

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARC ACHACHE

Appeal No. 2003-0552
Application 09/190,318

ON BRIEF

Before COHEN, FRANKFORT, and NASE, Administrative Patent Judges.
FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 19, 23, 27 and 31. Although the final rejection (Paper No. 19) involved a rejection under 35 U.S.C. § 103(a) of all of claims 17 through 32 then pending in the application, it is apparent from the record (e.g., Paper No. 22) that appellant only seeks review of the examiner's final rejection as it applies to dependent claims 19, 23, 27 and 31.

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Claims 1 through 16 have been canceled. Claims 17, 18, 20 through 22, 24 through 26, 28 through 30 and 32 have not been appealed.

As noted on page 1 of the specification, appellant's invention relates to a system or device for operating a controlled member on a rotary-wing aircraft, particularly a helicopter. The controlled member, in the case of a helicopter, may be the main lift and forward propulsion rotor or the countertorque tail rotor. An objective of appellant's invention is to provide an improved mechanically-based control system or device which allows high-performance control of the type achieved with fly-by-wire control, but with high dependability, owing to the fact that it is essentially a mechanically-based system and can continue to operate when its electrical part (i.e., the computer) breaks down, and at a low cost, because it is based on a conventional mechanical system/device and requires no redundancy between its constituent elements. A copy of parent claims 17, 21, 25 and 29 (not appealed), and dependent claims 19, 23, 27 and 31 (which are on appeal) can be found in the Appendix to appellant's brief.

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

Fernandez 5,489,830 Feb. 6, 1996

In addition to the foregoing prior art reference, the examiner has also relied upon applicant's admitted prior art (hereinafter, the APA) set forth on page 1 of the specification in the "Background of the Invention" section.

Claims 19, 23, 27 and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the APA in view of Fernandez.

Rather than attempt to reiterate the examiner's commentary with regard to the above-noted rejection and the conflicting viewpoints advanced by appellant and the examiner regarding the rejection, we make reference to the final rejection (Paper No. 19, mailed November 15, 2001) and the examiner's answer (Paper No. 24, mailed July 16, 2002) for the reasoning in support of the rejection, and to appellant's brief (Paper No. 23, filed May 6, 2002) and reply brief (Paper No. 26, filed August 30, 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 Fernandez patent and the APA, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determination that the examiner's rejection of claims 19, 23, 27 and 31 under 35 U.S.C. § 103(a) will not be sustained. Our reasons follow.

The examiner's position in the final rejection (Paper No. 19, pages 2-3) is that the APA discloses an apparatus as set forth in, for example, parent claim 17, except that the APA does not disclose at least one sensor as required in the penultimate clause of claim 17 and a computer which uses the values measured by said sensor to determine control commands to create control objectives. However, the examiner is of the view that Fernandez discloses a sensor and computer as required in appellant's claims, e.g., claim 17, "in figure 5 and on lines 18-67, on column 7." From such teachings, the examiner concludes that

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sensor and computer determining control commands of Fernandez in the

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prior art that is admitted to because such modification would provide some type of input that would be necessary for the control computer to provide load feel back to the pilot.

With particular regard to dependent claims 19, 23, 27 and 31 on appeal, the examiner further recognizes that the APA does not disclose a sensor which measures "relative movement" of a control (3) intended to be subject to the action of a pilot with respect to the position of a trim means (13) acting on the control. In this instance, the examiner is of the view that Fernandez teaches a sensor which measures relative movement of a control intended to be subject to the action of a pilot with respect to the position of a trim means "in figure 6" and that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to use the teachings of Fernandez in the APA "because such modification would provide an aircraft control with better load feel as stated in Fernandez" (final rejection, page 4).

Additional insight into the examiner's position regarding the obviousness rejection of claims 19, 23, 27 and 31 is found in the examiner's answer (pages 3-4), wherein the examiner more clearly makes note that it is the position sensor (26) of

Fernandez which is considered to measure the relative movement of the control member (12) with respect to a trim means (34). The examiner further contends that

This is evident because sensor (26) measures the movement of the control member (12) with respect to the frame of the vehicle. Also, from figure 2, it is clear that trim means (34) is fixedly attached to the frame of the vehicle. This makes sense since both the sensor and the trim means need to be attached to some structure that provides a frame of reference for the vehicle. Since the trim means (34) is on the frame and the sensor (26) is measuring relative movement of the control member (12) in relation to the frame, the sensor (26) has to also be measuring relative movement of the control member (12) relative to the trim means (34).

Like appellant, we are of the opinion that the APA and Fernandez are not combinable in the manner urged by the examiner so as to result in the apparatus defined in claims 19, 23, 27 and 31 on appeal. Even if one of ordinary skill in the art were to attempt to combine a sensor like that seen at (26) in the fly-by-wire system of Fernandez with a mechanically-based system including a control intended to be subject to the action of a pilot of a rotary-wing aircraft of the type set forth in the APA, we see no basis for the examiner's conclusion that the parameter measured by such a sensor (26) associated with a control like that of the APA would be "relative movement of said control with respect to the position of the trim means" acting on said

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control, as in appellant's claims before us on appeal. Nor did the examiner in the final rejection provide any cogent reasoning to support such a conclusion. Figures 5 and 6 of Fernandez referred to by the examiner and the specification of Fernandez at column 7, lines 18-67, also referenced by the examiner provide no apparent support for the examiner's stated position.

Moreover, the examiner's belated comments in the paragraph bridging pages 3 and 4 of the answer regarding mounting of the sensor to the frame of the aircraft and also "the trim means (34)" to the frame of the aircraft, along with the conclusion that this arrangement is somehow responsive to the limitations added by claims 19, 23, 27 and 31 are, for the reasons set forth in appellant's reply brief, untenable.

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In light of the foregoing, it is our determination that the examiner has not made out a *prima facie* case of obviousness, and that the decision of the examiner, accordingly, must be reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
CHARLES E. FRANKFORT)	
Administrative Patent Judge)	APPEALS AND
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)	INTERFERENCES
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JEFFREY V. NASE)	
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