

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HORST GRUNE, PETER BUCHNER
and RITTMAR VON HELMOLT

Appeal No. 2003-1907
Application No. 09/214,893

ON BRIEF

Before KIMLIN, TIMM and DELMENDO, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 14-17 and 19-30, all the claims remaining in the present application.

Claim 17 is illustrative:

17. An electrical vehicle having a drive battery comprising a fuel cell system, said fuel cell system comprising at least an integrated cooling system through which a gaseous coolant of air flows, the fuel cells being installed in the fuel cell system with the plane normals of the active surface of the individual fuel cells extending perpendicular to the direction of travel, the fuel cell system being arranged in the vehicle so that the

Appeal No. 2003-1907
Application No. 09/214,893

dynamic pressure of a relative airstream at least partly forces the coolant into the cooling system.

The examiner relies upon the following references as evidence of obviousness:

Gill	3,939,935	Feb. 24, 1976
Fletcher et al. (Fletcher)	5,470,671	Nov. 28, 1995
Rogers	5,671,802	Sep. 30, 1997
Lorenz et al. (Lorenz)	5,794,732	Aug. 18, 1998
Skeel et al. (Skeel)	6,129,056	Oct. 10, 2000

Appellants' claimed invention is directed to an electrical vehicle, and method for operating the fuel cell system for an electric vehicle, wherein the fuel cell system comprises an integrated cooling system that is arranged in the vehicle so that the dynamic pressure of a relative airstream forces coolant, i.e., air, into the cooling system. According to appellants, "[a] fuel cell stack is preferably located at the radiator of the vehicle and the relative wind directly cools the individual fuel cells" (page 3 of Brief, second paragraph).

Appealed claims 14-17, 19, 29 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fletcher in view of Lorenz and Rogers. Claims 20, 21 and 23-27 stand rejected under § 103 as being unpatentable over the stated combination of references further in view of Skeel. In addition, claim 28

Appeal No. 2003-1907
Application No. 09/214,893

stands rejected under § 103 as being unpatentable over the stated combination of references further in view of Gill.¹

Appellants have not challenged the examiner's grouping of the claims at page 4 of the Answer via a petition to the commissioner or otherwise. Accordingly, the appealed claims stand or fall together as set forth at page 4 of the Answer.

We have thoroughly reviewed each of appellants' arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejections for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

Appellants do not dispute that there is no patentable distinction between the fuel cell system within the scope of the appealed claims and that disclosed by Fletcher. Appellants also

¹ The examiner's statement of the grounds of rejection in the Answer fails to list the final rejection of claim 22 under § 103 over Fletcher in view of Lorenz and Rogers. However, since the examiner's treatment of the separately argued claims at page 4 of the Answer, as well as appellants' Brief, address the rejection of claim 22, the examiner's omission of the rejection of claim 22 at page 5 of the Answer is considered inadvertent error. Also, we note that the examiner should refer back to only one office action in stating the ground of rejection.

Appeal No. 2003-1907
Application No. 09/214,893

do not challenge the examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art to utilize the fuel cell system of Fletcher in an electrical vehicle.

Rather, the principal argument advanced by appellants is that "[n]either Fletcher nor Lorenz mention or suggest [sic, mentions or suggests] to use the dynamic pressure of a relative airstream with respect to a fuel cell system for cooling purposes in a car" (page 5 of Brief, second paragraph). Appellants urge that Rogers, relied upon by the examiner for a teaching of using air caused by the motion of a vehicle to cool a device in the vehicle, "has no relation to fuel cell systems at all" (id.). In essence, it is appellants' argument that there is no teaching in the cited prior art for cooling the fuel cell system of an electrical vehicle by arranging the system in the vehicle so that the relative airstream of the vehicle in motion serves to cool the fuel cell system.

While appellants' argument has some appeal at first blush, we must agree with the examiner that inasmuch as it was known in the art to utilize the airstream generated by a moving vehicle to cool systems of the vehicle which need cooling, it would have been a matter of prima facie obviousness for one of ordinary skill in the art to employ the well-known presence of a cooling

Appeal No. 2003-1907
Application No. 09/214,893

airstream to cool the fuel cell system of the vehicle. We note that Fletcher expressly discloses the use of a fan for directing ambient air onto the exposed surface of the fuel cell system (column 5, lines 2-4). In our view, it would have been prima facie obvious for one of ordinary skill in the art to supplement such a cooling fan with the airstream generated by the relative motion of the vehicle when employing the fuel cell system of Fletcher in an electric vehicle. We emphasize that appellants do not dispute that it would have been obvious for one of ordinary skill in the art to use the fuel cell system of Fletcher in an electric vehicle. Furthermore, we note that appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to refute the prima facie case of obviousness established by the examiner.

In conclusion, based on the foregoing and the reasons set forth by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

Appeal No. 2003-1907
Application No. 09/214,893

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

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
)	
)	
)	
)	
CATHERINE TIMM)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
)	
ROMULO H. DELMENDO)	
Administrative Patent Judge)	

ECK:clm

Appeal No. 2003-1907
Application No. 09/214,893

Baker Botts LLP
One Shell Plaza
910 Louisiana
Houston, TX 77002-4995