

PATENTS ACT 1977

IN THE MATTER OF Patent Application
No GB 2208175A in the name of
Martin Lindsay McCulloch

01132194

DECISION

Application No. GB 2208175 was filed as GB8815927.2 on 5 July 1988 claiming priority from an earlier application, No. 8715844, filed on 6 July 1987. The Application was published on 8 March 1989. The invention relates to a propulsion device for vehicles in which a jet of fluid is directed at one or more plates to produce a reaction on the plate in the intended direction of forward travel of the vehicle. The claims initially were directed to a method of propelling a vehicle and to a jet propulsion machine. During the substantive examination of the application the examiner objected to the main claims relating to the method and the device, on the grounds of lack of novelty, and he also objected to the embodiments described with reference to figures 1, 2 and 3 of the drawings on the grounds that they were not capable of industrial application. These embodiments relate to propulsion devices operating on a closed cycle with the fluid being contained within the system and recirculated after impinging on the plates. Despite several sets of amendments agreement between the applicant and the examiner could not be reached, and a hearing was appointed for 6 January 1992 to determine the matter.

The hearing was attended by Mr McCulloch and his Patent Agent, Mr Cline of Edward Evans & Co. During the hearing, the examiner, Mr Vosper, argued that the claims did not meet the requirements of Section 1(1)(c) of the Patents Act. The hearing was halted at the applicant's request so that the submission of further amendments could be considered. In the event no further amendments were received and in due course the application was treated as refused under Section 20(1).

Subsequently, Mr McCulloch requested that the hearing of 6 January 1992 be reconvened since no formal decision had been issued. This request was granted and as a result the date

of 6 July 1994 was set for the resumed hearing. At the hearing, Mr McCulloch was accompanied by his Solicitor, Mr Grundy, but was representing himself. Mr Vosper attended as the examiner dealing with the application.

As the period for putting the application in order as prescribed by Section 20 of the Patents Act 1977 and Rule 37 of the Patents Rules 1990 expired on 6 January 1992, no further amendments can be considered.

As already mentioned the application relates to propulsion devices for vehicles. In the specification, as it stood at 6 January 1992, a basic propulsion system is described, as well as two embodiments based on the application of the device to a motor car and a boat. In the basic system a steam generator in the form of a water boiler directs steam downwardly into a chamber containing a number of parallel inclined plates. The chamber is surrounded by cooling fins to aid condensation of the steam, and the steam and/or water discharged from the chamber is recycled to the boiler by means of a pump and return conduit. As described, the jet of steam reacts differentially on the two sides of the inclined plates to produce a horizontal driving force.

In the embodiment relating to the motor car, condensation of the steam is assisted by routing the return conduit through a radiator at the rear of the vehicle. It is stated that the steam generator could be replaced by a hot gas jet engine.

The claims as they stood at 6 January 1992 read as follows:

1. A vehicle having a forward direction of travel comprising means for generating a jet of fluid within the vehicle and directing it in a direction other than the forward direction at a plate such that the reaction on one side of the plate is different from the reaction being directed in said forward direction, and means for collecting within the vehicle the fluid downstream of the plate.
2. A vehicle as claimed in Claim 1 wherein said generating means comprises a jet engine.

3. A vehicle as claimed in Claim 1 wherein said generating means comprises a steam boiler.
4. A vehicle as claimed in claim 3 wherein said collecting means comprises means for condensing the steam and recirculating the condensate to the boiler after passage over the plate.
5. A vehicle as claimed in any one of claims 1 to 4 wherein the plate is of aerofoil section.
6. A vehicle as claimed in any one of claims 1 to 4 wherein the plate is a flat plate inclined in relation to the axis of the jet.
7. A jet propulsion machine substantially as herein described with reference to the accompanying drawings.

The examiner has objected that the application as it stands does not comply with Sections 1(1)(a), 1(1)(c) and 14(3) of The Patents Act 1977. Section 1(1)(a) stipulates that an invention can only be granted for an invention that is new. In support of his contention that the present case did not satisfy this requirement, the examiner suggested that the system as set out in claim 1 was anticipated by most motor car heating and ventilating systems. He pointed out that the claim was directed to a vehicle and did not specify that the fluid jet and inclined plate system was a propulsion system.

Section 1(1)(c) stipulates that an invention must be capable of industrial application. The examiner contended that because of the law of conservation of momentum the closed systems disclosed and claimed could not generate a net propulsive effect, and it followed that the invention was thus not capable of industrial application.

Section 14(3) requires that the specification shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art. The examiner contended that the system as described was not able to produce a

net propulsive force, so a person skilled in the art would not be able to perform the alleged invention.

Before reaching a decision as to whether the specification complies with Sections 1(1)(a) and 1(1)(c), it is necessary to determine what the alleged invention is. Section 125(1) specifies that an invention for which an application has been made shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application, as interpreted by the description and any drawings contained in that application. It follows that, in determining the scope of an invention, one should not consider the claims in isolation, but should have regard for what is disclosed in the specification as a whole. I take note that the examiner, in advancing his objection under Section 1(1)(a), has drawn attention to the fact that claim 1 has no reference to propulsion of a vehicle. The claim merely requires that the effect of the jet of fluid acting on the plate should be to generate a differential reaction in the forward direction of the vehicle. However, when one considers the disclosure in the description, it is quite clear that the purpose of producing the differential reaction is to generate a propulsive force on the vehicle. When one interprets the scope of the claim in the light of the total disclosure, one has to conclude that the invention is concerned with propelling a vehicle, and that claim 1 has to be interpreted in that light. Claims 2-6 are all appended to claim 1, so it follows that all these must be regarded as being concerned with propelling a vehicle. Claim 7 is an independent omnibus claim directed to a jet propulsion machine.

Considering first the objection under Section 1(1)(c), the applicant suggested, if I have understood him correctly, that as the steam was brought to rest before being recycled, a net propulsive force was generated. Alternatively he argued that by condensing the steam all reactive momentum generated by the steam impinging on the inclined plates would be dissipated without reaction on the rest of the system. Mr McCulloch also referred to a letter he had received from a Dr Hore who worked for a firm of consulting engineers. Mr McCulloch suggested that the letter was an endorsement of his invention. However, the relevant passage of Mr Hore's letter reads: "In my opinion the machine would undoubtedly work, providing that the recycling is not incorporated." Since the invention clearly does incorporate recycling, I do not think that Dr Hore's letter lends Mr McCulloch much

support. I am not persuaded by any of Mr McCulloch's arguments. I am satisfied that any forward momentum imparted to the vehicle, by the reaction of the jet of fluid on the inclined plates must result in an equal and opposite momentum imparted to the fluid, and since the latter is confined within the vehicle, this momentum also must be transferred to the vehicle, so no net propulsive force is produced. It follows that I find that the application does not comply with Section 1(1)(c) of the Act.

Turning now to the objection that the application does not meet the requirements of novelty under Section 1(1)(a), it was argued by the examiner that claim 1 was anticipated by most vehicle heating/ventilating systems. Without having to consider whether any given vehicle heating/ventilating system, before the priority date of the application in suit, had all the integers of claim 1, I think I can dispose of this objection by referring to my interpretation of the invention in the light of Section 125(1). I have decided that in claim 1 the purpose of the jet of fluid and the plate is to generate a propulsive force on the vehicle. Thus I conclude that the claim is not anticipated by a conventional vehicle heating/ventilating system. I note also that Mr McCulloch made the point that such heating/ventilating systems were not propulsion systems. Hence I find that claim 1 does comply with the requirements of Section 1(1)(a) of the Act.

Finally, I have to consider whether the application complies with Section 14(3). I have already found that the systems described will not produce a net propulsive force to drive a vehicle. It follows that anyone attempting to perform the invention from the information disclosed in the specification will not be able to produce a vehicle with a means of propulsion. Thus I have to conclude that the specification does not meet the requirements of Section 14(3) of the Act.

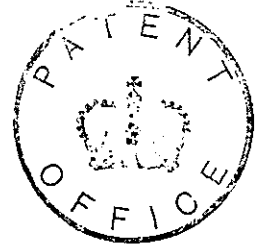
In summary, I find that the application does not comply with the requirements of Section 1(1)(c) and Section 14(3). Since we have been considering the application as it stood on 6 January 1992, which was the last day of the period prescribed by Section 20 and Rule 37 for putting the case in order, I find that the requirements of Section 20 have not been met, and the application is refused.

Any appeal from this decision should be filed within a period of six weeks from the date of the decision as set out below.

Dated this 23 day of August 1994



Graham Rogers
Principal Examiner, acting for the Comptroller



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