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PATENTS ACT 1977

PDD/H float.

IN THE MATTER OF

Patent Applications Numbers

9205818.9, 9300377.0 and

9400294.6 in the name of

Mr Harold Birkett.

268

0/107.1916

DECISION

The three applications in suit were filed respectively on 18 March 1992 and 11 January 1993, both claiming a priority date of 10 January 1992, and on 8 January 1994 claiming a priority date of 8 January 1993. During the substantive examination of the applications the examiner issued a number of reports setting out objections to the grant of a patent and Mr Birkett, who is acting on his own behalf without professional assistance, replied with amended claims. However, on each occasion the examiner did not consider that the amendments overcame the objections; indeed on a number of occasions the examiner considered that the amended claims introduced additional objections. In a letter dated 15 March 1996 on application 9205818 Mr Birkett wrote enclosing new claims and ended by saying "I am reluctant to abandon this application and would ask the patent office for a second opinion of confirmation."

The examiner replied enclosing a further examination report indicating that the amended claims had not overcome the outstanding objections and inviting Mr Birkett either to file amendments to overcome the objections or to indicate why he did not agree with the examination report, as indeed he had done on each occasion he had sent a report to Mr Birkett. He went on to explain that a second opinion would mean a hearing "at which a senior officer will consider the issue afresh and take into account any opinions expressed by you in person at the Office or in writing." and that it would seem to be sensible for all three applications to be dealt with at the same time.

The Office then made a number of unsuccessful attempts, both over the telephone and in

writing, to discuss the possible hearing with Mr Birkett with a view to fixing a date which was acceptable to him. Mr Birkett however did not respond but wrote in a letter dated 22 May 1996 which was directed to all three applications - "Please inform me regarding the date of the hearing when a second opinion will be given by the patent office." The Office then wrote to Mr Birkett on 14 June appointing a hearing for 3 July 1996 and asking him to confirm that he would attend. No reply was received from Mr Birkett who did not attend on the appointed date. It therefore falls to me to decide the outstanding issues on the papers before me.

Among the outstanding objections which have been raised by the examiner there are three main issues. First, that the invention claimed in all three applications is not new and/or does not involve an inventive step in the light of a number of cited documents, including in relation to the third application 9400294.6 the published versions of the two other applications, GB 2263183A and GB 2263184A, which are citable under section 2(3) of the Act by virtue of their earlier priority date. Second, that the claims of the first two applications 9205818.9 and 9300377.0 are essentially the same contrary to section 18(5) of the Act which prohibits the granting of two patents for the same invention. Third, that the opening part of the first claim on the second application 9300377.0 contains an idea which was not in the specification as originally filed and which therefore adds matter contrary to section 76 of the Act.

All three applications concern the idea of reducing the size of a keyboard or switch unit so that an operator's finger print area covers, and actuates, more than one key or switch and providing logic circuits to determine which individual key or switch the operator intended to actuate. The first application 9205818.9 includes a number of embodiments. Figures 1 to 4 show a plate or pad of various possible shapes pivoted about a central point so that contacts placed around the edge of the plate can be closed by tilting the plate about the central pivot. The contacts are spaced so that when the plate is tilted by finger pressure, three contacts are closed and logic circuitry provides a signal corresponding to the central one of the three contacts. Other embodiments involve the use of keys or switches arranged in a straight line, or in a circle or a matrix array or as a standard 'Qwerty' keyboard. In each embodiment the keys are closely spaced so that more than one is actuated by an

operator's finger and logic circuitry determines which key the operator intended to actuate. The arrangement allows much smaller keyboards to be provided and a number of possible applications are listed, *eg* for use in portable computers and video cameras. The main claim on this first application as originally filed read :

"A multiple electronic control switch assembly in which the keypads are deliberately positioned close to each other so that the operators finger print area encompasses and touches the adjacent keypads around the selected keypad so that they are also pressed."

The main claim as it stood at the date of the hearing was filed with Mr Birkett's letter of 15 March 1996 and reads :

"Existing electronic control keyboard are governed by the size of the operators finger print area and can be reduced in size with this invention to that where the symbols on each of the key pads are of sufficient size to be legible thus reducing the size of existing keyboard layout assembly and is not restricted in this reduction in size due to the operators finger print area overlapping onto and operating the adjacent keypads these signal being interpreted by the proposed electronic control assembly so that only the signal from the keypad central to the operators finger print is transmitted."

The second application, 9300377, concerns only a standard 'Qwerty' keyboard layout and describes in detail logic circuits for discriminating which key the operator intends to actuate. The main claim as originally filed read :

"A computer, data processor or control panel assembly in which the keypads are deliberately positioned close to each other so that the operators finger print area encompasses the adjacent keypads around the selected keypad so that they are also pressed."

The main claim as it stood at the date of the hearing was filed with Mr Birkett's letter of 17 March 1996 and reads :

"A keyboard where the minimum optimum size of the symbols on each of the keypads govern the size of the keyboard and not the size of the operators finger print area which restricts the reduction in size of existing keyboards, with the invention herein described the operators finger print area does not restrict the size and is used so that the adjacent keypad(s) are simultaneously pressed down and operated with the resulting transmitted signals passing into a circuit assembly as described so that the signal from the keypad central to the operators finger print area alone is allowed through and transmitted to the required destination resulting in a smaller keyboard than the existing data processor keyboard assemblies used on products and would be used when a reduction in size of these products is desired."

The third application, 9400294, is concerned with a standard 'Qwerty' keyboard layout and also shows the use of the invention in the handset of a cellular telephone. The main claim as originally filed read :

"A reduced size data processor assembly in which the keypads are deliberately positioned close to each other so that the operators finger print area encompasses the adjacent keypads around the selected keypad so that they are also pressed."

No amended claims have been filed on this application, Mr Birkett having simply replied to the initial section 18(3) report with his letter of 22 May enquiring as to the date of the hearing. However, in a subsequent letter of 27 May directed solely to this third application Mr Birkett wrote "I would like to appeal against the examiners report and objections to the above patent application. I realise that I should have objected earlier but was prepared to accept his opinion that the ideas were not original but would now request that a second opinion be given by the patent office due to me being far from convinced by all of the objections put forward." Mr Birkett did not however explain why he considered the examiner's objections to be unfounded save to say that the purpose of his invention was to provide a reduction in size and that while this was touched upon in the prior art cited by the examiner, it did not appear to be the purpose of any of the cited art other than his own two published applications.

As this suggests, the examiner has cited a number of prior documents which he argued show that the inventions claimed in Mr Birkett's three applications are not novel and/or do not involve an inventive step. At this stage however, and apart from the published versions of the first two of the present applications, I need consider only one of these documents, viz the prior British patent application GB 2125199A.

Prior application GB 2125199A was published on the 29 February 1984 and relates to an input device for a word information storage and retrieval device such as an electronic dictionary. On page 1 the specification states that conventional input devices comprise a keyboard and goes on :

"Although it is desired that electronic apparatuses such as electronic dictionaries be compact as much as possible, it has been difficult to miniature the size of the keyboard in view of the manual operations. ... Therefore, it is desired that a smaller size letter input device be provided for inputting a word having a large number of letters, shortly."

Figures 1 and 2(1) of the specification show a keyboard 19 consisting of a bar switch 2 with letters of the alphabet displayed above the switch along its length. A second bar switch 3 is provided for Japanese characters. An operator's finger is shown covering the letters "o", "p" and "q" along bar switch 2 and logic circuits are provided to decode the output. The specification states on page 3 at line 84 *et seq* :

"For example, it is assumed that the positions of the bar switch 2 centering (*sic*) the portion corresponding to the labelled letter "p" are depressed, whereby the key switches corresponding to three letters "o", "p" and "q" are actuated."

The specification goes on to describe how the logic circuits deal with the resulting information to produce a code corresponding to the letter "p" and states :

"Thus, the letter corresponding to the centre of the actuated portions of each one of the bar switches 2 and 3 is actually inputted."

It is therefore clear, notwithstanding what Mr Birkett said in his letter of 27 May, that the broad idea of miniaturising a keyboard by providing small key switches which are so close together that more than one switch is actuated by an operator's finger was known before the earliest priority date of any of the present three applications. And since this is essentially all that is claimed in the third of Mr Birkett's applications 9400294, it follows that the invention claimed in this third application is not new as required by section 1(1)(a) of the Act. It is also clear to me that this claim is also not new in the light of the published versions of Mr Birkett's first two applications GB 2263183A and GB 2263184A which are relevant because of their dates. While the first two applications were both published on 14 July 1993, which is after the claimed priority date of the third application 9400294, the first two applications both claim, and in my view are entitled to, the earlier priority date of 10 January 1992 which is earlier than that of the third application. Accordingly, these two published applications are citable under section 2(3) of the Act.

Looking now at the claims of the first two applications as they presently stand it is clear that both claims relate to a keyboard provided with small key switches which are so close together that more than one switch is actuated by an operator's finger, and with means for determining the switch at the centre of the operator's finger area to indicate which key the operator intended to actuate. However, this is no more than is disclosed in the prior British patent application GB 2125199 that I considered above. The only additional matter that I can discern in the two claims, and therefore the only possible distinction from the prior published application is, in relation to the claim of the first application, that the keyboard is reduced in size to the point where the symbols on the keypads are "of sufficient size to be legible" and, in relation to the second application, that "the minimum optimum size of the symbols on each of the keypads governs the size of the keyboard". My difficulty then is that neither of these requirements is clear.

In the first application, it is not at all clear to me what a "sufficient size to be legible" would be. Moreover, I do not think that this requirement is in fact supported by the description which states on page 4 - "Keyboards for compact computers and word processors where the size would be reduced to that where the symbols are legible *and* the operators fingerprint covers the required number of key pads as shown in Figure 13." (emphasis added) It also

states that - "It will be seen in Figure 13 that the keypads are large enough to contain legible symbols within the 3mm square areas of the keypad *and* small enough for the operators finger print to cover the required number of keypads." (emphasis added) Thus, it seems to me that even if it were possible to determine what the reference to the symbols on the keypads being of a "sufficient size to be legible" means, which in my view it is not, it is not in fact the case that the size of the keyboard is determined solely by the size of the symbols on the keypads. Consequently, I cannot ascribe any clear, definitive meaning to this requirement which, as a result, does not serve to distinguish the claim from what is disclosed in the cited document.

In the second application the examiner has objected that the requirement in the claim to the effect that "the minimum optimum size of the symbols on each of the keypads governs the size of the keyboard" was not in fact present in the specification as originally filed and this is clearly right. I can find no reference to this notion in the specification as originally filed and it follows that this requirement adds matter contrary to section 76 of the Act. Thus, I am obliged under section 76(1) to refuse to allow the application to proceed until the additional matter is deleted. If this matter were deleted then it would follow that the claim is not distinguished from what is disclosed in the cited document. But even if this matter were to remain, I am far from clear what the term "minimum optimum size" might mean. Thus, again I would not be able to ascribe any clear, definitive limitation to the requirement which, as a result, would not serve to distinguish the claim from what is disclosed in the cited document.

It therefore follows from this that in my judgment, the claims of the first and second applications are not distinguishable from what is disclosed in the cited document. Moreover, it also follows that the two claims are not distinguishable from each other. Accordingly, since the first two applications claim, and as I have already indicated are in my view entitled to, the same earlier priority date, I believe the examiner was right to raise objection under section 18(5) which allows the comptroller to refuse to grant a patent on more than one application which is by the same applicant, which has the same priority date and which is for the same invention. However, as will become apparent, this point is in fact academic in the face of my finding that the inventions, so far as these are claimed in all three applications

in suit, are not new as required by section 1(1)(a) of the Act.

I now need to consider in the light of this finding whether I should refuse the applications under section 18(3). Before doing that however, I should consider whether in the face of the prior documents cited by the examiner there is any matter in the three applications for which it might be possible to obtain a valid claim. In this respect, it is I think clear that there are a number of features described in Figures 1 to 4 of the first application which are not disclosed in any of the prior documents cited by the examiner and if Mr Birkett were to direct the claims of this first application to these features, then it may well be that a patent would be granted. So far as the remainder of the description in the first application is concerned, I do not believe there is anything which could support a claim which was both new and involved an inventive step as required by section 1(1)(a) and (b) of the Act. The linear array of keys shown in Figure 5 of the first application is essentially what is shown in the prior published application GB 2125199A discussed above. This prior application also indicates that a matrix or round key bar may be used which is what is covered in Figures 5 and 6 of the first application. Figure 13 of the first application shows the application to a standard 'Qwerty' keyboard of the basic idea of reducing the size of a keyboard or switch unit so that an operator's finger print area covers, and actuates, more than one key or switch and in my view this cannot involve an inventive step over and above what is known from GB 2125199A. 'Qwerty' keyboards are so ubiquitous that I have no doubt that the notional skilled person would have regarded it as obvious to apply the idea of using smaller keys set out in GB 2125199A to such a keyboard. Nevertheless, since I have concluded that there is in my view some matter for which Mr Birkett could be granted a patent on this first application, viz that shown in Figures 1 to 4 of the application, I shall allow Mr Birkett an opportunity to revise his claims to that end and to make any consequential amendments to the description that may be necessary.

So far as the second application is concerned, I do not believe that there is any matter for which it would be possible to obtain a valid claim. The application relates to the use of Mr Birkett's basic idea in a 'Qwerty' keyboard on a portable device with a hinged lid. I have already concluded that the application to a 'Qwerty' keyboard does not involve an inventive step as required by section 1(1)(b) and given that laptop computers with 'Qwerty' keyboards

and hinged lids have been commonplace for a long period now, there can be no question of the hinged lid of the device, so far as this is described in the application, involving any inventive step. Beyond this, the application simply describes particular forms for the logic circuits used to discriminate which key the operator intended to actuate and I am confident that these circuits simply involve routine logic development and do not involve any inventive step. Therefore, I believe that the description cannot support any claim which would involve an inventive step and consequently, I hereby refuse the second application 9300377.0.

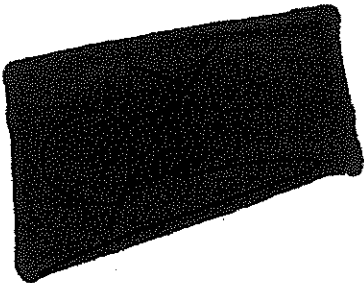
The third application is very like the second in that it relates to a 'Qwerty' keyboard in a portable device with a hinged lid. To that extent it is clear to me that this also involves no inventive step. However, the third application also includes embodiments in which the basic idea of reducing the size of a keyboard or switch unit so that an operator's finger print area covers, and actuates, more than one key or switch is applied to the handset of a cellular telephone. Logic circuits for this application are also described. While I have grave doubts as to whether any claim to this could involve an inventive step given that cellular telephone hand sets are common devices for which it is obvious that size is of some significance, and given that one of the other prior documents cited by the examiner, viz GB 1492538, specifically mentions the use in a "telephone system" of a keyboard whose size is reduced by using arrangements whereby certain signals are produced by actuating more than one key at once, I do not feel able to say that the description certainly could not support a claim relating to a cellular telephone handset which would involve an inventive step. Consequently, I shall allow Mr Birkett an opportunity to revise his claims to that end and to make any consequential amendments to the description that may be necessary.

Thus, in summary, I have found that the present claims of all three applications in suit are not new as is required by section 1(1)(a). I have also found that an amendment made to the second application 9300377.0 involved added matter contrary to section 76 and that because the first and second applications 9205818.9 and 9300377.0 have the same priority date and are for the same invention, grounds exist under section 18(5) for me to refuse to accept more than one of these two applications. However, since I have already refused application 9300377.0 under section 18(3), the objections under sections 18(5) and 76 fall away.

Turning to applications 9205818.9 and 9400294.6, before I refuse these applications I am prepared to give Mr Birkett an opportunity to amend these two applications with a view to overcoming my finding that the inventions they claim are not new.

Given that the period during which an appeal against this decision may be lodged is six weeks running from the date of the decision, and that as a result the period for putting the first application 9205818.9 in order will automatically be extended until the end of that period by virtue of section 20(2), it is I think sensible to allow Mr Birkett three weeks from the date of this decision in which to submit amendments, thereby giving the examiner and Mr Birkett the remaining three weeks to resolve any difficulties which may arise. If suitable amendments are not submitted within that timetable, I shall refuse applications 9205818.9 and 9400294.6.

Dated the 10th day of July 1996.



D M HASELDEN
Principal Examiner, acting for the Comptroller.

THE PATENT OFFICE