



## PATENTS ACT 1977

APPLICANT Geoffrey Arthur Dolan

ISSUE Whether patent application number GB 0821336.5  
complies with section 1(1)(b)

HEARING OFFICER J E Porter

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### DECISION

#### Introduction

- 1 Patent application GB 0821336.5 entitled "Composite window frame" was filed on 24 November 2008 in the name of Mr Geoffrey Arthur Dolan. It was published as GB 2 453 874 A on 22 April 2009.
- 2 Following correspondence the applicant has been unable to convince the examiner, Mr Philip Lawrence, that the invention as claimed involves an inventive step over the prior art and so is patentable in terms of section 1(1)(b).
- 3 The applicant therefore asked to be heard, and the matter came before me at a hearing held on 31 July 2013. Mr Dolan was present and was represented by his patent attorney, Mr Stephen Bankes of the firm Baron Warren Redfern. Mr Sean Ballard, another director of Mr Dolan's company, was also present as was the examiner.

#### The law

- 4 Section 1(1) deals with the conditions for grant of a patent, and states that:

*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;*
  - [other provisions not relevant]*
- 5 Section 3 then sets out how the presence of an inventive step is determined:

*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).*

- 6 Matter which “forms part of the state of the art by virtue only of section 2(2)” is all matter which was made available to the public before the priority date of the application in question.
- 7 It is well-established that the usual approach to adopt when assessing whether an invention involves an inventive step is to work through the steps set out by the Court of Appeal in *Windsurfing*<sup>1</sup> and restated by that Court in *Pozzoli*<sup>2</sup>. These steps are:

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

(1)(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;

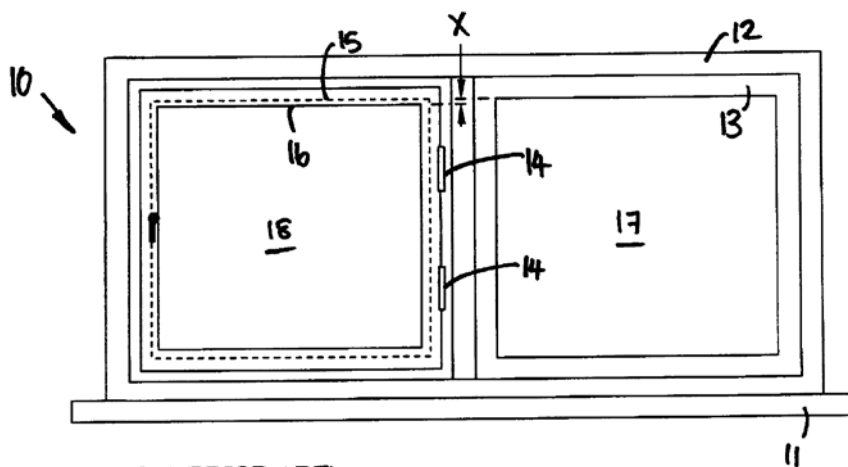
(3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;

(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 The applicant agrees that this is the methodology to apply in this case, but has made submissions about how I should approach the various steps, which I consider as a part of my analysis below.

### The invention

- 9 The invention is concerned with a composite window frame comprising both opening and non-opening inner frames.
- 10 According to the specification, frames conventionally have an outer frame with the non-opening inner frame mounted within it. The opening frame then comprises a first inner frame mounted to the outer frame, and a second inner frame which holds the pane and is hinged to the first inner frame. The result is asymmetrical – the visible parts of the opening and non-opening inner frames are not aligned with each other. A typical prior art window with 2 frames (one opening, one not) is shown thus:

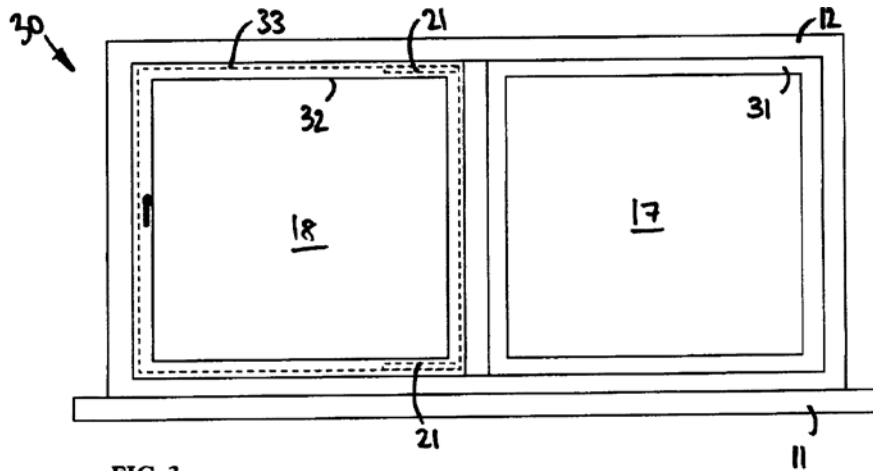


**FIG. 1 (PRIOR ART)**

<sup>1</sup> *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] RPC 59

<sup>2</sup> *Pozzoli SpA v BDMO SA* [2007] EWCA Civ 588, [2007] FSR 37

- 11 The window frame of the invention, however, is designed in such a way that the opening and non-opening inner frames are aligned, giving a symmetrical appearance. This is achieved by having just one openable inner frame which holds the pane and which is mounted directly onto the outer frame. The specification shows an example:



**FIG. 3**

- 12 The latest claim set was filed on 23 May 2013. There are 4 claims, of which only claim 1 is independent. It reads:

*A composite window frame comprising: an outer frame composed of a first material and defining at least two window openings; an openable inner frame of a second material within a first said opening, which directly supports a window pane and which is directly hinged to the outer frame; and at least one fixed inner frame of the second material which directly supports a window pane and which is directly and permanently fixed in a second said opening of the outer frame, wherein a pair of opposite inner edges of the openable inner frame align with a corresponding pair of edges of the fixed inner frame.*

- 13 Just prior to the hearing, on 29 July 2013, the applicant suggested an alternative version of claim 1 for consideration in the event that I were to find the claim unallowable as it stands. This alternative version replaces the words “directly hinged to the outer frame” with the words “directly connected to the outer frame by hinges on the top and bottom of the window”. In essence, this brings into claim 1 the feature of dependant claim 4.

### **Arguments and analysis**

- 14 The examiner maintains that the claims define an invention which does not involve an inventive step, when considered in light of certain prior art. His position was set out most recently in his pre-hearing report of 5 June 2013. The applicant’s arguments against the examiner’s position are contained in their responses of 14 and 19 March 2013, with further arguments being set out at the hearing.
- 15 What I must do is determine whether the invention involves an inventive step, within the meaning of the legislation. To do so, I will work through the *Windsurfing/Pozzoli* steps set out above, in light of the arguments before me.

### Step 1 – identify the notional skilled person and their common general knowledge

- 16 In his pre-hearing report, the examiner considers the skilled person could be “a builder, renovator, architect, window designer or installer or even an amateur self builder or someone contracting any of the former to do work on their home”. He went on to ascribe to that person a good knowledge of different types of windows and the different arrangements available depending on size, shape and use of the aperture in the building. He also considered that the skilled person would consider the overall aesthetic qualities of the assembly and the building, from both inside and outside. In particular, he considered that such a person would be aware of the possibility of having a window with two adjacent panes of the same size.
- 17 The applicant’s written responses prior to the hearing did not deal with this point explicitly, but it was touched on at the hearing. The applicant’s attorney explained his view that the notional skilled person could be Mr Dolan or someone similar, although he did not elaborate further. His view was that their common general knowledge would be summed up by the prior art in issue and would also include knowledge of conventional replacement windows sold in recent decades.
- 18 The notional skilled person is a legal construct and is just that – notional. That person in particular does not have any capacity for invention. If they are held to have envisaged a step forward then, by definition, such a step is not an inventive one. I did not therefore find it of much assistance to suggest that the applicant himself personified the notional skilled person.
- 19 In my view, the notional skilled person is someone in the building or window trade, involved in either new buildings or building renovation. They would have a good knowledge of different windows and window mechanisms, and of various window arrangements, including windows comprising multiple adjacent fixed panes of the same size. I agree with the attorney that the skilled person would be well aware of conventional replacement window units. They would have knowledge of conventional windows where the opening pane is constructed in a way which brings about asymmetry with respect to an adjacent fixed pane. As was touched upon at the hearing, I believe the skilled person would be aware of the option of adding an extra non-functional frame to the fixed pane, to replicate the look of the opening frame and so purely to achieve a symmetrical appearance. Based on the material before me, I do not have sufficient reason to find that their common general knowledge would extend to other ways of achieving symmetrical adjacent panes of the same size, where some are opening and some are fixed. I give the applicant the benefit of the doubt in this respect.

### Step 2 – identify the inventive concept

- 20 In his pre-hearing report, the examiner sets out his view of the inventive concept as claimed, which is a window assembly with an outer frame of one material which defines two window openings, a hinged inner frame of a second material and a fixed inner frame of the second material, both supported within the openings of the outer frame, and where inner edges of the inner frame are aligned.
- 21 At the hearing, the attorney was clear that the inventive concept is not concerned with hanging a window frame of one material onto an outer frame of differing material

– that was clearly known. The inventive concept is concerned with getting rid of the first inner frame onto which the opening frame of a window is conventionally fixed, and using two different materials, and in so doing avoiding the asymmetry which is caused by such an arrangement.

- 22 I do not think this causes any difficulty, and I do not detect any real disagreement between the examiner and the applicant here. The inventive concept is a window assembly with an outer frame of a first material and which has at least two openings, one opening having an openable inner frame of a second material which is hinged to the outer frame, and the other opening(s) having a fixed inner frame of a second material, where the inner frames are arranged so that their inner edges are aligned.

Step 3 – identify the differences between the state of the art and the inventive concept

- 23 The examiner’s objection is based upon two prior art documents.
- 24 The first is published patent GB 379 417 (“Dunhill”). This discloses a wooden outer frame for a window, mounted in a building. An inner metal frame fits within the wooden frame and retains the glass pane. The inner metal frame can be hinged to the wooden outer frame and is embedded so that no part of the inner frame projects beyond the outer surfaces of the wooden frame when the inner frame is in a closed position. The inner metal frame is hinged or otherwise attached to the outer frame.
- 25 The second is published patent GB 1 508 581 (“Bridgewater”), which concerns windows in what it calls “sub-frames” which are fitted around a “main frame”. The sub-frame is a rectangular frame designed to sit between the main frame and the surrounding brickwork, masonry, etc. There seems no dispute that this corresponds to the outer frame of the present invention. Bridgewater talks in terms of the “generally accepted procedure” of providing this timber “sub-frame” surrounding the main metallic frame which retains the glass panes. The document goes on to discuss difficulties with these in terms of construction, installation and maintenance, and the invention therefore concerns in one respect a sub-frame for surrounding the main frame which is formed of specific types of synthetic plastics and which has certain other features (e.g. in cross section). This is discussed in conjunction with the metallic “main frame” in which the panes of glass are mounted.
- 26 The examiner’s contention is that both documents disclose windows with an outer frame and an inner frame of different material. He contends that both documents disclose the use of opening windows and that Bridgewater also discloses fixed inner window frames. The difference between this prior art and the inventive concept is therefore in his view “the locating of a hinged window next to a fixed window and the inner edges of the inner frames being aligned” (pre-hearing report, page 3).
- 27 The applicant’s view is that neither of the documents tackles the problem identified by the present invention nor provides the solution. They say that both documents show only single windows and so the problem of asymmetry and how to achieve symmetrical adjacent opening and fixed windows does not arise.
- 28 There appears to be no disagreement that both documents disclose at least single windows where the outer frame is of a different material from the inner frame.

- 29 Dunhill clearly discloses an opening window. There was some discussion at the hearing as to the disclosure of Bridgewater in terms of opening or fixed windows. Figures 1 and 2 show different embodiments of the invention, and the attorney suggested at the hearing that figure 1 showed an opening window and figure 2 showed a fixed inner frame. The asymmetry was then apparent from the figures, and in particular would occur by virtue of the presence in figure 1 of the flanges or shoulders 17.
- 30 The examiner disagrees with this, and is of the view that figures 1 and 2 show two different embodiments of a fixed window. He points to page 3 lines 105 to 112, which talk about “the same frame section may be used in combination with an opening window”. So, he argued, neither the figure 1 nor figure 2 frames are in themselves opening frames, but they can be used in combination with opening frames.
- 31 The attorney’s response to this was to remind me that, regardless of this, Bridgewater does not address the question of symmetry between opening and fixed windows. You can put an opening window frame next to a fixed window frame but Bridgewater still does not tell you what the effect would be. As he put it, it remains the case that “no-one thought about the sightlines”.
- 32 So where does this leave us? The two prior art documents disclose various window assemblies where the outer frame is of a first material and has an opening. This opening can have an openable inner frame of a second material fixed to the outer frame, via a hinged mechanism, as per Dunhill. Alternatively it can have a fixed inner frame of a second material attached to that outer frame, as per Bridgewater.
- 33 As for figures 1 and 2 of Bridgewater, I am not entirely convinced that the passage the examiner refers to (page 3 lines 105-112, see above) is directed to figures 1 and 2. The reference in that passage to “the same frame section” appears to be a reference specifically to the frame section illustrated in figure 7. However, it does appear that figures 1 and 2 differ in the way in which the main frame is properly located against the sub-frame. In figure 1, it is the flange 17 which locates the main frame properly. This flange is formed as a part of the outer sub-frame. In figure 2, the sub-frame has no such flange but the main frame has a flange 32 which abuts the sub-frame. See page 3 lines 10 to 28. I can see no suggestion in the description that either of these frames is designed to be opening. I agree with the attorney that they would clearly have a different visual effect, but that effect is not connected to the opening or fixed nature of the windows in question.
- 34 The passage quoted by the examiner above, in relation to figure 7, does disclose the possibility that the frame section illustrated in figure 7 may be used “in combination with” an opening window. I take this phrase to mean that the frame section of figure 7 may be used with an opening window, as opposed to the fixed window shown. I do not think it amounts to disclosure of a fixed window and an opening window in combination. Thus I agree with the attorney that neither Bridgewater nor Dunhill discloses the placing of two frames together (one opening and one fixed). Clearly, therefore, neither document considers the aesthetic effect of doing so.
- 35 So, in terms of the inventive concept, the prior art shows that it is known to have an outer frame of a first material with an opening containing an openable inner frame of

a second material which is hinged to the outer frame. It is also known to have an outer frame of a first material with an opening containing a fixed inner frame of a second material. It follows that the difference between the state of the art and the inventive concept is the location of such fixed and openable frames adjacent each other within two or more openings in the outer frame, and with their inner edges aligned.

Step 4 – is the difference obvious to the skilled person?

- 36 The applicant's position is that the skilled person would start from the conventional, single-material asymmetric window frames comprising opening and fixed windows, where the opening frame is mounted on a further inner frame. The skilled person may consider how to address the asymmetry but it would not be obvious to them to turn to the prior art documents for a solution. Those documents do not address the placing of opening and fixed windows together, nor the aesthetics of doing so. Furthermore, the attorney argued, they are very old documents. It would not be obvious to the skilled person to mount the opening inner frame of one material directly onto the outer frame of another material in order to achieve symmetry.
- 37 Although this may well describe the route by which the applicant in this case came to the claimed invention, I do not think it is the correct route by which to apply steps 3 and 4. It is a well-established principle that the notional skilled person is aware of the prior art, and that he will have read it carefully but with no imagination. Although the prior art in this case is quite old, I do not think I have been given any reason to depart from that principle here. The skilled man is taken to be aware of this prior art and what it teaches.
- 38 In the applicant's view it is significant that the problem of asymmetry in conventional opening and fixed adjacent frames has not been addressed prior to the claimed invention, despite the activity in the replacement windows field in the last few decades. The attorney agreed that the invention may seem obvious with hindsight, but that most mechanical inventions can easily be seen in this way. He pointed to *Haberman v Jackel*<sup>3</sup> and the matter of there being a "long-felt want" for the invention demonstrated by its commercial success. Clearly, he said, the conventional windows had been around for decades, and no-one had addressed the asymmetry point satisfactorily.
- 39 We explored this point at the hearing. One interesting insight was the applicant's view that their solution had not been seen before because it was more expensive to manufacture and so did not fit with what they called the "pile 'em high, sell 'em cheap" business model of many window manufacturers. Manufacturers appeared to have been content with making the asymmetrical windows and only in the last few years had a demand seemed to develop for the symmetrical result that the claimed invention achieves. There was a brief discussion of whether there was anything else leading the skilled person away from the solution provided by the invention to the symmetry point, but this did not result in anything which could give me a basis for a conclusion on that point.

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<sup>3</sup> *Haberman and anr v Jackel International Ltd* [1999] FSR 683

- 40 My conclusion in step 3 was that the only difference between the prior art and the claimed invention is the location of the prior art fixed and openable frames adjacent each other, within openings in the outer frame, and with their inner edges aligned. As discussed in step 1, the skilled person would be well aware of conventional windows where the outer frame contains both opening and fixed inner panes adjacent each other. On this basis I cannot see how the identified difference can be considered to be an inventive one. I do not think that the skilled person would be exercising inventiveness by taking the two-material prior art frames, of both fixed and opening types, and arranging them in a conventional adjacent manner.
- 41 Furthermore, it would be apparent to the skilled person that, if he took the prior art opening and fixed frames and put them adjacent, then the inner edges of the fixed and opening inner frames would align – unless he made a special effort to avoid alignment. He could of course design the opening and fixed frames to have different dimensions, so that they did not align, but that would require extra effort on his part and a motivation for doing so. The skilled person would be aware of the desirability of symmetry and I can see no basis for assuming that such an extra effort would be made.
- 42 It follows that putting the opening and fixed frames of the prior art next to each other in an outer frame, with the alignment that would result, cannot be considered inventive. I do not see that the skilled person would face any particular technical barrier or would solve a particular technical problem in the prior art, when reaching the invention as claimed. Nor would he appear to be required to overcome a particular technical prejudice.
- 43 Of course I can see that there may have been reasons from a commercial or business-model viewpoint for not going down this route previously. Ultimately, what Mr Dolan appears to have done successfully is to identify and fill a gap in the market (particularly the replacement window market) for high-quality, more aesthetically-pleasing window frame designs. But I do not see that the commercial success demonstrates an inventive step is present, given my reasoning above.
- 44 It follows that I do not consider the invention of claim 1 to contain an inventive step.
- 45 Dependant claim 2 refers to the outer frame being wooden and dependant claim 3 refers to the inner frame being metal. Both prior art documents disclose these features, so claims 2 and 3 lack an inventive step too.
- 46 Dependant claim 4 refers to the openable inner frame being connected to the outer frame by hinges on the top and bottom of the window. Figure 2 of the present application shows that such hinges are conventional and the discussion explains how the window frame of the claimed invention may use such hinges (page 2, final sentence). At the hearing, the attorney argued that, although known, the hinges of this type were less visible and so added to the overall symmetrical effect. While that may be so, I cannot see – in the context of my finding in relation to claim 1 – that inventiveness is bestowed purely by the use of a particular type of conventional hinge. It follows that the feature of claim 4 lacks an inventive step.



- 47 As noted in paragraph 13, an alternative claim 1 was proposed which incorporated the feature of claim 4. It must follow from my reasoning that the alternative claim 1 is equally lacking an inventive step.
- 48 For completeness, I should note that the examiner ran an alternative argument which started from the skilled person's common general knowledge. This knowledge included, in the examiner's view, the fact that "you can have a fixed window and hinged window side by side with identical sized glazings in both". As noted in paragraph 19, I have given the applicant the benefit of the doubt in respect of this point, and so I do not consider it further here.

### **Conclusion**

- 49 I conclude that the claimed invention is not patentable because it lacks an inventive step. I conclude that the dependant claims and the alternative claim 1 equally lack an inventive step.
- 50 Based on the information before me, I cannot identify any further material within the specification upon which patentable claims might be based. I therefore refuse the application under section 18(3) for failure to comply with section 1(1)(b).

### **Appeal**

- 51 Any appeal must be lodged within 28 days.

**Dr J E PORTER**

Deputy Director, acting for the Comptroller