THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID J. MARKSTEIN, MARTIN A. CLEMENTS, ROBERT M. AUSDENMORE and WILLIAM C. LIPPMEIER

Appeal No. 1999-1084
Application No. 08/818,051[1]

ON BRIEF

Before CALVERT, COHEN, and CRAWFORD, Administrative Patent Judges.

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[1] Application for patent filed March 14, 1997. According to appellants, this application is a continuation of Application No. 08/314,124, filed September 29, 1994, now abandoned.

CALVERT, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 to 3, 6 to 8, 10 to 12 and 15 to 18. The other claims in the application, 4, 5, 9, 13, 14, 19 and 20, have been cancelled.[2]

The claims on appeal are drawn to a failsafe nozzle actuating system for an aircraft gas turbine engine and a method for operating such a system. They are reproduced in Appendix A of appellants' brief.

The references applied in the final rejection are:

Thompson et al. (Thompson)	2,395,435	Feb. 26, 1946
Curties et al. (Curties)	3,322,939	May 30, 1967
Lippmeier et al. (Lippmeier)	5,174,502	Dec. 29, 1992

[2] In an amendment filed on January 26, 1996 (Paper No. 8), appellants requested that claims 19 and 20 "be dismissed without prejudice," but the examiner included them in the final rejection (Paper No. 23). Appellants state on page 2 of their brief (third paragraph) that claims 19 and 20 were cancelled, and the examiner evidently agrees, since claims 19 and 20 are not included in the statement of the grounds of rejection on page 3 of the examiner's answer. We note, however, that the amendment cancelling claims 19 and 20 has not been entered. We also note in reviewing the application that piston 300 in Fig. 6 is not crosshatched.

French patent	999,277	Jan. 29, 1952[3]

[3] A copy of a translation of this reference, prepared by the PTO, is forwarded to appellants herewith.

The appealed claims stand finally rejected under 35 U.S.C. § 103 as unpatentable over the following combinations of references:

(1) Claims 1 to 3, 6 to 8, 10, 11 and 15 to 18, Lippmeier in view of the French patent;

(2) Claim 12, Lippmeier in view of the French patent, Thompson and Curties.

Rejection (1)

As stated by the examiner, the basis of this rejection is (final rejection, pages 2 and 3):

> Lippmeier et al. discloses all parts of the claimed invention (including variable thrust vectoring axisymmetric exhaust nozzle having a multi-degree of freedom pivotal flaps, primary actuating means that operate independent of each other [see figure 1 and columns 1 and 2], and vectoring ring 86 that is axially translatable and tiltable [see column 2] [)], except for the specific details of the flap attitude actuators which includes the primary and failsafe piston. However, French 999,277 discloses a system that utilizes primary piston 2 and failsafe piston 4 to halt the movement of piston 2.
>
> It would have been obvious to one of ordinary skill in the art at the time the invention was made to use [the] French 999,277 system on Lippmeier et al.'s nozzle vectoring system to position Lippmeier et al.'s flaps 54

> at a desired attitude to ensure safe maneuvering of the aircraft.
>
> As for the failsafe control system, it is inherent that French 999,277 contains a failsafe control system so that the system can operate as designed. In other words, when it is in a failsafe mode (see figure 2), there must be a system to set the pistons in the failsafe mode. In this day and age, computers are well known to have been used to control many system[s]. Therefore, one of ordinary skill in the art would have used a failsafe control system on Lippmeier et al.'s system to safely control the flap[s].

In response to appellants' argument that neither Lippmeier nor the French patent disclose anything about failsafe actuators, the examiner asserts (final rejection, page 4):

> Although Lippmeier et al. is silent on whether or not his actuator has a failsafe mode, it is inherent that there is a motivation to prevent the actuator from exceeding a safe operating threshold; that is, Lippmeier et al. would not want the actuators to cause failures in the system. French discloses an actuator which has a failsafe system. The failsafe operation occurs as shown in figure 2 in which the primary [actuator] is set between a fully retracted and extended position.

Also (answer, page 4):

> Failsafe is a broad term and the French Reference '277 clearly meets this limitation because the primary actuator is between the fully extend[ed] and fully retracted position. In addition, just because the French Reference doesn't use the term or word "failsafe" doesn't

> mean that the French Reference do[es] not contain the elements that are being claimed.

Initially, we note that, according to appellants' specification, their invention relates to axisymmetric exhaust nozzles as disclosed in Hauer Patent No. 4,994,660 (page 1, line 19, page 2, line 20), the same patent which Lippmeier incorporates by reference at col. 1, lines 21 and 22. Although

we agree with appellants that there is no disclosure in Lippmeier of a failsafe system, we note that at page 4, lines 1 to 5 of their specification, appellants disclose that (emphasis added):

> The nozzle actuating system and nozzle is therefore typically provided with a hydraulic failsafe position using actuating ring actuators to fully retract and in the case of a vectoring ring to set the nozzle in a fixed unvectored position so that thrust of the engine is not vectored.

It therefore appears that, at the time appellants' original application was filed, the art recognized the desirability of including a failsafe system for the actuators of the vectoring ring of an axisymmetric vectoring exhaust nozzle of the type disclosed by Lippmeier.

Nevertheless, we do not consider that it would have been obvious to modify the Lippmeier apparatus by using the system of the French patent therein as proposed by the examiner (presumably by using the actuator shown in Fig. 1 to 4 of the French patent in place of Lippmeier's actuators 90). It is fundamental that "[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion

supporting the combination." ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984) (footnote omitted). The actuator disclosed in the French patent Figs. 1 to 4 is simply an arrangement of two pistons 2, 4 within a cylinder such that the piston rod 3 which is connected to the object being actuated may be displaced to two predetermined intermediate positions (Figs. 2 and 3) as well as the end positions (Figs. 1 and 4). There is no disclosure in the French patent that any of these positions is a failsafe position. With regard to aircraft gas turbine engines having an exhaust nozzle of the type claimed, appellants' above-quoted disclosure indicates that in the typical (known) failsafe system, the actuating ring actuators are in the fully retracted position when in the failsafe mode; there is no teaching or suggestion in Lippmeier that the failsafe position of the actuators (vectoring actuators 90) should be a partially retracted position between the fully extended position and the fully retracted position, as recited in independent claims 1 and 15. In view of the lack of any such teaching or suggestion in the applied prior art, the examiner's combination of Lippmeier and the French patent

appears to have been based upon improper hindsight, gleaned from appellants' disclosure, rather than upon something in the prior art which would suggest the desirability of making the combination.

Accordingly, the rejection of claims 1 to 3, 6 to 8, 10, 11 and 15 to 18 will not be sustained.

Rejection (2)

This rejection will not be sustained, since the additional references applied do not overcome the above-noted deficiencies in the combination of Lippmeier and the French patent.

Conclusion

The examiner's decision to reject claims 1 to 3, 6 to 8, 10 to 12 and 15 to 18 is reversed.

REVERSED

IAN A. CALVERT Administrative Patent Judge	)
IRWIN CHARLES COHEN Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
MURRIEL E. CRAWFORD Administrative Patent Judge	)

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REVERSED

Prepared: December 15, 2000