

PATENTS ACT 1977

IN THE MATTER OF

Patent application no. GB 0006887.4

in the name of Robert Leonard Carpenter

DECISION

Background

1. This application, entitled "Hands-free megaphone", was filed as 0006887.4 on 23 March 2000, claiming priority from application 9908380.0 filed on 14 April 1999. Although objections were originally raised on grounds of both lack of novelty and inventive step, following several actions during the examination procedure, an interview, and amendment of the claims, the only remaining objection is one of lack of inventive step under Sections 1(1)(b) and 3 of the Act founded on the disclosure in French patent FR 2543392 . The agent and examiner were unable to reach agreement, and the matter was brought before me at a hearing on 2 October 2003. At the hearing, the inventor and applicant, Mr Carpenter, appeared accompanied by his Agent, Mr Craske. The Examiner, Mr Quirk, and his assistant Mr Collins also attended.

The application

2. The application relates to apparatus for amplifying and delivering a spoken message, using devices which are carried on the human body. Apart from an omnibus claim, the sole claim reads:
"A megaphone having:
-a microphone assembly including a microphone, a curved member in the form of a resilient head band of inverted-U shape for attaching the microphone assembly to the head of a user, and a stalk connecting the microphone to the curved member and being capable of being bent to position the microphone adjacent to the users mouth for hands-free operation;
-a body pack incorporating an electronic amplifier, a battery pack for powering the amplifier, an output horn connected to the amplifier, and a belt provided with a releasable connector for securing the body pack about the waist of the user such that the output horn is mounted to be forwardly-directed in use to direct sounds in a forward direction away from the body of the user; and
-a flexible cable connecting the microphone assembly to the body pack."

The law

3. The relevant part of Section 1 of the Act reads: "*A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say- it involves an inventive step*".
4. The relevant part of Section 3 of the Act reads: "*An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art*".

Issues raised at the hearing

5. At the start of the hearing, the applicant/inventor, Mr Carpenter, demonstrated the use of apparatus embodying the invention, and explained its advantages in operation. Apparently the device is attracting wide interest in the UK and abroad. I explained to Mr Carpenter that, whilst his demonstration was helpful in appreciating the invention, I had to consider the claims and disclosure set out in the specification and not allow the current form of the apparatus to influence my decision. I also emphasised that it was necessary for me to decide whether or not the invention would have been obvious to the notional skilled man, not whether it was obvious to the inventor himself.
6. The agent, Mr Craske, then proceeded to present and analyse the invention using the well-known framework set out in *Windsurfing International Inc v Tabur Marine [1985] RPC 59*. Describing the present application, he drew particular attention to the advantages which the invention conferred, *viz.* the audible range achievable, increased comfort for the wearer of the apparatus, and enhanced freedom of movement resulting from the form of microphone and speaker which the apparatus uses.
7. In assessing the state of the art at the priority date of the application, Mr Craske referred briefly to the use of simple megaphones which use only a cone construction, and to electronic versions of such devices. He then went on to discuss in more detail the disclosure in French patent FR 2543392, which he and the examiner agreed was the only document which needed to be considered at this stage. Mr Craske drew my attention to the shortcomings of this document, particularly the lack of drawings, and the obscurity and poor quality of drafting to which the translator referred. Regarding the content of FR 2543392, Mr Craske noted that reference is made to a “loudspeaker” (*haut-parleur*) rather than to a “horn” as presently claimed. He also asserted that the cited document did not make any suggestion that the described apparatus should have a directional characteristic. On the contrary, claim 1 of the present application requires a horn to “direct sounds in a forward direction”. In addition, the microphone of the cited apparatus was mounted “behind a tie fixed around the neck of the user” and “as close as possible to the throat”, in contrast to the present claim 1 which required a head-mounted microphone “adjacent to the user’s mouth”.
8. Mr Craske suggested that the French document might not constitute an “enabling disclosure” as set out in *Asahi KK [1991] RPC 899* since it lacks any clear description of either the speaker or the microphone assembly, and he went on to assert that there were too many unknowns associated with the document for it to provide support for an objection of lack of inventive step.
9. I invited the examiner, Mr Quirk, to comment on Mr Craske’s argument. He expressed the opinion that the skilled man would have been aware of the French document, and would have considered that the differences between the presently claimed invention and the apparatus described in FR 2543392 would constitute mere workshop variations as referred to in *PLG Research v Ardon International [1995] RPC 287*. The differences comprised (a) forward directivity, which was clearly desirable in the light of FR 2543392, (b) a rather dubious distinction between a horn and a loudspeaker, (c) a cable connection between the microphone and the speaker, and (d) a microphone assembly which was clearly different but of a type which was well-known at the time of the priority date of the present application. Moreover, Mr Quirk pointed out that the judgment in *Windsurfing* refers specifically to “differences”

and “steps” in the plural, suggesting that mere plurality is no assurance of the presence of an inventive step.

10. In reply, Mr Craske suggested that the examiner was using hindsight, and that while the individual differences taken separately might be held to be minor, their combination involved an inventive step leading to a beneficial result. In particular, he said that the invention of FR 2543392 was not setting out to replace a megaphone and suggested that directionality of sound in that document was not important.
11. Mr Craske concluded by reminding me that, in accordance with *Swift & Co [1962] RPC 37*, the function of the Comptroller is to refuse to allow to proceed only those applications which on no reasonable view could be said to be within the ambit of the Patents Act.

Consideration of the arguments

12. On the face of it, this is a simple matter, in that the objection of lack of inventive step is based on the disclosure in a single document, and the subject matter is not complex. However, the matter is made more difficult by the nature of the cited document and by the existence of several distinct differences between the disclosure in that document and the invention presently claimed.
13. First, I shall consider the cited document FR 2543392. As Mr Craske pointed out, this document seems to have been poorly drafted in the original French and suffers from a complete absence of drawings despite being concerned principally with a mechanical arrangement of parts. In trying to construe this document, I find it difficult to be certain of the disclosure in some aspects, although I cannot accept the argument that the disclosure is not an “enabling disclosure” in the sense that a skilled man would not be able to put the described apparatus into practice. It seems to me that FR 2543392 clearly discloses much of the substance of the present invention, *viz.* an amplifier, batteries and a sound source mounted on a belt, and a microphone located in the region of the user’s mouth so as to enable comfortable hands-free operation, thus apparently achieving many of the results and advantages to which the present invention is directed.
14. However, I am aware of a number of differences between the present claim and the disclosure in FR 2543392. These seem to lie principally in the areas of the connection between microphone and speaker; the microphone assembly; the nature of the speaker; and the direction of the sound. I take Mr Quirk’s point that *Windsurfing* suggests that the presence of more than a single difference between claim and citation is not in itself a full defence against an objection of lack of inventive step. Nevertheless, I think it imposes a further burden on the notional skilled man since he is required to make changes in more than one parameter of the system set before him.
15. Referring specifically to these areas of difference, I think I can deal rapidly with the question of the flexible cable connection. I am in no doubt that such a device would immediately come to mind in deciding how to connect a microphone to a body pack. Secondly, the nature of the microphone assembly is of some significance, but the claimed form of head mounting of a type which it is agreed was in widespread and

common use at the priority date of the present application seems to me to be something which I have little doubt that a skilled man would try, particularly if the apparatus were to be used in an environment subject to considerable extraneous noise.

16. Moving on to the nature of the speaker and the direction of the sound, it seems to me that these features are closely related. Present claim 1 requires “an output horn”, and this is supported by the described embodiment which incorporates “a rosette-type audio output horn”. On the other hand, FR 2543392 simply refers to a “loudspeaker” and provides no further information. In addition, claim 1 states that the horn “is mounted to be forwardly-directed in use to direct sounds in a forward direction”, leaving little room to doubt that directivity is an important feature of the invention. In contrast, the French patent suggests that apparatus to which it relates is intended for addressing an auditorium. Whilst it is arguable that this would to some extent require a generally forward direction of the sound, I consider that apparatus for satisfactorily addressing an auditorium would require sound to be produced over a relatively broad area, and this tends to point away from the directing of sound which seems to be the purpose of the present invention. This interpretation would also accord with the use of a loudspeaker in FR 2543392 without further qualification, contrasting with the more specific term “horn” in the present case, which to my mind clearly indicates a device which is able to provide sound production in a directed zone.

Conclusion

17. By the Agent’s own admission, the differences between the claimed arrangement and that described in FR 2543392 comprise only small steps when taken separately. However, when considered together, the use of a horn as speaker, the directing of the sound produced, and the use of a microphone assembly which ensures close proximity to the user’s mouth, produce a combined synergistic effect which solves the problem of addressing individuals or groups of people at a substantial distance from the user.
18. The development of such an apparatus starting from the disclosure in FR 2543392 seems to me to demand a degree of imagination not deemed to be possessed by the notional skilled man. On balance, I have decided that the invention as presently claimed does indeed involve an inventive step, and I therefore direct that the application should now proceed to grant.

Dated this 27th day of October 2003

D C Brunt

Deputy Director acting for the Comptroller
THE PATENT OFFICE