

- (a) *The invention is new;*
- (b) *It involves an inventive step;*

6 Also, Section 3 of the Act states:

An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

7 In addition to statute, the courts have long used the so called *Windsurfing*¹ test to assess issues of inventive step. This involves a four step test which was reformulated by Jacob LJ in *Pozzoli*² as follows:

- (1) (a) *Identify the notional “person skilled in the art”;*
 - (b) *Identify the relevant common general knowledge of that person;*
- (2) *Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;*
- (3) *Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;*
- (4) *Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?*

8 Additionally, there is also the decision in *SABAF*³ which is the leading authority on how to decide whether or not a combination of known things can be considered inventive. Briefly, this decision held that if two integers interact upon each other, or if there is synergy between them, then they constitute a single invention having a combined effect and one then considers the idea of combining them under section 3 of the Act. However, if each integer performs its own proper function independently of any of the others, and the claim is a mere aggregation or juxtaposition of features, then each is, for the purposes of section 3, considered a distinct invention and assessed separately.

9 The decision in *SABAF*³ explained that two features are considered to interact synergistically if their functions are interrelated and lead to an additional effect that goes beyond the sum of the effects of each feature taken in isolation. It is not enough that the features solve the same technical problem or that their effects are of the same kind and add up to an increased but otherwise unchanged effect. Specifically, in paragraph 24 of *SABAF*³ Lord Hoffmann held:

¹ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59

² *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

³ *SABAF SpA v MFI Furniture Centres Ltd* [2005] RPC 10

But before you can apply section 3 and ask whether the invention involves an inventive step, you first have to decide what the invention is. In particular, you have to decide whether you are dealing with one invention or two or more inventions. Two inventions do not become one invention because they are included in the same hardware. A compact motor car may contain many inventions, each operating independently of each other but all designed to contribute to the overall goal of having a compact car. That does not make the car a single invention.

10 In paragraph 26 he went on to add:

The EPO guidelines say that "the invention claimed must normally be considered as a whole". But equally, one must not try to consider as a whole what are in fact two separate inventions. What the Guidelines do is to state the principle upon which you decide whether you are dealing with a single invention or not. If the two integers interact upon each other, if there is synergy between them, they constitute a single invention having a combined effect and one applies section 3 to the idea of combining them. If each integer "performs its own proper function independently of any of the others", then each is for the purposes of section 3 a separate invention and it has to be applied to each one separately. That, in my opinion, is what Laddie J meant by the law of collocation.

11 The applicant has also highlighted decision T 2/83 of the Technical board of Appeal of the European Patent Office⁴. While they recognise that I am not bound by this case law, they stressed that it should be considered as being persuasive. In this decision the Technical Board of Appeal established that when considering inventive step, the point was not whether the skilled person *could* have arrived at the invention by adapting or modifying the closest prior art, but whether he *would* have done so because the prior art incited him to do so in the hope of solving an objective technical problem or in the expectation of some improvement or advantage. I confirm that I will also consider this guidance when making my assessment.

The invention

12 The current claims were filed on 12th July 2017. There are two independent claims, claim 1 to a remote control method and claim 9 to the equivalent remote control system. Claim 1 read as follows:

1. A remote control method for remote controlling at least one infant care apparatus, the remote control method comprising:

preparing a remote control device capable of being connected in communication to the at least one infant care apparatus, wherein the at least

⁴ Decision T 2/83 of the Technical Board of Appeal (<http://www.epo.org/law-practice/case-law-appeals/recent/t830002ex1.html>)

one infant care apparatus comprises a sensor for generating a sensing signal, and a first processing module electronically connected to the sensor;

the remote control device comprising a touch display;

the remote control device displaying a graphic user interface on the touch display;

the remote control device receiving a touch operation through the graphic user interface, generating a control signal according to the touch operation, and transmitting the control signal to one of the at least one infant care apparatus; and

the infant care apparatus which receives the control signal operating according to the control signal;

wherein the graphic user interface comprises a structured menu, and wherein the remote control device displays the structured menu on the touch display according to the touch operation, the structured menu comprising:

a main menu, the main menu having a plurality of infant care apparatus options; and

a plurality of submenus correspondingly linking a plurality of options of the main menu, to control operation of at least one infant care apparatus, each of which corresponds to one of the options in the main menu and a corresponding submenu; and

wherein when the first processing module of the at least one infant care apparatus receives a sensing signal through the sensor and judges that the sensing signal is larger than a predetermined value, the first processing module of the at least one infant care apparatus transmits a warning signal to the remote control device; and

in response to receiving the warning signal the remote control device displays a warning message on the touch display or emits a continuously varying bright light using the touch display according to the warning signal.

- 13 While claim 9 is slightly different to claim 1, I do not believe that its differences are material to the issues before me.
- 14 To add some context to the claims, I note that pages 5 & 6 of the description disclose that the remote control device may be a smart phone or a tablet computer. The infant care apparatus may include a motion machine (e.g. a rocking device), a high chair, or a baby carrier. Page 13 discloses that the warning signal may be in response to excessive vibration, the temperature of the infant or due to it crying loudly.

Collocation

- 15 Following the decision in SABAF³ I must first determine how many inventions are present in the independent claims. The applicant has argued that having a single device provide both the control of an infant care apparatus and warning signals from such apparatus links these two features to provide a common advantage. Specifically, they argue that a parent, or caregiver, needing only one device to both control remotely and to receive warning signals is advantageous over having a plurality of devices.
- 16 While I agree that this is a desirable feature for users, I am afraid that I do not think that it is enough to create a single invention for the purpose of section 3 of the Act. To my mind the independent claims clearly relate to two distinct integers, namely:
- a) the remote control of an infant care apparatus using a device with a touch display having a graphic user interface comprising a structured menu; and
 - b) the infant care apparatus having a sensor and sending a warning signal to a remote device when a sensed signal exceeds a predetermined value.
- 17 To my mind these two integers are clearly separate. While both involve the same infant care apparatus and the same remote touch screen device, each performs its own function independently of the other. I cannot see any synergy between these two functions, they are not inter-related and do not create any effect that goes beyond the sum of each taken separately. The advantage of only needing one device does not come out of the concepts working together but is merely a summation of the advantages provided by each concept within a single device. Thus, following SABAF³, I am satisfied that the independent claims are each a collocation of two inventions, each of which must be considered separately for the purposes of section 3.

Integer (a)

- 18 Turning to consideration of the invention defined in integer (a), above, I will now determine whether it is obvious in view of what has been disclosed in the following documents:

D1	EP1900311	MAKERIDEA
D2	FR2725116	BENHAMOU
D3	CN102415739	SHEN
D4	US6983813	WRIGHT
D5	US2012149359	HUANG

Application of the Windsurfing/Pozzoli test

Step 1(a): Identify the notional "person skilled in the art"

- 19 There is no disagreement over the nature of the person skilled in the art, they are a manufacturer of children's toys and care equipment.

Step 1(b): Identify the relevant common general knowledge of that person;

- 20 This person would have knowledge of methods and apparatus for remotely controlling such equipment, including the use of touch screen devices. Again, there appears to be no disagreement over this point.

Step 2: Identify the inventive concept of the claim in question

- 21 The inventive concept under consideration is remote control of at least one infant care apparatus using a touch screen device where the touch screen device has a graphical user interface and structured menu system. As currently set out in claims 1 and 9 there is no requirement that the device control a plurality of infant care apparatuses – the control of just one such apparatus falls within the scope of these claims.
- 22 The applicant has argued that control of a plurality of infant care apparatuses does provide an inventive step. Notwithstanding that the invention as presently claimed is not limited in this way, I will also consider whether such an inventive concept would involve an inventive step.

Step 3: Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim

- 23 As characterised by the applicant, the prior art discloses infant care apparatus controlled by remote control devices, where a specific remote control device is used to control a specific apparatus. In particular:
- D1 discloses a vibration unit which can be attached to a cot and operated via a remote control;
- D2 discloses a remotely controlled rocking cot;
- D3 discloses a remotely controlled crib;
- D4 discloses a motorised baby walker which is operated by a remote control.
- 24 The difference between the inventive concept as claimed and what is disclosed in documents D1-4 is the remote control comprising a touch screen device with a graphical user interface and a structured menu.
- 25 The difference between the inventive concept as argued by the applicant is the remote control comprising a touch screen device with a graphical user interface and structured menu wherein the device controls a plurality of infant care apparatuses.

Step 4: Do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

- 26 Considering first the inventive concept as claimed, the use of touch screen devices as controllers was well known in the art. For example, D5 discloses using a mobile phone with a touch sensitive screen to control a toy. Such touch screen controllers routinely feature graphical user interfaces and layered menu systems with multiple options and submenus. I believe that the remote control device as characterised in claims 1-23 of the current application was well known to the skilled person before the priority date.
- 27 In my view, it would have been a simple design choice to use a touch screen device, such as a smart phone, as a remote control unit in any of the systems of documents D1-4. Such a variation would have been obvious to try and would not have required any inventive ingenuity. I thus conclude that integer (a), as presently claimed, does not involve the required inventive step.
- 28 Although I do not believe that the claim is so limited I will now consider the inventive concept as argued by the applicant, i.e. with the additional difference that the remote control device is used to control a plurality of apparatuses.
- 29 As set out above, the use of touch screen devices, such as smart phones, as remote controllers was well known in the art. The skilled person would have understood that when a smart phone was used as a controller it was not restricted to controlling a specific device but could be used to control any devices to which it was connected and for which it had suitable software. An established property of touch screen devices is that they can be used for multiple purposes without the limitations imposed by physical button layouts. Additionally, it was also well known at the priority date to use non-touch screen remote controllers to control multiple devices from one controller. For example, it has been known for many years to control a TV, set-top box and DVD player from a single remote controller.
- 30 As reasoned above, the skilled person could readily substitute the remote control unit in any of documents D1-4 for a touch screen device without the need for inventive ingenuity. Furthermore, where more than one infant care apparatus is in need of control, it would be obvious to include suitable software and menus in the single remote control device to permit control of the various apparatuses. In my view it would be obvious to the person skilled in designing infant care equipment to make such a modification to known remote control devices.
- 31 Although I am not bound by Decision T 2/83⁴ of the EPO, I will now consider whether the skilled person *would* have arrived at the invention in the expectation of some improvement or advantage, not merely whether they *could* have done so.
- 32 In the current case, I believe that the skilled person would be aware of multiple different infant care apparatuses each of which can be controlled remotely. Further, they would know that touchscreen devices, such as smartphones, can be used to connect to and control multiple external devices. The advantages of using such a controller, i.e. the ability to control more than one device, an adaptable graphical user interface, and ease of use by providing control via a mobile phone which is likely to be on hand to the care-giver, would also be readily apparent to the skilled person. I thus conclude that the skilled person would see that using a smartphone, or similar device, to manage multiple infant care apparatuses would offer a clear improvement over the control devices disclosed in documents D1-4.

- 33 Even though I am not bound by the decision in T 2/83⁴ I am reassured that following its reasoning leads me to the same conclusion as my previous analysis. Namely that the inventive concept as argued by the applicant lacks an inventive step.

Integer (b)

- 34 Turning to consideration of whether the invention defined in integer (b) is new and inventive, I will consider the disclosure of the following document cited by the examiner:

D6 US20111261182 LEE et al.

- 35 This document discloses a crib with a device which detects if an infant is awake or in an inappropriate sleeping position. If either of these conditions are detected the device sends a warning signal to a communication device. Document D6 discloses that the communication device can be a mobile phone. At the publication date of this document I believe that it was implicit that such a mobile phone could be a smartphone with a touchscreen. D6 further discloses that the warning signal may be text or some other visual or audible indication.
- 36 It is thus my view that document D6 discloses all of the features of integer (b) and so fully anticipates this aspect of the collocation. Accordingly, I find that integer (b) of the collocation is not new. I note that the applicant has not provided any arguments on this point.

Other claims

- 37 I can see nothing in claims 2-8 or 10-22 that might be considered inventive over what is shown by the cited prior art in the light of the common general knowledge of the skilled person. I thus conclude that these claims also do not provide an inventive step.

Decision

- 38 I have found that the invention set out in the independent claims is a collocation of two separate integers. I have further found that the first integer lacks an inventive step and that the second integer lacks novelty. Finally, I can see nothing that might comprise an inventive step in any of the dependent claims.
- 39 Accordingly, I decide that the invention as set out in the claims lacks an inventive step as required by section 1(1)(b). I therefore refuse this application under section 18(3).

Appeal

40 Any appeal must be lodged within 28 days after the date of this decision.

Stephen Brown

Deputy Director, acting for the Comptroller