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**PATENTS ACT 1977**

IN THE MATTER OF Patent Application

No. 8901448.4 by Maher Louis Helmy

**DECISION**

The application was filed on 24 January 1989 by the applicant without the assistance of a patent agent. At the substantive examination stage, objection was raised, inter alia, against the claims on the ground of lack of inventive step under Section 1(1)(b) of the Act (official letter dated 6 October 1992). In response, the applicant filed amended claims with his letter dated 26 January 1993 and a further official letter was issued on 15 April 1993 pursuing the inventive step objection.

In the absence of a reply from the applicant within the set reply period (which expired on 15 July 1993), an official letter dated 31 July 1993 issued advising the applicant that as no reply had been received, it was intended to treat the application as having been refused at the end of the Rule 34 period, subject to any observations he might wish to make. The applicant responded, in a letter dated 21 August 1993, acknowledging the official letter of 31 July and submitting arguments against the inventive step objection raised in the previous official letter.

Finally, an official letter dated 6 September 1993 was issued advising the applicant that, as his reply was received after expiry of the reply period and no reason had been given for the late reply, refusal action would be taken, subject to any further observations he might wish to submit or his requesting a hearing to determine the matter. No further communication having been received from the applicant, and the Rule 34 period now having expired (on 6 October 1993), I shall determine the matter of whether the application was in order for grant at the end of the Rule 34 period on the basis of the documents at present on file.

The invention relates to an axial flow turbine, claim 1 (filed with the applicant's letter dated 26 January 1993 and accompanied only by an omnibus claim) reading as follows:

"The use of axial flow turbine to harness wind energy; the axial flow turbine comprises stable inlet guide vanes, rotating rotor blades, and surrounded by an outer simple cylindrical casing, having no variation in thickness, this same cylindrical casing extend downwind side to form the diffuser wall; this axial flow turbine is fixed over a central aerofoil profile having a symmetrical cross section around the central axis of the turbine; the axial flow turbine is fixed at the maximum diameter of the aerofoil profile; the central aerofoil profile can be used as a casing for an electric generator; the axial flow turbine is surrounded from outside its casing by a wind barrier, taking the shape of a disc, which is perpendicular to the axis of the axial flow turbine, and building a pressure drop behind it; the overall design of the axial flow turbine depend on the pressure drop offered by the wind barrier to the flow of air moving parallel to the turbine axis but outside turbine casing."

In the official letter dated 15 April 1993, the examiner cited five prior art documents to support the inventive step objection and commented as follows:

"The essential feature of the invention would seem to reside in the disc wind barrier located on the turbine casing. The application of such barriers is well known, however, with the benefits taught in, for example, US 4482290, US 4411588 and GB 1508752.

Specification US 4411588 shows an axial flow turbine which is void of inlet guide vanes but includes all the remaining features of claim 1 and shows a thin flat ring at a downstream location of the turbine casing. Also US 4482290 shows an axial flow wind turbine with an outer casing wall of even thickness and wherein the diffuser outer wall includes a collar with a short ring-like projection which is disposed perpendicularly to the turbine rotational axis. It is noted that the device of this specification is void of inlet guide vanes . However, inlet guide vanes are well known means for effecting a desired flow profile into a rotary turbomachine so that provision of such means to the application invention cannot impart inventiveness to the claim.

Specifications GB 1539566 and 1508752 both teach wind turbines of the axial flow type including stationary inlet guide vanes, there being rotor blades downstream thereof which rotate about a maximum diameter portion of a profiled central body containing generator means. Furthermore, GB 1508752 shows a deflector downstream of the turbine diffuser section, although the deflector is at an angle to the rotor axis other than normal to it.

In his response dated 21 August 1993, the applicant commented as follows:

"I agree that my submitted design rely only on the annular disc surrounding the wind turbine, and a similar annular disc appeared in a previous patent.

My last point of defense sums up as follows:-

The successful wind turbine which exploits effectively wind energy depends on the correct choice of known elements.

I am proclaiming that my submitted design represents the correct choice of elements to exploit wind power properly, more effectively than the available design, acknowledged nowadays (the simple 3 blade wind turbine).

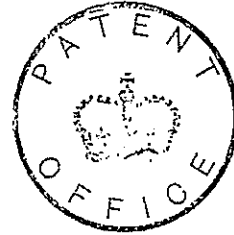
While the patents I am defending my application against, turned to be over the years a failure. These patents include the different possible elements which can be used to exploit wind power, while using the wrong combination of these elements.

Yes, the elements I am using appeared in a previous patent, previous patents used wrong combination of these elements leading to unfruitful designs....."

From consideration of the cited prior art and the above comments by the examiner and the applicant, I am satisfied that the invention claimed comprises an assembly of known elements the combination of which produces no unexpected result and would be obvious to a person skilled in the art, and therefore does not involve an inventive step.

In the result, I find that the application failed to comply with Section 1(1)(b) of the Act within the period specified by Rule 34 and therefore the application is to be treated as having been refused by the Comptroller under Section 20(1) of the Act.

Dated this 25 day of October 1993



K C THOMAS

Principal Examiner, acting for the Comptroller

**THE PATENT OFFICE**