

01 December 2011

PATENTS ACT 1977

APPLICANT Combi Corporation

ISSUE Whether patent application number GB 1102027.8
complies with sections 1(1)(b) and 3 and involves an
inventive step.

HEARING OFFICER Ben Micklewright

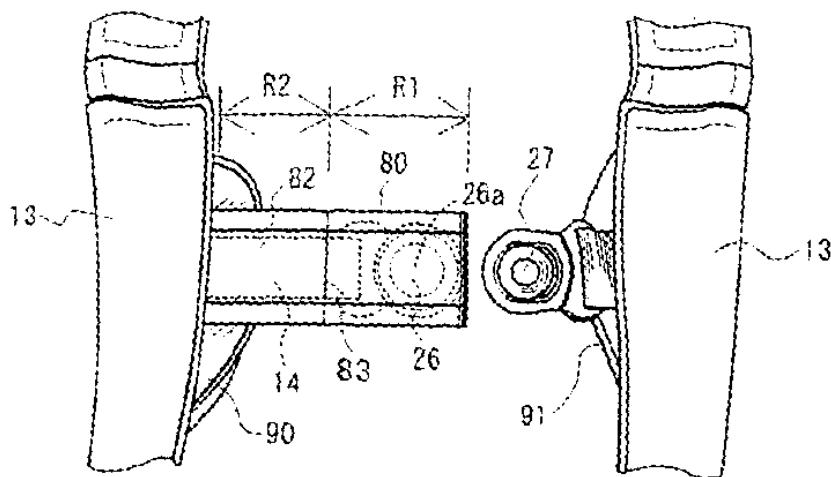
DECISION**Introduction**

- 1 Patent application GB 1102027.8 was lodged on 4 February 2011, claiming divisional status from parent application GB0706220.1 and thus having an effective filing date of 29 March 2007 and an earliest priority date of 31 March 2006. The divisional application was published on 22 June 2011 as GB2476402 A.
- 2 The examiner maintained that the claimed invention did not involve an inventive step. The applicant disagreed and the matter therefore came before me at a telephone hearing on 3 October 2011 in which the applicant was represented by Mr Alan Mitchell, a chartered patent attorney of the firm Hoffmann Eitle.

The invention

- 3 The invention relates to a baby carrier having a covered chest strap, described as a bridging strap, as illustrated in Figure 28 below. The baby carrier has a seat portion in which the baby sits and shoulder straps 13 for carrying the baby on the shoulders. The shoulder portions have a chest strap which can be attached to the shoulder straps by fastener 26 and which has attached to it a fabric tube-like sleeve cover 80 for covering the strap and the fastener. The cover includes an identifier which allows identification of a front side surface and a back side surface of the cover so that in use the wearer can ensure that the chest strap is not twisted. This indicator could for example be realised by using different fabrics for the two surfaces.

FIG. 28



4 The latest formal amendments to the claims were filed on 29 June 2011. Claim 1, the only independent claims, reads:

1. A baby carrier, comprising:

a seat main body for covering a torso of a baby;

a pair of shoulder straps which is attached to the seat main body;

a bridging strap for connecting the pairing shoulder straps with each other; and

an attachment/detachment for attaching the bridging strap to the shoulder strap in a detachable manner, wherein

the baby carrier further comprises a tube-like cover which surrounds the bridging strap and which extends from the bridging strap to the attachment/detachment to surround at least a portion of the attachment/detachment, the cover is fixed to the bridging strap at a position near the attachment/detachment, and

the cover includes an identifier which allows identification of a front side surface and a back side surface of the cover, the front side surface being opposite to a side of the seat main body, and the back side surface facing the seat main body.

5 A number of possible amendments were proposed at the hearing if I found that claim 1 in its current form did not involve an inventive step. The first two of these relate to an attempt to restrict the claim to a cover that permanently surrounds the bridging strap. The third relates to an attempt to limit the claim to its purpose of preventing twisting of the bridging strap. I will discuss these suggestions to the extent necessary in my analysis below.

The law

6 Section 1(1) of the Patents Act 1977 (“the Act”) states:

1.-(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –

(a) the invention is new;

(b) it involves an inventive step;

(c) it is capable of industrial application;

(d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below;

and references in this Act to a patentable invention shall be construed accordingly.

7 Section 3 of the Act states:

3. 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).

8 In *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 49, the Court of Appeal formulated a four-step approach for assessing whether an invention is obvious to a person skilled in the art. This approach was restated and elaborated upon by the Court of Appeal in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588 where Jacob LJ reformulated the *Windsurfing* approach as follows:

(1)(a) Identify the notional “person skilled in the art”.

(1)(b) Identify the common general knowledge of that person.

(2) Identify the inventive concept of the claim in question or if that cannot be readily 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 claim as construed.

(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps that would have been obvious to the person skilled in the art or do they require any degree of invention?

9 In assessing whether the invention of present application involves an inventive step, I will therefore use this *Windsurfing/Pozzoli* approach.

Assessment

Steps (1)(a) and 1(b): Identify the notional “person skilled in the art” and the common general knowledge of that person

- 10 The examiner identified the person skilled in the art as a person involved in the design, construction and manufacture of baby carriers. The common general knowledge of that person would include an appreciation of the various common carrier configurations available, e.g. carriers worn to the front and to the rear of a user, upright holding carriers and lying carriers. The skilled person would also be aware of the different component parts of carriers such as strap construction and placement, buckle constructions, cushioning requirements and the attachment between various components. The examiner also expected the skilled person to have a good knowledge of neighbouring arts, including rucksacks and equipment used for the transportation and restraint of infants. The applicant did not explicitly disagree with this but did highlight that the field of safety belts used for restraining occupants of vehicles, which will become relevant to the question of inventive step, is fairly remote from the field of baby carriers. I accept the examiner’s identification in principle but will take into account the applicant’s submission when considering a specific document which lies in the field of safety belts for vehicles.

Step (2): Identify the inventive concept of the claim in question or, if that cannot be readily done, construe it

- 11 There was no real dispute between the examiner and the applicant in relation to this step. The inventive concept relates to a tube-like cover for a bridging strap for a baby carrier, the bridging strap being for connecting a pair of shoulder straps with each other and being attached to the shoulder strap in a detachable manner by an attachment/detachment, the tube-like cover surrounding the bridging strap and at least part of the attachment/detachment and being fixed to the bridging strap, the cover including an identifier which allows identification of a front and rear surface of the cover.

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 or claim as construed

- 12 The examiner cited the following three documents as forming part of the “state of the art”:

D1: JP 11046938 A (LUCKY)

D2: JP 2006075441 A (NAGASAWA)

D3: US 4961251 (SMITH)

- 13 D1 and D2 both disclose baby carriers with shoulder straps connected to each other by a bridging strap. In both cases the bridging strap has some form of attachment means to attach it to the shoulder straps. Moreover both documents also disclose some form of cover for the shoulder strap.

- 14 In D1 the bridging strap 13 includes a buckle 15 which is a type where a male member clips into a female member. In order to release the male member from the female member the sides are pressed so as to release two prongs. This is a standard type of buckle used for example in many rucksacks and bags. Strap cover 16 is included to protect the infant from the bridge strap (from Figure 6 below it would seem that the baby's head is at the level of the bridging strap when the carrier is used in its "piggy back" configuration) and is attached to the shoulder straps in a manner which allows free attachment and detachment to the shoulder straps. The cover does not appear to be attached to the bridging strap itself. The cover covers only one side of the strap, the side which would be facing the baby.

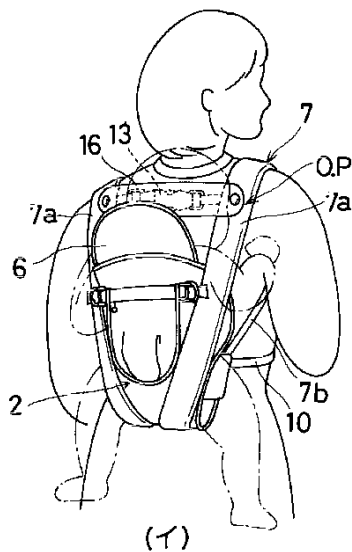


Figure 6

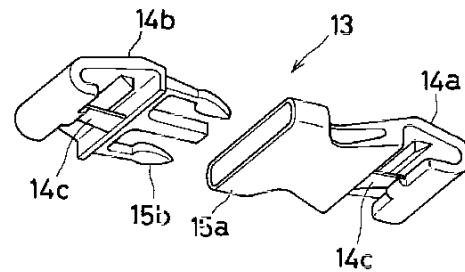


Figure 3

- 15 In D2 the baby carrier includes a crossing strap 5 which is covered by a tube of cushioning material 51. Crossing strap 5 comprises a wire 53 attached to karabiner 52. The karabiner has a claw-like part 521 and a sprung part 522. In use the karabiner is attached to fasteners 31 or 32 on the shoulder girdle 3. The stated purpose of the cushioning material is to improve the comfort to the wearer of the baby carrier.

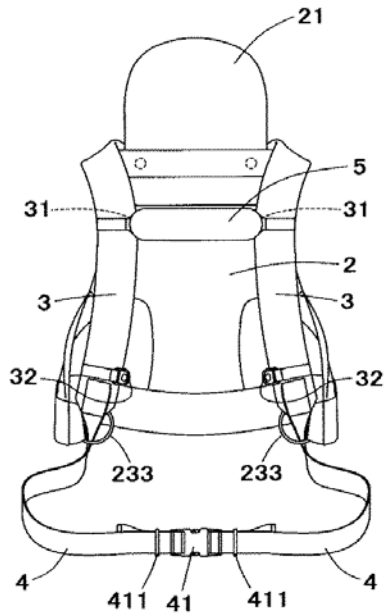


Figure 2

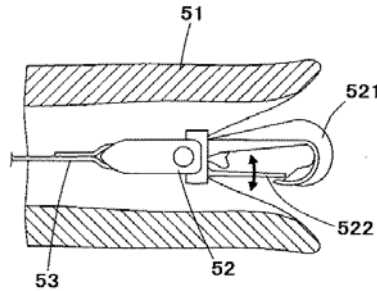


Figure 5

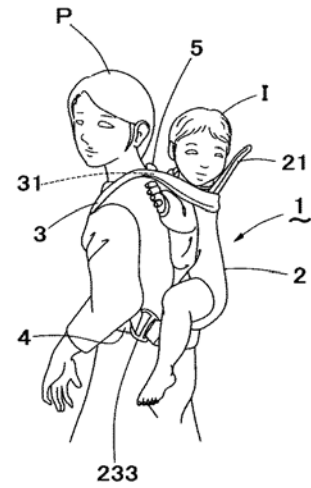
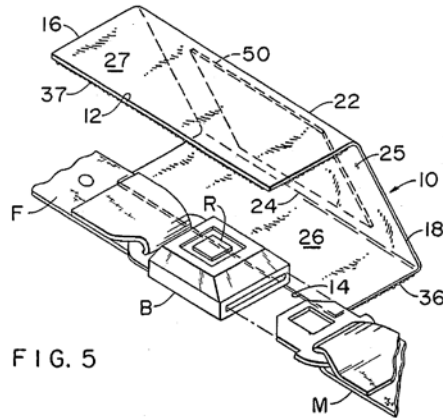


Figure 6

- 16 It is noted that although the strap in D2 constitutes a cover of sorts, it is an integral part of the strap and without this cover the strap merely constitutes a wire. A wire can however in my view be considered as a strap.
- 17 Neither D1 nor D2 disclose any identification on the cover to indicate one side of the cover from the other.
- 18 D3 does not relate to a baby carrier but rather to a belt buckle assembly for use as a safety restraint in a car or other vehicle. It discloses a belt buckle guard for preventing young children from unfastening themselves from a vehicular safety restraint. The buckle itself is of the type typical to vehicular safety belts for children where a button lies in the plane of the strap and in which the strap is released by pressing the button as is shown in Figure 5, reproduced below. Although the claim could at least in theory cover other types of buckles, there is no specific disclosure of an adaption to any other types of buckles and the embodiments are all focussed on the type of buckles shown in Figure 5. The guard comprises a flexible body which wraps around the engaged safety belt buckle and includes a rigid member which prevents depression of the release mechanism of the buckle. The flexible body is wrapped around the belt buckle and is then connected to itself by, for example, a hook and loop fastener with the rigid member secured over the button of the belt buckle. The guard may be attached to one of the two safety belt ends by for example a pivot.



- 19 The difference between the inventive concept of the application in suit and D1 is that D1 does not disclose a cover which surrounds the strap. Moreover the cover does not appear to be attached to the bridging strap but rather seems to be connected to shoulder strap 7. Finally, the cover does not include an identifier which allows identification of a front side surface and a back side surface of the cover.
- 20 The difference between the inventive concept of the present invention and the disclosure of D2 is that the cover does not include an identifier which allows identification of a front side surface and a back side surface of the cover.
- 21 D3 does not relate to a baby carrier and therefore does not disclose any of the baby carrier features of the inventive concept of the present invention. Nor does it really disclose a bridging strap in the form understood in claim 1 of the present invention. It does however disclose a strap with an attachment/detachment which has a cover which surrounds the strap and is fixed to the strap. There was some disagreement between Mr Mitchell and the examiner in relation to whether this cover included an identifier which allows an identification of a front side surface and a back side surface of the cover. Although Figure 3 of D3 seems to show the rigid member making a visual impression on the cover, Mr Mitchell argued that this drawing was merely indicative of the construction of the cover and did not necessarily disclose a visual indicator. Having considered the matter, I am satisfied that the rigid member in the cover would provide some sort of identification, whether visual or tactile, of a front side surface of the cover and thus also allows identification of a back side surface of the cover.

Step (4): Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps that would have been obvious to the person skilled in the art or do they require any degree of invention

- 22 The examiner argued that the skilled person, seeking ways to prevent accidental release of a chest strap of a baby carrier, would become aware of the cover shown in D3 and would consider the strap cover to be entirely suitable for use with the bridging straps shown in D1 and D2. He would regard the substitution of the covers shown in these documents for the improved cover of D3 to be straightforward, something that would not require any inventive ingenuity to be exercised. The

resulting baby carrier would then have all the features of the inventive concept of the present invention, including the identifier feature. The examiner therefore argued that claim 1 lacked an inventive step.

- 23 In his correspondence with the examiner Mr Mitchell disagreed that the skilled person would modify either of the apparatuses disclosed in D1 and D2 in this manner. His arguments initially focussed on whether or not D3 actually disclosed an identifier (a point I have dealt with under step (3) above), the fact that D3 did not expressly identify the problem being solved by the present invention, namely the strap being inadvertently twisted, and that it did not indicate that the rigid member could be used as an identifier to allow front/back disambiguation of the orientation of the buckle. Moreover Mr Mitchell submitted that D3 pertained to the field of safety belts used for restraining occupants in vehicles which, he argued, was fairly remote from the field of baby carriers. Mr Mitchell did at one point argue that in D3 the cover was at no time fixed to the strap but at the hearing acknowledged that there was in fact disclosure of this in D3. In a later letter Mr Mitchell focussed on the way the cover was fastened around the strap in D3. In that case the cover was designed to be fitted around an already-fastened buckle of a safety belt and would therefore provide no visual indication as to whether or not the strap had been twisted and would provide no visual indication of the orientation of the buckle.
- 24 At the hearing Mr Mitchell took a different approach, one which I found much more helpful, in which he took me to the constructional details of D1 and D2 and argued why the skilled person would not consider replacing the covers disclosed in these documents with that of D3 based on these constructional details.
- 25 In relation to D1, Mr Mitchell highlighted that the buckle is of a different nature than that disclosed in D3. Instead of being operated by pressing the button into the plane of the buckle, it is operated by pressing the sides of the buckle so as to release the prongs in the male part of the buckle. Mr Mitchell argued that a baby young enough to be carried in the baby carrier of D1 would be unlikely to be able to press these prongs, particularly given that, at least according to the figures, the bridging strap is at the level of the top of the baby's head. Furthermore the cover to the strap already prevents access to these prongs by the baby although I did point out that it may be possible to depress them through the material of the cover. Finally, Mr Mitchell submitted that even if a baby were able to depress the prongs, the strap cover disclosed in D3 would not resolve the matter as it is designed to prevent operation of a button in the plane of the strap. It is not clear that the rigid member in the cover of D1 would prevent a baby depressing the side prongs unless it was in some way adapted or re-designed, in which case the rigid member may no longer serve as the indicator of claim 1 of the present invention. For all these reasons Mr Mitchell submitted that the skilled person would not therefore consider replacing the cover of D1 with the cover of D3.
- 26 I find these arguments persuasive. It seems to me that the skilled person may have to make a number of alterations to the invention disclosed in D3 in order for it to be usable in D1 as a buckle guard and it is not apparent that these alterations would necessarily be obvious. Nor is it clear that there is a sufficient problem with the system disclosed in D1 which would lead the skilled person to consider solutions in documents such as D3, which, whilst in a related field, is further removed from the field of baby carriers. Finally, even if the person skilled in the art would have looked

at D3 and would have made the necessary alternations, it is not clear that the resulting guard would function as an indicator in the manner prescribed by claim 1. I therefore consider that the invention claimed in claim 1 is not obvious in the light of the teaching of D1 and D3.

- 27 In relation to D2, Mr Mitchell submitted that an infant was unlikely to be able to operate the karabiner with success, and in any case the karabiner was covered by the cover which would prevent its operation and therefore there wasn't a problem with the infant releasing the karabiner. It was therefore not clear that the person skilled in the art would identify the problem which D3 aims to solve, namely the infant unfastening the buckle themselves. Moreover the karabiner has no fixed orientation and so it is not clear that there is a back side surface and front side surface of the cover of the strap. Mr Mitchell argued that even if it could be argued that there was a problem with an infant undoing the Karabiner, it was not clear how the teaching of D3 could be applied by the skilled person to solve the problem.
- 28 For similar reasons as that given in relation to D1 I am of the view that it would not be obvious for the person skilled in the art to combine the teaching of D3 with that of D2 in a manner which would result in a baby carrier the features of the claimed invention. A karabiner is a very different type of connector to the buckle of D3 and the guard of D3 may therefore need adaption in order to provide the necessary protection for the Karabiner of D1, after which it may no longer operate as an identifier. Moreover I agree with Mr Mitchell that a karabiner would be difficult to operate by an infant and that, combined with the fact that the cover of the strap covers the karabiner, the skilled person would not identify a problem with the strap of such as that of D3. I therefore consider that the invention claimed in claim1 is not obvious in the light of the teaching of D2 and D3.
- 29 I therefore conclude that the claimed invention contains an inventive step over the cited prior art documents D1, D2 and D3. As I have reached this conclusion I do not need to consider any of the auxiliary requests made to me. At the time of the hearing the compliance period had expired and the applicant requested discretionary extensions of time in order to be able to make amendments along the lines of these auxiliary requests if I found that the claims in their present state were not allowable. I have however allowed the claims filed on 29 June 2011 and I do not therefore need to consider whether to allow these discretionary extensions.

Conclusion

- 30 I have found that the application contains an inventive step over the cited prior art. As there are no other issues outstanding I therefore conclude that the application is in order and may be forwarded for grant.

BEN MICKLEWRIGHT

Deputy Director, acting for the Comptroller