



BL O/302/04

30<sup>th</sup> September 2004

**PATENTS ACT 1977**

BETWEEN

Cunningham Covers Limited

Claimant

and

Airmat Safety Products Limited

Defendant

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PROCEEDINGS

Application under section 71(1) for a declaration of  
non-infringement of patent number EP(UK) 0983776

HEARING OFFICER

R C Kennell

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**DECISION**

**Introduction**

- 1 The patent in suit, EP 0983776, entitled “Building safety system”, having a priority date of 2 September 1998, was granted to Airmat Safety Products Limited (“Airmat”) with effect from 11 December 2002. It concerns a building safety system made up of inflatable bag means.
- 2 On 12 May 2003 Airtek Safety Limited (“Airtek”) wrote to Cunningham Covers Limited (“Cunningham”) contending that an inflatable collective passive fall arrest system offered for sale by the claimant infringed the patent in suit. Cunningham responded on 23 May 2003 refuting the contention of infringement. In a letter dated 10 June 2003 Airtek sought further details of the Cunningham product. Cunningham responded to Airtek on 13 June 2003 *inter alia* seeking acknowledgement of non-infringement. On 18 June 2003 Airtek wrote back *inter alia* declining to provide the requested acknowledgement. Finally Cunningham filed the present application for a declaration of non-infringement of the patent under Section 71 of the Patents Act 1977 on 4 July 2003. In a revised statement of case dated 23 December 2003 the claimant put in issue the question of the validity of the patent in suit in the light of two earlier patent disclosures.
- 3 After the filing of a counter-statement by the defendant and the usual evidence rounds, the matter came before me at a hearing on 21 June 2004. Mr John Hanna (of Ansons)

appeared on behalf of the claimant and Mr Richard Davis (instructed by Messrs Field Fisher Waterhouse) appeared on behalf of the defendant.

## **Law**

- 4 In brief, Section 71(1) provides that the comptroller may make a declaration that an act does not or would not constitute an infringement of a patent, subject to the following conditions: (a) the person doing the act has sought in writing from the proprietor a written acknowledgement to the effect of the declaration, (b) the person has furnished the proprietor with full particulars in writing of the act and, (c) the proprietor has refused or failed to provide the acknowledgement. It is not disputed that the burden of proof is on the applicant to show that either the act falls outside the scope of the patent claims or that the act falls within the scope of claims that are themselves invalid.
- 5 Section 74(1)(c) allows the validity of a patent to be put in issue in proceedings under section 71, subject to the provisions of sections 74(2) to (8). The possible initiation of proceedings for infringement of the patent is mentioned in letters to the claimant from Airtek on 12 May 2003 and from their solicitors on 16 July 2003. If such proceedings were pending in the court then leave from the court would be required for the initiation of proceedings under section 71 before the comptroller, as required by Section 74(7). However no court proceedings appear to have been initiated, and the point has not been disputed. I am therefore satisfied that leave from the court is not required.
- 6 There is one possible matter of compliance with Section 71(1)(a) which I should mention. The claimant applied for an acknowledgement of non-infringement from Airtek Saftey Limited, and all subsequent correspondence was with Airtek. However, Airmat Safety Products Limited was, and remains, the registered proprietor of the patent. Nevertheless, it is not in dispute that Airtek and Airmat are one and the same entity and that this is merely a change of name, although no request has yet been made to change the registered name of the proprietor on the patent register.

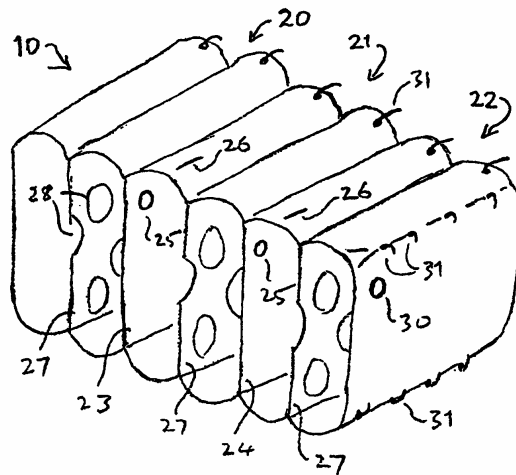
## **The patent in suit**

- 7 The patent relates to a safety device to reduce the risk of injury from falls, especially falls of construction workers. The claims read as follows:
- “1. Safety apparatus for use in building construction comprising pump means (11) and bag means (10, 12) inflatable thereby to cushion a person falling thereon, characterised in that the bag means comprise a plurality of chambers (Fig. 1) coupled together by valves (25, 30) controllable to interconnect the chambers such that the bag means can be adjusted to a desired plan shape (Fig. 1).
  2. Safety apparatus according to claim 1 characterised in that the bag means comprises a bag (10) having internal dividers (24) dividing it into segments and valve means for controllably coupling the segments together.
  3. Safety apparatus according to either preceding claim characterised in that the bag means comprise a plurality of separate bags (10, 12) which can be coupled together.

4. Safety apparatus according to claim 2 characterised by means comprising pneumatic coupling means (30) and mechanical linking means (31, 36) for coupling together a plurality of bags.
5. Safety apparatus according to either of claims 3 and 4 characterised by cover means for covering the coupled bags.
6. Safety apparatus according to any preceding claim characterised by internal bracing (27, 34) in the bag means for shape control thereof.
7. Safety apparatus according to any previous claim characterised by alarm means for indicating over and/or under-pressure.
8. A method of protecting workers on elevated portions of a building comprising providing inflated bag means of any previous claim in the interior of the building or parts thereof and/or adjacent the outside of the building or parts thereof.”

8 The invention is therefore directed to an inflatable cushion whose plan shape is adjustable by controlling the interconnection of segments within the cushion. It was not disputed at the hearing that the claims embraced two alternative types of construction of the cushion: *either* from one or more bags with internal segments, which segments are interconnected by valves (as in claims 2 and 4); *or* from separate bags interconnected through valves (as in claim 3).

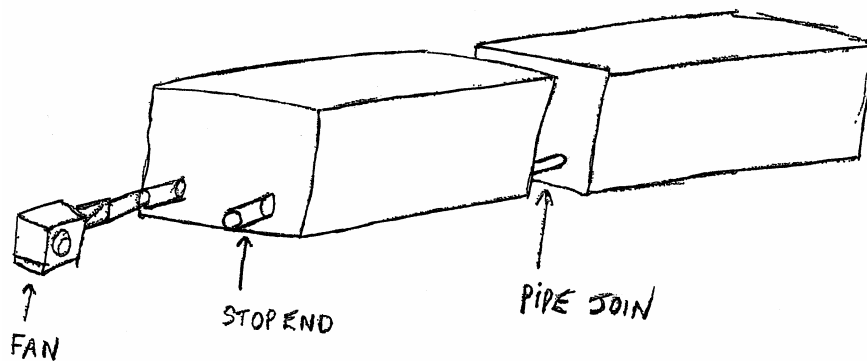
9 In the description, the valves used to interconnect the segments within a bag and the valves used to interconnect bags are referenced 25 and 30 respectively, as shown in Figure 2.



Paragraph [0029] states that each valve 25 may consist of a screw-threaded neck and a cap which can be screwed on to the neck to close the valve, or unscrewed and removed from the neck to open the valve. Paragraph [0033] gives as examples of valves 30 male and female press fit connectors, bayonet type connectors, and all male press fit connectors with separate short double female coupling elements (or vice versa); it explains that valves which are not being used for coupling bags or as feed valves must be closed off by providing stop elements (which can be attached to the valves), or by providing internal flaps in the bags.

### **The act for the purposes of section 71**

- 10 The Cunningham product was first described in their letter dated 23 May 2003 as comprising a plurality of chambers connected in series by tubes between openings in adjacent chambers, the end chamber being connected to a fan, which runs continuously. Several rows of chambers may be placed alongside one another and connected to the same fan by an octopus type manifold. The number of chambers may be selected to provide a desired plan shape. Openings which are not in use may be sealed by bungs.
- 11 The defendant requested further clarification in a letter dated 10 June 2003, in response to which a sketch

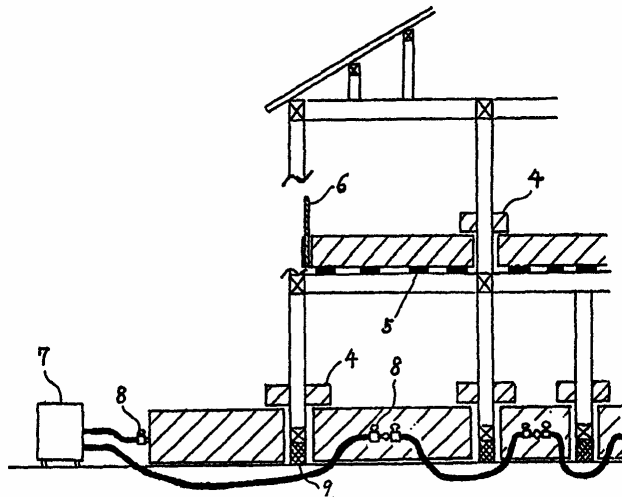


- was provided on 13 June 2003. The accompanying letter explained that the pipe has no valve and is connected to the chambers in an airtight manner. It is not now in dispute that sufficiently full particulars of the device have been given for the purposes of section 71(1)(a).
- 12 Additional details of the Cunningham product were provided in evidence and are dealt with below. At the hearing Mr Hanna offered to demonstrate an example of the Cunningham product, but Mr Davis objected – and I agreed - that if this was to be put in evidence prior notice and an opportunity to inspect should have been given. In the event I considered that the evidence already provided, coupled with Mr Hanna’s explanation at the hearing, was adequate to explain the functioning of the product.

### **The prior art relevant to validity**

- 13 On the issue of validity, the claimant relies on two patent specifications, Japanese application no 03-47376 (“PA1”) in the name of Masahiro Nakata, published on 28 February 1991, and US patent no 3399407 (“PA2”) in the name of Thomas O Olsen, published on 3 September 1968. In the statement the claimant alleges that claims 1 and 3, and claim 8 as dependent thereon, either lack novelty or lack inventive step over PA1; and that claim 6 (to the feature of internal bracing in the bag for shape control), and claim 8 as dependent thereon, lack inventive step in view of the combination of PA1 and PA2. Some doubt emerged at the hearing as to the essence of the claimant’s argument on inventive step, and I deal with this below.
- 14 Specification PA1 (for which I make reference to a verified translation supplied by the claimant) relates to an inflatable accident prevention airbag made from airtight material on to

which on to which building workers can fall from a height. The bags are supplied in standard shapes and sizes to fit different sizes of room, and several such units can be connected together as shown in Figure 2



in which an accompanying list identifies the hatched sections as the airbag units, item 7 as an air compressor and items 8 as valves. Beyond a statement in section (3) of the description “Multiple numbers of units as described above combined together or used on their own along with an attached air compressor can be used as a system of preventing accidents involving people falling”, there is no explanation of how the valves and the lines to them from the air compressor are arranged and operated.

- 15 Specification PA2 relates to a closed flexible bag with a continuously operating fan unit, intended to cushion the fall of pole vaulters and high jumpers in a way which decelerates the body on impact without a pressure build up sufficient to cause shock and stress. The feature to which the claimant draws particular attention is the provision (in the embodiment of Figure 9) of slotted compartmentalising walls (166) in the bag to permit a substantially unrestricted air flow whilst maintaining a substantially flat impact surface. The specification also discloses (Figure 3) an embodiment in which cords (66) are provided between the top and bottom surfaces of the bag as spacers to maintain the shape of the bag on inflation. These cords are preferably inelastic in order to prevent the surface moving in such a way as to cause the impacting body to bounce.

### Evidence

- 16 Evidence in chief from the claimant comprised a witness statement from John Hanna, an associate of Ansons, the patent attorneys acting for the claimant. This statement merely verified as exhibits a number of documents which had previously been sent to the Office, including a brochure from Leapfrog Inflatables showing swimming pool inflatables called “The Jurassic Run”, selected items of correspondence, photographs and videos showing the claimant’s product (provided on compact disk), the two patent specifications on which the claimant’s case on validity rested, and a witness statement from Alan Oughton, former Managing Director of Oughton Leisure Products Ltd, trading as Leapfrog Inflatables. Mr Hanna subsequently provided a further witness statement exhibiting photographs of some of

the items on the compact disk.

- 17 Evidence for the defendants comprised an expert report from Graham Ratcliffe, Sales Director of Polyone Plasticotta. Mr Ratcliffe states that he has worked in the industrial PVC sector since 1984, and that Polyone Plasticotta are the main suppliers of PVC to the inflatable products trade. The claimant's evidence in reply was a further witness statement from John Hanna disputing a number of Mr Ratcliffe's contentions.
- 18 Mr Davis raised an important point in his skeleton argument regarding the evidence from the claimant, namely that in general witnesses should give evidence as to facts and not their opinions, except where a witness gives expert opinion. He considered that Mr Hanna was not qualified to be an expert witness and that his evidence was therefore straying into the realms of inadmissible opinion to which I should give no weight. For these reasons he did not propose to cross-examine Mr Hanna.
- 19 I am in agreement with the general point made by Mr Davis. I do not consider that Mr Hanna can be regarded as an expert witness – although in fairness to him he has made no such claim and nor did he seek to challenge Mr Davis on this point at the hearing. Although much of Mr Hanna's evidence is factual, there are undoubtedly parts of it, particularly in the evidence in reply where he disputes the opinion of Mr Ratcliffe, where he is giving an opinion. I have therefore been careful not to give undue weight to any such opinions. However Mr Hanna is the professional adviser of the claimant and was also its representative there at the hearing. The weight that I can give to Mr Hanna's opinion will therefore depend on the extent to which he was able to throw doubt on the defendant's case, particularly in his cross-examination of Mr Ratcliffe.
- 20 At the hearing Mr Davis drew my attention to a statement in the letter from Mr Hanna to Airtek dated 23 May 2003, which was submitted as part of the statement of case and which also forms part of Mr Hanna's evidence, that Cunningham's airbags are used without modification in buildings. He thought this was an allegation unsupported by evidence, to which I should give no weight. I agree, although I do not think my decision turns on this point.

#### Cross-examination

- 21 Mr Oughton and Mr Ratcliffe were cross-examined before me. Mr Oughton was cross-examined very briefly on the size and construction of the "Jurassic Run" inflatable, in the course of which he readily acknowledged that the product was not intended to break the fall of falling workmen. For this reason (explained further below), although I found Mr. Oughton's evidence to be clear, convincing and reliable, I did not find that it helped me in reaching my decision.
- 22 Mr Ratcliffe's evidence compared the patent in suit with the claimant's product, the two patent documents from the claimant's evidence, and the "Jurassic Run". Under cross-examination, he answered clearly and without hesitation, and I felt he was speaking from practical knowledge and experience of inflatable products and the materials used to make them. However, there are two points which I should mention. First, and I explain this in

more detail below, I detected one or two instances where Mr Ratcliffe's answers were not perhaps wholly consistent, although in the event I did not think these detracted in any significant way from the overall picture that he was trying to paint. Second, Mr Hanna established in cross-examination that, although Mr Ratcliffe had indeed worked in the field of PVC sheeting for 20 years, he had no experience of inflatable products prior to his employment by Polyone Plasticotta in 1994: this particular strand of his experience therefore amounted only to four years at the priority date of the Airmat patent. I was however satisfied that Mr Ratcliffe's experience of supplying materials for inflatable products was sufficient to give credibility to his opinions. On the whole therefore I found Mr Ratcliffe to be a fair and reliable witness.

## **Validity**

### Arguments on novelty

- 23 The claimant's case on validity turns upon what the disclosure in PA1 teaches the skilled man. At the hearing, Mr Hanna took me to the definition of a valve in "Collins English Dictionary" (Third Edition Updated 1994) on which the claimant relied to show infringement, namely "any device that shuts off, starts, regulates or controls the flow of a fluid". In the absence of explicit disclosure, he argued that it was implicit in the description of items 8 as valves that they could have any of these functions and could be in an open or closed position or in some intermediate position to control or regulate the air flow from the compressor. In consequence it could be inferred that, since the bag second from the right was only connected to the bag second from the left by tubing extending between a valve located on each of these bags, the outlet valve of the latter had to be open to allow air to flow into the inlet valve of the former, and so allow adjustment to a desired plan shape.
- 24 The main thrust of the defendant's argument is that the device of PA1 is fundamentally different from the Airtek product. Thus, whereas the latter is a low-pressure system designed to leak air (see paragraphs [0015] and [0016]), PA1 discloses a high-pressure trampoline-type product which acts in a similar manner to a bouncy castle, breaking a fall by bouncing - rather than by cushioning, which absorbs energy with no, or minimal bounce as for instance in PA2. In support of this, Mr Ratcliffe in his witness statement drew attention to the statements in section 3(4) of PA1 that the bags "can be walked over even after inflation if scaffolding planks/veneer plywood boards are laid at the necessary places over the units" (which he thought would require the bag to be stiff and bouncy), and to the use of the stopper board 6 on the first floor "to prevent a secondary fall, as it is possible to fall on the unit on the first floor and then bounce off the unit on to the ground floor." Under cross-examination Mr Ratcliffe explained that, whereas the Airtek product was made from a sewn PVC-coated nylon material which could leak air through the stitching, the PA1 product was made from air-tight material, and he gave welded polyester as an example of such a material. However, Mr Ratcliffe also said that he supplied PVC-coated nylons for use in bouncy castles which would be assembled by sewing and, although acting as a trampoline, leaked air.
- 25 Mr Ratcliffe in his witness statement drew further distinctions between the two devices in that PA1 was not a modular system for assembling bags to a desired size and shape, but simply

used different size bags in different rooms; and in that there was no suggestion in PA1 that the bags could be divided into chambers. It is undoubtedly the case that there is no provision of chambers in any of the individual bags in PA1, but as explained above claim 3 of the patent in suit embraces constructions in which a series of bags, not necessarily themselves subdivided into chambers, are connected together to constitute the chambers in an overall bag structure. Under cross-examination Mr Ratcliffe appeared at one point to accept that the assembly of bags in PA1 did in fact equate to a plurality of chambers connected by valves, and when Mr Hanna returned to the point later in cross-examination, he did not explicitly deny this interpretation, saying it was “just how you word it”.

- 26 As to the disposition of the valves in PA1, in response to a single question on this matter put in examination-in-chief, Mr Ratcliffe said that in Figure 2 the valves “would have to be open on the first one (the first bag on the left hand side) and closed on the others because it would be airtight”. However, in cross-examination he suggested that the valves between the bags second from left and second from right would have to be open to let air travel from one to the other. Although not very clear, I think it is possible that Mr Ratcliffe may have been talking about two different scenarios – inflation of the separate perimeter bag and inflation of the bags within the building. Under cross-examination Mr Ratcliffe held firmly to his fundamental point – that because the bags were made of air-tight material, the system would be constantly full and there would be nowhere for the air to escape to. Accordingly the build-up of pressure on impact could not be dissipated into adjacent bags and so a falling body would not be cushioned and would bounce.
- 27 Mr Ratcliffe also said in his witness statement that he would have obtained no hint from PA1 to construct a mat which would cushion a person falling on it, and (a point which I take up below under inventive step) that it would not have occurred to him to modify the product of PA1 to produce such a product. Mr Hanna found this surprising, since Mr Ratcliffe supplied materials for inflatable products in both the bouncy castles and the building industries.
- 28 Construction of the patent is a matter for me, and as Mr Davis pointed out, PA1 is silent or unclear on a number of matters - whether the fan is always running, what pressure is employed, and how the air ducts are to be arranged. Taking me to the judgment of the Court of Appeal in *Monsanto v Merck* [2000] RPC 77, Mr Davis reminded me that it was not for me to substitute my own interpretation of the document for that of the skilled person, and that I could not infer what it meant where it was silent, except when clothed in the mantle of the skilled man - in this case by Mr. Ratcliffe’s expertise, his being the only admissible expert evidence before me. I accept that this is the basis on which I should proceed, and, as I have mentioned above, that I should not accord expert status to any opinions expressed by Mr Hanna. However, this does not in my view preclude me from taking into account any flaws in Mr Ratcliffe’s account exposed during Mr Hanna’s cross-examination.
- 29 Taking all these factors into consideration, although there appeared to be some inconsistencies in the detail of Mr Ratcliffe’s evidence, as mentioned above, and notwithstanding the sparseness of the disclosure in PA1, I am persuaded on the issue of novelty that if PA1 discloses anything to the skilled man, it discloses an air-tight bouncing structure, not a cushioning one. On this point, I do not think Mr Hanna was really able to deploy any convincing argument to the contrary in the absence of expert evidence from the



claimant.

30 One argument put forward by Mr Hanna was that the stopper board 6 was essentially there to block off windows, but I do not see how this gets round the description of this feature in PA1, to which Mr Ratcliffe referred. Also, as I understood his argument, Mr Hanna appeared to be suggesting that the feature of cushioning a falling person was not significant because it appeared in the pre-characterising part of claim 1 of the patent in suit. However as Mr Davis, rightly to my mind, pointed out, this merely goes to what was considered by the European Patent Office to be the closest prior art, and PA1 was not before that Office. The requirement for cushioning therefore suffices to distinguish claim 1, and in consequence all other claims, of the patent in suit for PA1 for novelty.

31 I should nevertheless add that in my view the arrangement of interconnected bags in separate rooms and around the periphery of the building falls within the ambit of “adjustment to a desired plan shape” in claim 1. I see no reason why that shape should not include a series of rooms, or why putting one bag of each of the selected rooms in PA1 should not be regarded as an adjustment to achieve that shape. In any case, as Mr Hanna pointed out, the perimeter bags, which are shown adjacent one another, might imply other than just one bag per room.

#### Arguments on inventive step

32 The claimant argued that even if I found that claims 1 and 3 lacked novelty over PA1, these claims would still lack inventive step over that document because it would be obvious to one of ordinary skill to use valves with a degree of controllability to adjust the floor plan shape. The argument is that the valves in PA1 must have a degree of controllability to adjust the plan shape, otherwise the bags first, second and third from the right would inflate simultaneously, because they are connected consecutively – but this cannot be the case because it is explicitly disclosed that the airbags can be inflated whenever it suits the work process. However, I am not convinced that this argument really goes to inventive step, because it seems to me to amount to saying that controllability is implicit in the disclosure of PA1, and to be essentially the same argument that was deployed to show lack of novelty.

33 As I have mentioned, Mr Ratcliffe said in his witness statement that it would not have occurred to him in 1998 to modify the product of PA1 to produce a cushioning structure. This would seem to be essentially an argument on obviousness. I had some doubt about what Mr Ratcliffe was saying, given that on his own admission a trampoline product such as a bouncy castle can be made from materials which leak air. Mr Hanna took this up in cross-examination, but this did not really take matters any further. In the absence of any expert evidence from the claimant, I am prepared to give the benefit of the doubt to the defendant.

34 Therefore I am not convinced that the skilled man would have found it obvious starting from the airtight construction of PA1 to derive the “leaky” construction of the patent in suit - even if I were to accept that the two documents lay in the same technical field, and that the valves in PA1 operate in the way that Mr Hanna suggested (which to my mind is far from clear).

35 As Mr Davis reminded me, the claimant has adduced no evidence as to the common general knowledge in this art, and (see *General Tire v Firestone* [1972] RPC 457, 482) prior

patents alone are not necessarily common general knowledge. Mr Davis also drew my attention to Fletcher-Moulton LJ's warning in *British Westinghouse v Braulik* [1910] 27 RPC 209, 230, which cautions me not to fall into the trap of ex post facto analysis by finding the invention obvious with the benefit of hindsight by taking a series of apparently easy steps from something which was known. I believe that the claimant's argument on claim 1 falls into this trap.

36 At the hearing, Mr Hanna mounted an alternative line of attack on inventive step against claim 1. In his witness statement, Mr Ratcliffe said that, given the disclosure of PA1 at the priority date of the patent in suit he would have constructed the bag with some form of bracing between the top and bottom surfaces in order to prevent the bag ballooning on inflation (for instance by using cord, strips or webbing as in PA2, or by welding) but would not have adopted a construction with chambers, Figure 9 of PA2 notwithstanding. As I understood it, Mr Hanna appeared to argue from this that bracing would be an obvious modification to make to the bags shown in PA1 and that, because such bracing is said to reduce bounce in PA2, it would nevertheless be obvious to incorporate the bracing from PA2 to make a cushioning structure, thus making claim 1 obvious. I think this argument fails because I do not think that reducing bounce by bracing will of itself produce a cushioning structure. Under cross-examination Mr Ratcliffe went no further than admitting that, although directed primarily at maintaining shape, the bracing would have the effect of reducing bounce.

37 I do not therefore consider that claim 1 of the patent in suit lacks inventive step in the light of PA1 alone.

38 Mr Davis pointed out – and I accept - that Mr Hanna's alternative argument on claim 1 was not the argument as pleaded: PA2 was only pleaded in combination with PA1 as an inventive step attack against claim 6, not claim 1, on the grounds that it disclosed bracing to control shape. However, having found that claim 1 is not obvious over PA1, I do not think that any case can be made against claim 6 on the basis of a combination of PA1 and PA2. In any case I am not satisfied that these two documents can properly be combined for the purposes of an obviousness attack. Mr Hanna sought to persuade me that the documents were from the same technical field on the basis that the people supplying materials for inflatable products dealt with a wide variety of industries and the technology was essentially the same. However, even if I were to accept Mr Hanna's argument, there is no evidence before me either that these documents form part of the common general knowledge of the art, or that the skilled man would have been led to combine their teaching.

#### Other matters relating to validity

39 A point was taken at hearing as to whether all the documents put in issue were in fact "safety apparatus for use with buildings" as required by claim 1 of the patent in suit. It was common ground that "for use" was to be interpreted as "suitable for use", but Mr Davis drew my attention to *Hickman v Andrews* [1983] RPC 147 (in which the definition of the product as a workbench sufficed to distinguish the citation of a bookbinding press for novelty) as authority for the proposition that "safety apparatus" was an effective limitation in the claim. I think this right, but I do not think my decision turns on this point.

40 The only other prior art in issue is the “Jurassic Run” swimming pool inflatable, but it was not pleaded as part of the case on validity, and seems to have been put forward only to show that the claimant was using a known type of interconnection between inflatable airbags (see the claimant’s letter of 10 December 2003 accompanying their evidence). As Mr Oughton readily accepted in cross-examination, this apparatus is quite unsuitable for cushioning the fall of a building worker, and in the absence of further argument I do not see how it assists the claimant’s case.

### Finding

41 I therefore find that claim 1 is novel and inventive over PA1 and that no case has been made out for be made for combining PA1 and PA2 to render claim 6 obvious. I do not think it is in dispute that the remaining claims then stand or fall with claim 1. The attack on validity therefore fails. I will now go on to consider whether the Cunningham product infringes the patent in suit.

### **Infringement**

42 On this, it is I think not disputed that only the embodiment of the patent in suit in which the chambers are constituted by a series of separate bags coupled together is in issue. The claimant’s case is that their device lacks the following three features of claim 1 of the patent in suit: (i) the chambers being coupled together by valves; (ii) the valves being controllable to isolate or interconnect the chambers; and (iii) such that the bag means can be adjusted to a desired plan shape. This argument turns on the meaning to be attributed to the words “controllable”, “valve” and “coupled”. The essence of the claimant’s argument is that claim 1 of the patent in suit requires chambers to be coupled together by the valves, and the words “isolate” and “interconnect” refer to pneumatic, rather than physical, isolation and interconnection - however, no such isolation or interconnection is possible when the chambers are connected by a piece of tubing, and once the tubing is removed and the bungs are in place the bags are no longer coupled.

43 The claimant drew a distinction between the bung of its product and a valve such as the screw threaded neck and cap 25 in the patent, arguing that in the latter case the chambers were coupled physically in both the open and closed states and pneumatically in the open state, and the cap provides the controllability to pneumatically isolate or interconnect the chambers. This the claimant saw as evidenced by the provision of slots 26 (see paragraph [0029]) to allow access to the inside of the chambers to open or close the valve. At the hearing Mr Hanna drew a clear distinction, as he saw it, between the operation of a screw cap, which allowed a measure of controllability of the flow, and a bung, which did not.

44 The claimant’s evidence also included a letter from the European patent attorney who prosecuted the patent application, arguing before the European Patent Office that the ability to tailor the shape was achieved by the division of the cushion into chambers which could be independently inflated or collapsed. They pointed out that such independent inflation was not possible when the chambers in their product were coupled by the tubes. The claimant urged that as this construction was presumably accepted by the EPO, it was of considerable

persuasive authority.

- 45 Basing himself on the dictionary definition of a valve (which I have mentioned above) as “any device that shuts off, starts, regulates or controls the flow of a fluid”, Mr Davis argued that the orifice/tube/bung arrangement was a valve within the meaning of the claims, both as a matter of language and a properly construed with reference to the description. In the patent in suit he suggested that no distinction was made between the internal and external valves 25 and 30, and took me to paragraph [0033] which explained that when the latter were not being used to couple two bags together or as feed valves, they could be closed off by stop elements. He saw the Cunningham device as precisely such a product, and as an immaterial variant of the screw cap arrangement 25, bungs being common alternatives to screw caps.
- 46 Mr Ratcliffe in his witness statement thought it appropriate to describe the Cunningham arrangement as a valve, and that even if this was inappropriate it was apparent that the bung performed a similar function. He also said in that statement that there was controllability to isolate or interconnect the chambers because whether the pipe was closed off by a bung or left open would determine whether or not the bag beyond it was inflated; and that the adjustment to a desired plan shape arose through the connection of individual bags in an appropriate configuration. Mr Hanna did not take up any of these points in cross-examination.
- 47 Having considered the opposing arguments, I am persuaded that the construction argued by the defendant is correct. In my view, the claimant’s argument, although ingenious, ignores the nature of the valves 30 which are used to interconnect two separate bags, and concentrates overly on the screw-type valve 25 in the embodiment where a single bag is divided into internal chambers, and the need to provide access to it via the slots 26. When reference is made to the examples given for valves 30, it seems clear to me that they can be quite crude devices, intended to do no more than open up or close off a passageway, and the example of “all male press fit connectors with separate short double female coupling elements (or vice versa)” seems not essentially different from the Cunningham arrangement. To my mind, it follows from this that the skilled man would understand the concepts of controllability and adjustment in the way suggested by Mr Ratcliffe, and that it is not the valves themselves which are controllable. In the absence of any evidence of the response of the EPO to the interpretation put forward by the prosecuting patent attorney, I do not consider it to be persuasive.

### Finding

- 48 In consequence I find that the claimant’s product infringes at least claims 1 and 3 of the patent in suit.

### **Other matters**

- 49 I should mention that the claimant appears to hint in paragraph 6 of the aforesaid letter of 10 December 2003 that it is simply using a well-known type of tubing for connecting inflatable airbags, and that the patent is preventing the public from carrying on something already available to the public. However, they have not pleaded as any part of their case that if I

found against them on infringement, then the making available to the public of their product would constitute a prior disclosure of the invention of the patent, and nor have they given any evidence as to when their product was made available to the public. I do not therefore propose to consider this point further.

### **Conclusion**

- 50 In accordance with my findings above, I decline to give any declaration of non-infringement of patent no EP(UK) 0983776 in respect of the claimant's device as particularised in their statement of case and evidence.

### **Costs**

- 51 Since the claimant has not succeeded in its request the defendant should be awarded costs in accordance with the standard scale. Therefore, and bearing in mind that the amount of evidence in the case was relatively limited, I order Cunningham Covers Limited to pay Airmat Safety Products Limited £2200 within 7 days after the expiry of the period for appeal below. Payment will be suspended in the event of an appeal.

### **Appeal**

- 52 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

**R C KENNELL**

Deputy Director acting for the Comptroller