all the structural limitations claimed by applicant since the material(s) to be worked upon (liquid or gaseous hydrogen, air or liquid oxygen) does not impose any structural limitations.

We note that an anticipation under 35 U.S.C. § 102(b) 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 the appellant has 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), cert. denied, 465 U.S. 1026 (1984).

With the above as guidance, we look to claim 1 on appeal and note that this claim is directed to a gaseous-fuel breathing

rocket engine which includes a gaseous-fuel duct defining a gaseous-fuel intake (30), a gaseous-fuel compressor (3) for compressing gaseous fuel, a turbine assembly (6) disposed in an annular chamber (8) and including at least one turbine rotor blade (7) operatively associated with each of the compressor blades, a source of liquid oxygen (24), a pump (25) for transporting the liquid oxygen from the source to the annular chamber so as to rotate the turbine, an oxygen exhaust path (16) from the annular chamber, and one or more injectors (at 17) for directing the oxygen into the gaseous-fuel duct for mixing with the compressed gaseous fuel. By contrast, the air-hydrogen turbo-jet engines of Figures 1-8 in the Mirville patent do not include "a source of liquid oxygen" and "at least one pump for transporting the liquid oxygen from the source into the annular chamber so as to rotate the turbine rotor stage."

Like appellant, we view claim 1 as being directed to a combination, wherein a source of liquid oxygen is positively set forth as part of the combination, along with at least one pump for transporting the liquid oxygen from the source into the annular chamber so as to rotate the turbine rotor stage. Since the engines of Mirville have no "source of liquid oxygen" or pump

for transporting the liquid oxygen from the source into the annular chamber, it is clear to us that Mirville does not anticipate appellant's invention as defined in claim 1 on appeal. Accordingly, the examiner's rejection of claim 1, and of claims 2 through 14 which depend therefrom, will not be sustained.

Independent claims 15 and 16 on appeal, however, are of a considerably different scope than claim 1 discussed above. In both of claims 15 and 16 the gaseous-fuel breathing rocket engine is defined in terms of either means or structure for performing a function, with the result being that the functional recitations of these claims each actually constitute merely an intended use or capability of the recited means or structure, and do not positively limit the structure or means in any other way. As an example, we read appellant's claim 15 on the engine seen in Figure 1 of Mirville, noting that the engine of Figure 1 in Mirville is a rocket engine capable of serving as a gaseous-fuel breathing engine, and comprises a gas duct (11) defining an intake capable of handling a gaseous fuel; means (3, 4) for compressing any gas within the duct, including a gaseous fuel; means (17) for injecting a gaseous material (e.g., fuel or oxidizer) into the compressed gas flow downstream of the

compressor means (3, 4); a turbine (6, 7) driven by expanding a gaseous material (e.g., fuel or oxidizer) operatively associated with the means for compressing; and means (1) operatively associated with the gas duct for exhausting gases from the gas duct.

Independent claim 16 on appeal is readable on the engine of Figure 1 of Mirville in the following manner, noting particularly that the engine of Figure 1 in Mirville is a rocket engine capable of serving as a gaseous-fuel breathing engine, and comprises a gas duct (11) defining an intake capable of handling a gaseous fuel; a compressor (3, 4) disposed axially within the gas duct for compressing any gas within the duct, including a gaseous fuel; one or more injectors (17) for injecting a gaseous material (e.g., fuel or oxidizer) into the compressed gas flow downstream of the compressor (3, 4); a turbine (6, 7) operatively associated with the compressor for driving the compressor, wherein the turbine is driven by expanding a gaseous material (e.g., fuel or oxidizer); and one or more nozzles (1) operatively associated with the gas duct for exhausting gases from the gas duct.

Appellant's contentions (brief, pages 10-11) that claims 15 and 16 are "similar to claim 1" and that the arguments applicable to claim 1 apply equally as well to claims 15 and 16, are not persuasive. As we have demonstrated above, claims 15 and 16 are of an entirely different scope than claim 1 on appeal and those claims are readable on the prior art engine of Mirville.

As a result of the foregoing, we will sustain the examiner's rejection of claims 15 and 16 under 35 U.S.C. § 102(b) as being anticipated by Mirville.

In accordance with appellant's grouping of the claims on page 3 of the brief, we find that claims 17 through 19 will fall with claim 16, from which they depend. Thus, the examiner's rejection of claims 17 through 19 under 35 U.S.C. § 102(b) as being anticipated by Mirville is also sustained.

It follows from the above determinations that the decision of the examiner rejecting claims 1 through 14 of the present application under 35 U.S.C. § 102(b) is reversed, while the decision rejecting claims 15 through 19 under 35 U.S.C. § 102(b)

is affirmed. Thus, the decision of the examiner is affirmed-in-part.

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

AFFIRMED-IN-PART

CHARLES E. FRANKFORT Administrative Patent Judge	)	
JEFFREY V. NASE Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)	

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