

OPINION UNDER SECTION 74A

Patent	EP(UK) 1152971
Proprietor(s)	EHC Canada, Inc
Exclusive Licensee	
Requester	Ms Elizabeth Fenwick, on 17 August 2009
Observer(s)	
Date Opinion issued	17 November 2009

The request

1. The comptroller has been requested to issue an opinion as to whether claims 1 to 6 and 9 of EP1152971 (“the patent”) are valid in light of a number of prior art documents. More specifically the request suggests that those claims are not novel or inventive in view of the disclosure of JP7-101659, in some cases in combination with other patent documents.

Observations

2. Observations in response to the request were received from Bird & Bird LLP. The observations dispute the requester’s characterisation of the claims, query the publication date of one of the prior art documents in the request, US6047809, and question the clarity of the translation provided by the requester of JP7-101659, since it is not a certified translation. Consequently they maintain that the claims are novel and inventive over the prior art.
3. Observations in reply were received from the requester, Elizabeth Fenwick & Co. These provided a verified translation of JP7-101659 as well as verifications of the initially filed translations of two of the other prior art patent documents. They also drew attention to certain parts of the disclosure of JP7-101659 and discussed the construction of claim 1, including referring to a further patent document, US5020256. The observations in reply went on to detail an argument against the inventiveness of claim 3 in the *Windsurfing* form and to introduce patent

document JP10-59672 as an accurate equivalent to US6047809, since it is accepted that US6047809 was published after the priority date of the patent.

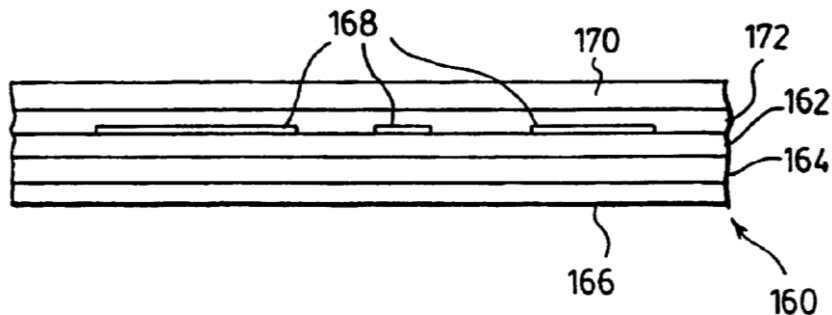
4. Subsequent to the observations in reply a further letter was received from Bird & Bird LLP objecting that the observations in reply were not observations strictly in reply and that I should therefore not consider the reply, since the patent proprietor had no opportunity to respond to any new material that the observations in reply introduce. More particularly this further letter was concerned that:
 - a. the two translations of JP7-101659 differ, that
 - b. a further document is referenced, US5020256, and that
 - c. document JP10-59672 is not an accurate equivalent to US6047809 from the request.
5. As a preliminary matter I will now deal with the allowability of the observations in reply. It seems inappropriate to ignore the observations in reply in their entirety, but rather to consider the allowability of those parts that have been highlighted as not strictly in reply.
6. As examples the observer takes me to two parts of JP7-101659 at which the two translations differ, specifically paragraphs 0023 and 0015. The differences in paragraph 0023 seem to amount to “mechanical scraping work” in the later, verified translation replacing “cut ... using machine to clean”, while the difference in paragraph 0015 is the introduction of the notion that the film cover is coiled in the lengthwise direction. The differences in the two translations at paragraph 0023 seem to me to be minor. The new concept introduced into paragraph 0015 is more significant. Since the requester and observer differ over the degree of flexibility of the film cover shown in JP7-101659 it seems important whether or not it might be coiled. As a result the differences between the translations appear to be non-trivial and I shall consider the original, unverified translation of JP7-101659 in forming my opinion.
7. The further document referenced in the observations in reply, US5020256, is referred to in the context of construing claim 1 in the light of arguments from the patentee contained in a letter filed at the European Patent Office during the pre-grant prosecution of the patent. A copy of this letter has not been provided by the requester. In any event, and in line with *Telsonic's Patent* [2004] RPC 38 and *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2005] RPC 9, I am reluctant to use such a letter as an aid to claim construction and therefore I will not base my conclusions on the comments in the observations in reply regarding US5020256 and any part of the pre-grant prosecution file of the patent.

8. I turn now to the question of document JP10-59672 being an accurate equivalent to US6047809, as referenced in the request. The letter from the observer states that it is “unknown whether any amendments were made to the US document during prosecution or otherwise to render it different” from JP10-59672. US6047809 claims its priority date from application number JP8-260107, which was published as JP10-59672. Simply comparing the figures of the two documents shows that they differ as far as the reference numbers used is concerned and also JP10-59672 includes an additional figure, figure 2. The request refers to a passage in US6047809 which describes the embodiment of figures 1 to 3. Since figures 1 to 3 are also present in JP10-59672, as figures 4, 1 and 3 respectively, it may be reasonable to suppose that their description is essentially the same in both documents. However, since the introduction of JP10-59672 is not strictly in reply to the observations I will not consider JP10-59672 in preference to US6047809.

The patent

9. EP1152971 was filed on 18 February 2000 as PCT application number PCT/CA00/00166, claiming a priority date of 19 February 1999 from US application number 09/252784. The patent was granted on 1 September 2004 and remains in force.
10. As set out in paragraph 0001, the patent is concerned with handrails for escalators and moving walkways, and more particularly with applying a protective film, optionally including advertising or other visible material, to the surface of such a handrail. I note that printed matter is an essential requirement of claim 1, but in places such as paragraph 0001 the description suggests it is optional. I also note that the claims are not limited to moving handrails and subsequently the description suggests that the handrail may be a stationary handrail in a stairwell, see paragraphs 0016 and 0124. A film 160 is described and shown in figure 12, below, comprising a first layer 162 with a first adhesive layer 164 on its underside and a release sheet 166. Printed matter 168 such as text, logos, images, etc. may be printed directly on top of the first layer 162, the printed matter 168 being of negligible thickness, so as not to significantly affect the thicknesses of other layers, and possibly comprising a repeated pattern. A second film layer 170 with a second layer of adhesive 172 is shown applied to the top of the first sheet, sandwiching and protecting the printed matter 168 between the two film layers 162,170.

FIG. 12.



11. Also described are methods and apparatus for applying and removing the film. Since these methods and apparatus do not feature in the claims regarding which an opinion is sought, I will not describe them here.
12. Claims 1 to 6, 8 and 9 of the granted patent are as follows (NB claims 7 and 8 are not referred to in the request, however, claim 9 depends on claim 8 and claim 7 is included for completeness):
 1. *In combination, an elongate handrail and a flexible film adhered to the handrail, the film comprising: a first film layer (162) and a first layer of adhesive (164) between the first film layer (162) and the handrail (200), bonding the first film layer (162) to the handrail (200), wherein the film has a width corresponding to the handrail (200), is substantially continuous along the length of the handrail, extends around at least a portion of shoulders of the handrail, and includes printed matter on top of or on the underside of said first film layer, and wherein the first layer of adhesive permits removal of the flexible film and the film does not significantly alter the dimensions of the handrail, whereby, in use, the elongate handrail can be used with and without the film, and the flexible film can be exchanged for another flexible film.*
 2. *A combination of a handrail and a film as claimed in claim 1, wherein the film extends around the shoulders of the handrail to cover lips of the handrail.*
 3. *A combination of a handrail (200) and a film as claimed in claim 1 or 3, wherein the film includes a second film layer (170) and a second layer of adhesive (172) bonding the second film layer on top of the first film layer (162).*
 4. *A combination of a handrail and a film as claimed in claim 3, which includes printed matter (168) on top of the first film layer (162), between the first film layer (162) and the second layer of adhesive*

(172).

5. *A combination of a handrail and a film as claimed in claim 4, wherein the printed matter (168) comprises a pattern repeated at regular intervals along the length of the film.*
6. *A combination of a handrail and a film as claimed in any one of claims 1 to 5, wherein the first film layer has one of a solid colour and a repeated pattern.*
7. *A combination as claimed in any preceding claim, wherein each layer (162), (170) of the film comprises polyurethane with an approximate thickness of 0.076 mm (3 mil).*
8. *A combination of a handrail and a film as claimed in any preceding claim, wherein the handrail (200) comprises a continuous loop of handrail, intended to be driven in use on an escalator or moving walkway, and wherein the film includes end portions which overlap one another to form a spliced joint.*
9. *A combination of a handrail and a film as claimed in claim 8, wherein the film extends around the outside of the handrail and partially covers the lips of the handrail.*

Claim construction

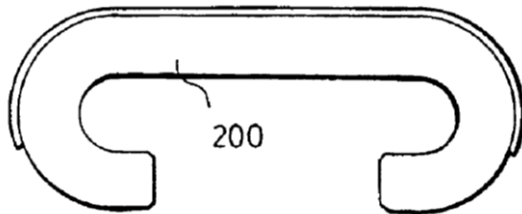
13. Before considering the documents put forward in the request I need to construe the claims of the patent, following the standard principles of claim construction set out in *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2005] RPC 9. I should put a purposive construction on the claims and follow section 125(1) of the Patents Act 1977 and the Protocol on the Interpretation of Article 69 of the European Patent Convention by interpreting the claims in the light of the description and drawings. In other words, the question is always what the person skilled in the art would have understood the patentee to be using the language of the claim to mean.
14. In the context of obviousness the request suggests that the notional person skilled in the art would be skilled in the art of printing and advertising. The observer disagrees and suggests that the skilled addressee is someone familiar with escalators and their handrails and the maintenance and up keep of these and the inclusion of visible information on them. In support of this assertion the observer points to paragraph 0069 of the patent where reference is made to an operator of the apparatus described for applying the film to a handrail. In the

observations in reply it is suggested that the relevant skilled person would be engaged in designing, printing and/or fitting public print advertising media, particularly to escalator handrails and that he would be required to have a general knowledge of public print advertising, including the properties of printed films and adhesives for such films. This is based upon paragraphs 0002 to 0005 of the patent, setting out the background of the invention. These paragraphs discuss advertising in the context of mass transit systems including escalators.

15. I believe that the operator of the film application apparatus to whom the observer refers is not the skilled addressee, since the invention is more than simply applying a film to a handrail and the skilled man would require more knowledge of films and printing in order to produce the film. To my mind the skilled addressee is someone working in the design, manufacture and maintenance of handrails, both fixed and moving, and of film and advertising material that might be applied to such handrails. It is likely that the skilled addressee would in fact be several individuals or a team.
16. Claim 1 requires that the film "*does not significantly alter the dimensions of the handrail, whereby, in use, the elongate handrail can be used with and without the film*". The observations in reply offer two interpretations of this requirement: either that the film is not so thick that the combination of film and handrail does not become impractically large or that the handrail need not be modified so significantly so as to accommodate the film that it cannot be used without the film. There seems to me to be no teaching in the patent of modifying the construction of the handrail in order to accommodate the film. Such an arrangement from the prior art is discussed and dismissed in paragraphs 0008 and 0009. I take this requirement to mean that the film must be sufficiently thin that the normal functioning of a handrail is not compromised. In the case of a fixed handrail this would not seem to be a significant limitation, but in the case of a moving handrail it would appear that the film is required to be rather thin.
17. The request queries the meaning of the term lips from claim 2. The term appears in the patent at paragraphs 0024, 0085, 0112 and 0123 as well as in claims 2 and 9 of the claims listed in the request. The patent also refers to the shoulders of the handrail and the top surface and I take the lips to be different parts of the handrail from these two. Considering figure 7c from the patent (below) I take the top surface to be the horizontal area, the shoulders to be the curved, outermost areas and the lips to be the curved surface below the shoulders, including the free edges beneath the handrail. I base this conclusion on for example claim 2 which describes the film as extending around the shoulders of the handrail to cover the lips and paragraph 0012 which refers to the bottom

of the lips.

FIG. 7c.

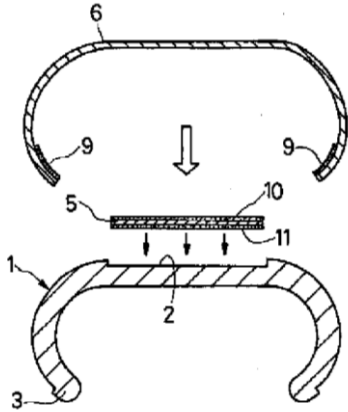


18. As a minor matter I note that claim 3 depends on claims 1 or 3. I will assume that this was intended to be claims 1 or 2. Unlike the request I take the solid colour and repeated pattern to be alternatives, both because the claim requires one of them and because they appear to be mutually exclusive, although I note that the request takes these both to be essential requirements of the claim.

The prior art

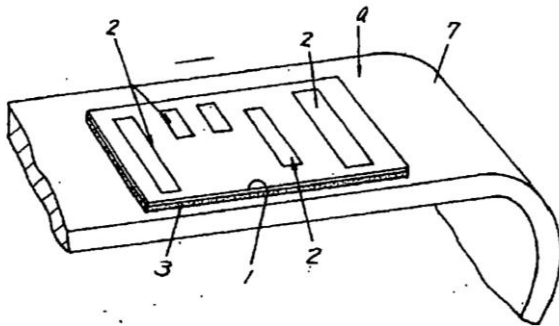
19. Several pieces of prior art are referred to in the request. These are five patent specifications concerning handrails (JP7-101659, JP7-206352, JP57-130883U, US6047809 and JP48-25687U) and extracts from three publications concerned with printing. The extracts are pages 100 and 101 from Speirs, Introduction to Printing and Finishing, BPIF, 1998 discussing varnishing and laminating of notices, showcards, magazine covers and book jackets, pages 6.18 and 6.19 from Barnard, The Print and Production Manual, PIRA, 1998 discussing varnishing of printed sheets and laminating of sheets or webs such as book jackets and covers, compact disc covers, magazines, postcards, publicity material, maps, documents, warning signs and identity passes and finally page 366 from Romano, Delmar's Dictionary of Digital Printing and Publishing where laminate and laminated are defined. Although a copy of JP48-025687U and a translation were supplied, the statement actually refers to JP7-206352, but, having checked, this was a mistake and JP48-025687U was intended. As I mentioned earlier, the observations in reply introduced two further patent documents, JP10-59672, an earlier published equivalent to US6047809, and US5020256. As I have already said, I will not base my conclusions on US5020256 or JP10-59672 or on the comments in the observations in reply regarding US5020256 or JP10-59672 and therefore I will not consider those documents further.
20. All of the patent documents were published before the priority date of the patent, apart from US6047809. Only JP7-206352 appears to have been considered during the pre-grant prosecution of the patent, it was listed on the PCT search report. Two of the three extracts from publications

【図5】



23. JP57-130883U shows a handrail 7 upon which is mounted a label a comprising printing 2 on the underside of transparent film, the label being secured to the handrail by adhesive 3.

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24. US6047809 shows a handrail 2 on which is mounted a transparent plastic sheet 7, with information sheets 10 between the handrail and the transparent plastic sheet.

Fig. 1

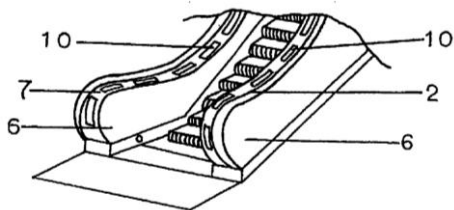
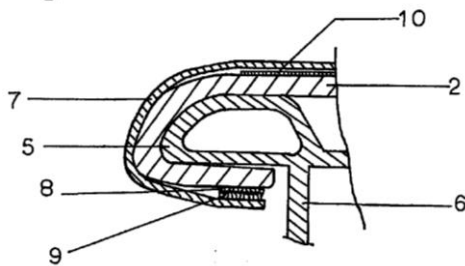
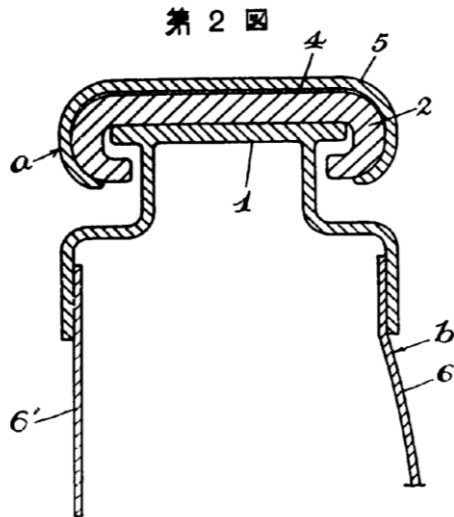


Fig. 3



25. JP48-25687U shows a handrail 2 with a covering 5 of transparent synthetic material and advertising 4 between the handrail and the covering.



Novelty

26. Claims 1, 2 and 9 are said in the request to lack novelty in light of JP7-101659.
27. It seems to me and is apparently not disputed that JP7-101659 shows the combination of an elongate handrail 53 and a film adhered to the handrail 53 in figures 1 to 3, the film comprises a first film layer 57 and a first layer of adhesive 58 between the first film layer 57 and the handrail 53, bonding the first film layer 57 to the handrail 53, wherein the film has a width corresponding to the handrail 53 (see figure 2), is substantially continuous along the length of the handrail (see the joint in figure 3), extends around at least a portion of the shoulders of the handrail (see figure 2), and includes printed matter on top of or on the underside of said first film layer (according to paragraph 0021), and wherein the first layer of adhesive permits removal of the film and the film can be exchanged for another film (according to paragraphs 0008, 0009, 0015, 0018 and 0022). These form most of the requirements of claim 1. However, the observations dispute that JP7-101659 shows a flexible film, that the film shown does not significantly alter the dimensions of the handrail and that the handrail described is unworkable and hence there is no enabling disclosure.
28. While the translation of JP7-101659 does not use the term flexible, it does refer to a film cover, the term film suggesting to me and I believe to the skilled addressee a thin, flexible material. More fundamentally figure

1 of JP7-101659 shows an escalator, i.e. movable, handrail to which the film cover is to be applied. I believe it is therefore implicit that the film cover must flex with the handrail in use.

29. I have already construed the requirement that the film should not significantly alter the dimensions of the handrail as meaning that the film must be sufficiently thin that the normal functioning of a handrail is not compromised. I believe that the figures of JP7-101659 show a thin covering that allows the handrail to function.
30. As I have said the observations suggest that the handrail described in JP7-101659 is unworkable and hence there is no enabling disclosure. The reason given for this is the assertion that the reinforcements shown in figure 2 would not allow the handrail to flex. The observations in reply do not accept this, in part because the relevant disclosure concerns the film and not the internal construction of the handrail. I agree with this point, the relevant disclosure is the film and its interaction with the handrail and I believe that there is clearly an enabling disclosure of this interaction.
31. In any case, the translation of paragraph 0015 describes the reinforcements as: "lots of steel wires (53b) and iron board (53c)". It seems to me that wires are often flexible and could easily permit flexing of the handrail. This leaves reference 53c. On the face of it the singular "board" shown in figure 2 could be interpreted as a single rigid board extending the length of the handrail and hence inflexible. However, figure 2 shows a cross section through the handrail and through a single board 53c and several wires 53b. Therefore the translation is consistent with figure 2. Even though only a single board appears in figure 2 it does not preclude a series of additional boards along the handrail, since that figure is a single cross section. I also note another possible interpretation of the translation: "lots of ... iron board (53c)", which once again could suggest multiple boards 53c.
32. Additionally, to my mind the skilled addressee looking at JP7-101659 would realise that the handrail must be sufficiently flexible in order to operate in an escalator and consequently the reinforcements 53b and 53c must implicitly permit that flexibility. For all these reasons I believe that JP7-101659 constitutes an enabling disclosure.
33. Thus JP7-101659 seems to show all of the requirements of claim 1 and anticipates the invention of that claim.
34. In figure 2 JP7-101659 also shows the film extending around the shoulders of the handrail to cover the lips of the handrail, as required by claim 2 and consistent with my construction of the terms shoulders and

lips above. Therefore in my view claim 2 is also anticipated.

35. The request argues that claim 9 is not novel in light of JP7-101659. However, claim 9 depends on claim 8 and therefore to undermine the novelty of claim 9 a document must disclose all the requirements of at least claims 1, 8 and 9 together.
36. In figures 1 and 3 JP7-101659 shows a continuous loop of handrail 52, intended to be driven in use on an escalator or moving walkway 50, and the film 57 having end portions, as required in claim 8. Claim 8 also requires that the end portions of the film should overlap one another to form a spliced joint. The joint shown in figure 3 does not involve the end portions overlapping and being spliced, but rather an additional tube is glued to the film ends. Therefore JP7-101659 does not disclose all of the requirements of claim 8 and consequently it cannot anticipate claim 9, which depends on claim 8.

Inventive step

37. The request seeks an opinion as to whether claims 3 to 6 are obvious in light of the prior art.
38. In considering the question of obviousness I shall follow the approach set out in *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59A as restated and elaborated upon in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588. The four steps of the so-called Windsurfing test have been reformulated as follows:
 - (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?
39. I have already said that to my mind the skilled addressee is someone working in the design, manufacture and maintenance of handrails, both fixed and moving, and of film and advertising material that might be applied to such handrails. It is likely that the skilled addressee would in fact be several individuals or a team.

40. The common general knowledge of the skilled man is said in the request and the observations in reply to include the use of laminates to protect printed matter, as shown in the three extracts from publications discussed earlier. The observations do not accept the three extracts disclose common general knowledge and certainly not the common general knowledge of the skilled addressee.
41. It seems to me that the skilled addressee that I have identified would indeed know about laminating in the context of printing and finishing and I am reinforced in this belief by the three extracts provided with the request. That is not to say that the three publications themselves would be part of the common general knowledge of the skilled addressee, but rather that the notion of laminates which they all describe would be part of that general knowledge.
42. Considering now the inventive concept of claim 3, which depends on claim 1 or 2, this seems clear: it is adhesively bonding a second film layer on top of the first film layer. This also constitutes the difference over the matter cited as forming part of the "state of the art", i.e. JP7-101659.
43. This brings me to the final step of the *Pozzoli/Windsurfing* approach: 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?
44. The request and observations in reply approach this question in several different ways, seeking to combine the disclosure of JP7-101659 with common general knowledge, with any of the three publication extracts or with any of JP7-206352, JP57-130883U, US6047809 or JP48-25687U.
45. It seems to me that a combination of JP7-101659 with common general knowledge or with any of the three publication extracts would include all the requirements of claim 3. As I have said the three publications in themselves do not form part of the common general knowledge of the skilled addressee, although their disclosure of laminates and laminating does exemplify common general knowledge. But the question is whether this combination would have been obvious to the skilled man? The request suggests that the arrangement described in JP7-101659 would be prone to the printed matter wearing off and that providing a second film layer would be the most obvious way of addressing this problem.
46. The majority of the disclosure of JP7-101659 is concerned with using a film to protect a handrail, the advertising or informational aspects seem to me to be secondary. Paragraphs 0021 and 0024 simply suggest that

information could be printed on the surface of the film, with no suggestion as to which surface. There is no reason for the skilled man when presented with JP7-101659 to assume that the printing would be on the upper surface of the film and in any event the film is described as being replaced on a regular basis. Therefore I do not believe that the problem of printing being worn off identified in the request would be apparent to the skilled man presented with JP7-101659. Consequently he would have no motivation to combine the disclosure of JP7-101659 with his common general knowledge and claim 3 is not obvious.

47. The request also suggests that claim 3 is obvious in light of JP7-101659 combined with any of JP7-206352, JP57-130883U, US6047809 or JP48-25687U. These last four documents each show printed material placed between a transparent cover and a handrail. Of these only JP7-206352 shows an arrangement in which a first layer is adhered to a handrail and a second rail is adhered to the first layer. In JP57-130883U there is a single layer with printing ink on its underside and both US6047809 and JP48-25687U show two layers, but do not mention adhesively bonding the outer layer to the inner layer. I should note that in any case US6047809 was published after the priority date of the patent and does not form part of the state of the art as defined by section 2(2) of the Patents Act 1977. The combination of JP7-101659 and JP7-206352 would appear to disclose all of the requirements of claim 3. Once again the question is whether this combination would have been obvious to the skilled man? As I said previously I do not believe that the problem of printing being worn off identified in the request would be apparent to the skilled man presented with JP7-101659. There is nothing to suggest that JP7-206352 itself was common general knowledge. Therefore I can see no motivation for the skilled man to mosaic these two patent documents and claim 3 is once again not obvious.
48. Claim 4 depends on claim 3 and it follows logically that if claim 3 is not obvious in light of the cited prior art documents and common general knowledge then claim 4 is also not obvious. Similarly, as claim 5 depends on claim 4 that claim is also not obvious.
49. Claim 6 depends on any of claims 1 to 5, so the inventive concept of claim 6 at its broadest is the first film layer having "one of a solid colour and a repeated pattern" and this is the difference over JP7-101659, cited as the state of the art. I have previously construed claim 6 to mean that the solid colour and repeated pattern are alternatives. The request asserts that the combination of these would have been obvious, but does not explain why this would be so. Nor do the observations in reply explain this, despite an explicit query in the observations. That said, I can see nothing inventive in providing a film to be printed which is formed with a solid colour or a repeated pattern. I believe that the

existence of such printing materials would be common general knowledge to the skilled man that I have identified. Their use in the arrangement JP7-101659 would have been obvious. If I am wrong in my construction of claim 6 and in fact it requires the first film to have a combination of a solid colour and a repeated pattern then I have nothing to suggest that such a combination was well known and consequently I would conclude the combination would not have been obvious.

Opinion

50. I conclude that claims 1 and 2 are not novel in light of JP7-101659 and claims 8 and 9 are novel over JP7-101659. I also conclude that claims 3 to 5 are not obvious in light of the prior art, while claim 6 would have been obvious in light of JP7-101659 and common general knowledge in the art.

Application for review

51. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.

Karl Whitfield
Examiner