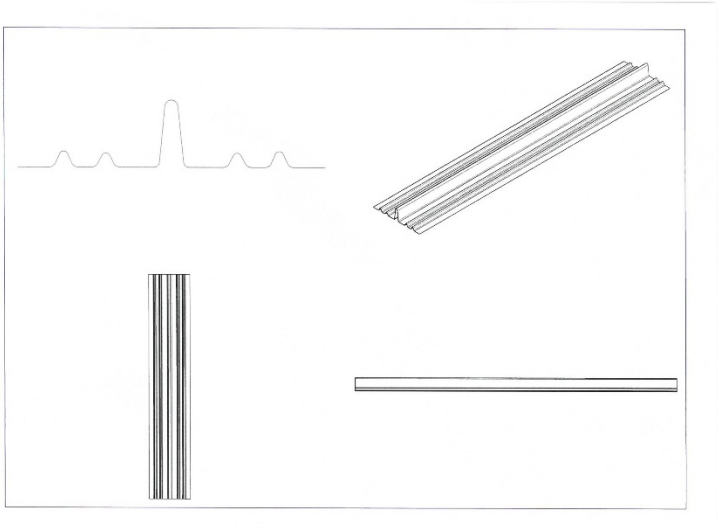
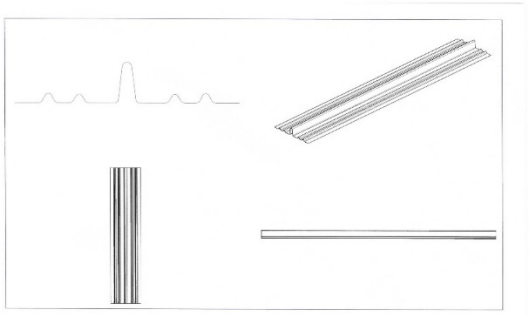
TRADE MARKS ACT 1994
IN THE MATTER OF APPLICATION NUMBER 3158606
BY HAMBLESIDE DANELAW LTD
TO REGISTER THE FOLLOWING TRADE MARK IN CLASSES 17 AND 19:



TRADE MARKS ACT 1994
IN THE MATTER OF APPLICATION NUMBER 3158606
BY HAMBLESIDE DANELAW LTD
TO REGISTER THE FOLLOWING TRADE MARK IN CLASSES 17 AND 19:



1. Trade mark application 3158606 was filed on 8 April 2016 in the name of Hambleside Danelaw Ltd ('the applicant'). The mark was designated and described as 'three dimensional' and plainly comprises of a shape. The applicant's accompanying description reads as follows:

> "The mark consists of the three dimensional shape as identified in the views provided in the representation. The views are profile view, south east isometric view, top view and side view."

2. The goods for which application has been made are as follows:

Class 17

> Unprocessed and semi-processed rubber, gutta-percha, gum, asbestos, mica and substitutes for all these materials and goods made from these materials and not included in other classes; Plastics in extruded form for use in manufacture; Packing, stopping and insulating materials; Flexible pipes, not of metal; Plastics in extruded form for use in manufacture of roofs and roofing materials; plastics in extruded form for use in insulating materials; plastic material in the form of sheets and/or boards (semi-finished products); polyester sheets and/or boards (other than for wrapping or packaging); glass reinforced plastic sheets and/or boards (other than for wrapping or packaging); glass reinforced polyester sheets and/or boards (other than for wrapping or packaging); flexible drainage materials; flexible plastic conduits; Parts, accessories and fittings for the aforesaid goods.

Class 19

> Building materials [non-metallic]; Non-metallic rigid pipes for building; Asphalt, pitch and bitumen; Non-metallic transportable buildings; Monuments, not of metal; roofing fabrics; roofing troughs; sheets and/or membranes for buildings; roofing sheets and/or membranes for buildings; roofing and/or roof panels; roof coverings and claddings; roof flashings, conduits, channels and gutters; roofing ventilation elements for buildings;

roofing tiles, plates and/or panels; facade elements, canopies and roofing; seals for use in building; Roofing materials; roofing panels, tiles, plates, boards and sheets; Bitumenised roofing materials; roofing boards; guttering, channels, courses, conduits, apparatus, all for drainage or ventilation; channels or pipes for transmitting air for ventilation or liquid for drainage; connectors, supports, brackets not of metal for gutters; Connectors, supports, brackets not of metal for building; connectors, supports, brackets not of metal for roofing; parts and fittings for all the aforesaid; all of the aforesaid being made wholly or principally of non-metallic material.

Nature of the mark

3. Prior to proceeding to a chronological account of the application's history and full reasons for my decision, it may help if an explanation of the mark itself is provided. This is because it may not be self-evident from the mark's planar representation alone, exactly where and how it is placed in situ during the construction of a roof and how the product may function when fitted. Once the roof is fully constructed, the product will largely be invisible to an observer, being mainly covered by roofing felt and/or tiles, save perhaps for the peak of the 'upstand'. I should say that, in describing the product, the 'upstand' refers to the single, central and largest peak of the shape. The four outer ridges may variously be described as 'ribs', 'ridges' or 'corrugations'; all mean the same thing but the different terms may reflect the source from which I am referring.

4. The mark comprises, as I have said, a planar representation of a roofing product; this is how the product will be sold. As suggested, there is no doubt that the subject of the mark (being a 3D shape) is indissociable from the product itself, which is fully covered by the goods of the specification. The product is called by the applicant a 'dry fix valley trough' ('DFVT') and is used in the construction of a valley between two adjoining roofs whose pitch may be at right angles to each other. In final configuration and construction the roof may look something like this photo below. The DFVT is largely, as I have said, invisible to the observer save for the top portion of the central upstand.

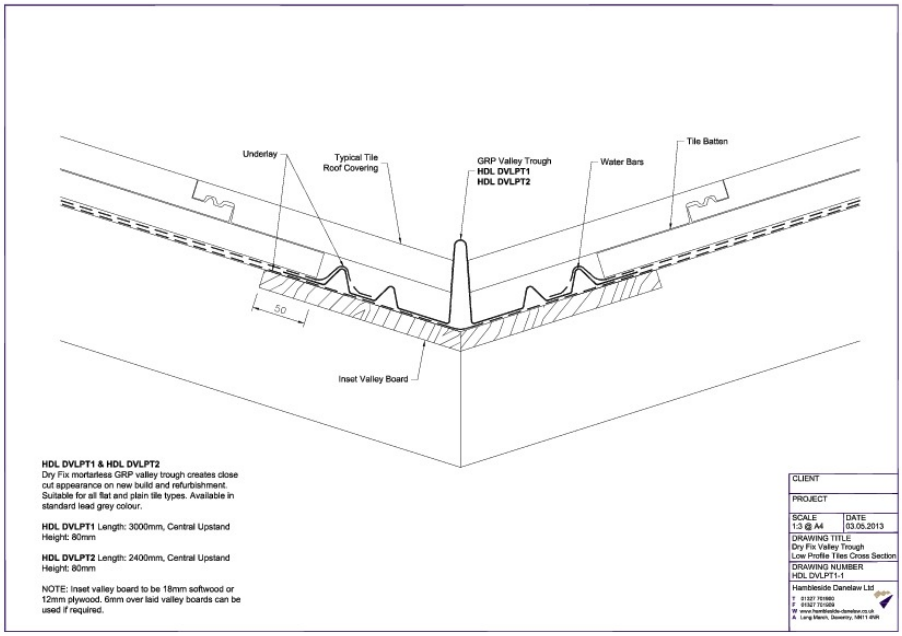
5. The product is capable of being used with a variety of tiles and other roof materials. The following sequence shows the roof at various stages of construction.

6. The first frame below shows the initial wooden formation of the valley, but without the product in situ.

7. Now the product is being fitted in place. It is usually nailed to the wooden boards illustrated above:

8. Here is what the product looks like in situ, with roof battens in place, and covered by roofing sheet or felt, ready to receive tiles:

9. Finally, here is a cross section of the final roof assembly showing the relationship between the product itself and adjoining roofing assembly members:



10. It will be seen that in construction and situ, the product needs to be flexible since it ends up being shaped, corresponding to the underlying valley boards in a 'V' shape. As I understand it, the product is sold by the applicant in lengths of 2400mm and is made from glass reinforced polyester ('GRP'). Being sold in this form, the product is said to give certain advantages over traditional lead valley construction, such as, e.g. that fitting can take half the time and be done on a semi-skilled basis and also that the product is light in weight and easy to handle.

11. It is especially important to note for the purposes of this decision that the product is described by the applicant as being 'dry fix'. This means that no mortar is used in the fitting of the product.

12. That said, the evidence and submissions effectively concede that, in its evolution, the product was originally a 'wet fix' product, in which mortar was used in the build. In that form, the evidence effectively admits that all elements of the shape had a technical function, notwithstanding that it may not have been usual, in earlier 'wet fix' mode, to have the central upstand, the valley being 'open'. In its earlier incarnation as a 'wet fix' trough, the outer ribs either side of the upstand created what are termed 'water channels' with the outer rib in particular serving, according to the evidence, to prevent mortar from being 'washed out'. It may have had other functions as well but this is the one that the applicant especially concedes.

13. The core of the applicant's case is, however, that having discovered that the 'wet fix' product also had utility in 'dry fix' mode, effectively one, or even perhaps both ribs either side were rendered technically redundant or superfluous, but were nonetheless retained as features of the product which had become, to use a word taken from the evidence, the applicant's 'signature', or guarantee of origin, its trade mark.

Background

14. On 25 April 2016, the examiner issued her examination report raising an objection under section 3(2)(b). The objection was presented as follows:

> *"Section 3(2)(b)*
>
> *The application is not acceptable in classes 17 and 19 as there is an objection under section 3(2)(b) of the Act. The mark consisting of a three dimensional shape and the essential features of the shape are attributable only to the technical function and the goods would be used to obtain a technical result.*
>
> *The purpose of a trade mark is to distinguish your goods and services from those of other traders, this cannot be achieved if the mark is simply not distinctive enough to be a single badge of trade origin.*
>
> *In my opinion the sign would not be recognised by the average consumer as an indication of trade origin of any one individual trader in relation to the goods applied for but simply seen as a shape of goods necessary to obtain a technical result, therefore the mark is not capable of performing the function of a trade mark."*

15. In response, the applicant contended, broadly, that the outer ridges of the shape serve no purpose and that, on being designed in 1997, the shape was intended to bring to mind the horns of a Viking helmet, as was used in corporate branding for the applicant's predecessor in business, Danelaw Ltd. The applicant said that the goods applied for are 'dry-fix'. Earlier 'wet-fix' versions, which are still available today, have two water bars and are and were of an 'open' design (i.e. they do not have a central upstand). With the wet-fix version, when it rains, it was explained that water from both roof slopes collects in one open channel. The outer ridges were initially protected by mortar but the product was designed with outer ridges in the event that the mortar got washed out, which it did. This is not however, says the applicant, the case with the goods applied for under the mark of the present application, being dry-fix.

16. The applicant added that not only were the second ridges either side of the upstand superfluous, it made the fitting of roofing felt or sheet, under and over the product more difficult. Further, the outer ridges do not support any of the weight of the tiles and are not designed to support any of the materials used underneath the roofing tiles, nor are they designed to keep them in place. The central 'upstand' keeps the tiles apart, and each side of the roof join has a curved section, or wing, under the roofing material. The 'upstand' is easier to manufacture flatter and wider. Earlier designs of the upstand were of this type but the applicant chose to make it slender, so when installed it showed a neat thin line, which is like an ironed crease in a shirt, with a much more aesthetically attractive effect.

17. Further, the applicant argued that *in situ* the outer ridges cannot act, in fact, as a boundary to water since it is raised above the inner ridge and the angle of the wings can be steep.

18. These broad arguments, which have been consistently maintained throughout the whole examination process, did not persuade the examiner who felt, broadly speaking, that the consumer would not dissect the mark to the extent suggested by the applicant and would see nothing in the mark that could be construed as being either non-functional or could operate as a trade mark in the *prima facie* case. In consequence of this position, and for the first time, the examiner introduced a further, and alternative, objection under section 3(1)(b) ('devoid of distinctive character'), in addition to existing section 3(2)(b) objection.

Ex Parte Hearing

19. The applicant asked to be heard and this came before me on 20 October 2016, at which the applicant was represented by Ms Sarah Chatterley of Coulson and Rule.

20. Prior to the hearing I had written to the applicant as follows:

> *"It is understood that a hearing is scheduled to take place on this case shortly. Having reviewed the papers I think it is necessary to focus the discussion on the CJEU Case C-205/13 Hauck GmbH v Stokke A/S, Stokke Nederland BV, Peter Opsvik and Peter Obsvik A/S (the 'Tripp Trapp' chair case) as this is the highest and most recent authority on the application of Section 3(2). This means that all of the provisions of 3(2), being (a), (b) and (c), will need to be considered and it must be assumed that preliminary objection is raised in respect of each, separately and independently.*
>
> *Secondly, the registry asks that the applicant gives full disclosure on any rights, such as a patent or registered design, that may have or still subsist in relation to the mark applied for."*

21. The applicant responded on 13 October 2016 notifying me of several patents (both granted and pending applications) pertaining to the product, these being: GB2307922 A and B ('922'), GB 2334980 A and B ('980'), GB 2413806 A and GB 9523934. I have annexed 922 and 980 to this decision as being the most obviously relevant.

22. The applicant also sent in samples of the product, including a label, promotional material, information regarding competitor products and a sample of a competitor's product.

23. Prior to the hearing, I also clarified that it was my intention at the hearing only to deal with the objection under sections 3(2)(a), (b) and (c), and therefore not to deal with the additional objection under section 3(1)(b), at least at the hearing. The section 3(1)(b) objection, however, remained on the table.

24. At the hearing I gave no decision but there was an extensive discussion around the objections under section 3(2)(a) and (b) and with specific reference to one of the patents, 980, which was filed on 3 September 1996 and has since expired.

25. I concluded the hearing by undertaking to record my understanding of the technical discussion, send it to the applicant for checking and to provide further time in which to receive any other submissions or clarifications as the applicant may consider necessary or useful. My record of the hearing discussion and request for further information read as follows:

> ***"Record of discussion at the hearing***
>
> *Any objection under section 3(2)(c) was waived by me at the outset.*
>
> ***(a) Essential characteristics***
>
> *As I have said, the product, comprising the shape of the mark, is a 'dry-fix' (i.e. without mortar) glass reinforced polyester ('GRP') valley trough, used to construct a valley between two adjoining pitched roofs.*
>
> *The shape is comprised of an elongate strip with central longitudinal 'upstand' or 'barrier'. To either side of the upstand are longitudinal ridges, an inner and an outer, being equidistant from the upstand and each other. The ridges are significantly lower than the central upstand and the outer one appears to be marginally higher than the inner one.*
>
> *This statement of essential characteristics is based on simple visual observation together with features disclosed in patent specifications. I would be grateful if you indicate whether or not you accept the statement of essential characteristics. If not, I would be grateful if you would suggest an alternative.*
>
> ***(b) Functionality or otherwise of essential characteristics***
>
> *I do not understand the applicant to be contesting the fact that the central 'upstand' is a functional feature and which serves to act essentially as a barrier between water and debris cascading from one pitched roof and that of the other.*
>
> *The critical submission by the applicant is that the ridges serve no functional purpose, or that at least one of them is not functional.*
>
> *In order to determine this, at the hearing we discussed GB patent 2334980, especially in some detail. I noted the following in the patent description and you responded as I have recorded:*
>
> - *The description refers to the corrugations (or ridges) as, "serving substantially to prevent water escaping sideways from the channels thereby formed" (page 8*

lines 23 - 24). You said that notwithstanding what was said in the patent, in situ, one of the ridges (the inner) at least was effectively superfluous since the lateral margins would be bent upwards and water would overflow that inner ridge easily;

- *The description refers to, "The undersides of the tiles rest on the apex of the outer corrugation" (page 9 line 5). You said that by reference to the drawings in the 'Pitched Roofing Product Brochure' at page 17, the outer ridge in fact had no tiles resting on it and neither was the outer ridge used as a means of support to any battens;*

- *The description refers to, "The barrier means of preferred embodiments provides increased strength to the valley strips of the invention by the shape of the barrier means and the state of tension it is under and protects against damage to the valley by feet during construction or maintenance of a roof." You said this was the technical effect of the barrier 'upstand', rather than the ridges per se;*

- *Claim 4 of the patent refers to "two corrugations" lying between the channel base and lateral margin. You said that notwithstanding that Claim, the patent as a whole does not provide or disclose any functional utility as regards any second ridge. The Claim in question does not say why there should be two ridges and the specification uses the term 'preferably' in referring to two ridges, rather than being prescriptive in that regard.*

In addition to the above, the following possible aspects of utility or functionality of the ridges are also either mentioned in the patent specification or in the applicant's instructions for installation of the strip as attached to this letter. I would be grateful for any comments on the aspects identified below:

- *At page 5 line 25, the patent states that "The roofing underfelt is preferably cut to finish between two corrugations on each lateral portion". This is shown in the installation guide.*

- *The installation guide also refers to fixing a bridge on one of the ridges to support a short cut tile.*

(c) General submission regarding reliance on a patent document to determine functionality of essential characteristics

I should record that you submitted that it was not necessarily appropriate to have regard only to a patent specification to determine the functionality of essential characteristics of the shape. In principle I agree with this submission. The applicant is entitled to call, for example, expert evidence as indeed is the registrar or any other party should the matter proceed further. Indeed I have drawn attention already to an installation guide in this letter and reserve the right to call on any other material which may help with my decision, subject to the applicant's right to make comments on such material.

(d) Competitor product

You mentioned that the competitor product reinforced the fact that the ridges or at least one of them was entirely superfluous and a competitor would be able to produce a perfectly functioning product, performing the same 'generic function' without ridges, but with an outer boundary, serving to contain the water and debris.

(e) Relevant consumer

Notwithstanding that we did not consider objection under section 3(1)(b), it was your contention that the second ridge, by virtue of its superfluous nature was the applicant's 'signature'.

(f) Grounds of objection - section 3(2)(a)/(b)

Neither of the remaining grounds were, or are expressly waived by me. That said, I endeavoured to make a distinction between the 'generic function' protected by section 3(2)(a) and the 'technical function' protected by section 3(2)(b), as expounded in the 'Tripp Trapp' chair case. This is quite problematic in such a case as this.

At the highest level the 'generic function' under section 3(2)(a) could arguably be that in situ the product enables the 'effective collection of water and debris'.

In regard to section 3(2)(b) and the question of 'technical function', it could be said that this admits of a closer look at the essential characteristics to ensure that none perform a technical function, and by 'technical function' is included features which may assist a builder or competent DIY person in the assembly and construction of a roof having a valley trough.

I would be grateful for any submissions on this approach and distinction in light of the 'Tripp Trapp' chair case and any other material which may shed light on the separate operation of these objections.

Moving forward

A period of two months from the date of this letter is allowed for any comments, specifically requested by me above, or including revisions or amendments to your submissions or additional material you may wish to submit to support your position.

26. The applicant responded substantively on 21 March 2017.

27. The applicant's response was not confined to the objections under section 3(2)(a) and (b), as discussed at the hearing, but addressed also the alternative objection under section 3(1)(b) in the event I felt able to waive the objections under section 3(2)(a) and (b). If I was still against the applicant under section 3(1)(b), evidence of acquired distinctiveness was also submitted.

28. This evidence was in the form of a witness statement dated 15 March 2017 by Mr Christopher Avery. Mr Avery is Managing Director of the applicant. It is fair to say his evidence is a mix of technical explanation, which largely reinforced what has been already said in the proceedings, and factual evidence of use of the mark. In the latter regard I am treating the evidence as being in support of a plea of acquired distinctiveness if needed.

29. In terms, firstly, of technical explanation, Mr Avery recounts the origin of the DFVT and its initial incarnation as a successful wet-fix product, but without the upstand. He concedes however that the upstand, whilst its design had a certain degree of aesthetic motivation, is essentially functional. It is functional, both in the sense that it keeps the tiles apart without touching them and also prevents the flow of water and debris from one roof to the underside of the other.

30. Crucially to the applicant's case, he argues that the relevant consumer will be aware that in 'dry fix' mode, the outer ridge at least has no functional utility. That is, not just that the relevant consumer will be 'aware' of that, but that such an awareness is, itself, based on fact. Mr Avery notes that the decision to keep the four ridges for the 'dry fix' version was taken and motivated by consumer recognition of the applicant's 'signature' and the desire to reference, in profile, the horns of a Viking helmet, used in the branding of the applicant's predecessor. To support this claim, in effect, to a form of corporate identity, he notes that the applicant produces a number of products with two ridges and Exhibit CJA12 shows a GRP valley trough roughly dating from 2003, a continuous dry soaker from 2003 and pages from the applicant's brochure dated Feb 2012 featuring a number of products.

31. In particular, Mr Avery is keen to dispel any notion that the outer ridge may act as a barrier or boundary to water in situ. Mr Avery says the product is sold in a different format to that in which it is used. The mark as filed illustrates the application at the point of sale i.e. on a flat horizontal plane. (Exhibit CJA11 shows examples of the mark as sold in a counter top display). These contrast with images of the goods in situ which clearly show the formation of a 'W' shape formed by the wings either side of the upstand. Mr Avery's point is that in situ the outer ridges cannot act as a boundary for water, being raised above the height of the inner ridge. The angle of each of the wings of the 'W' shape can be steep or at a slight incline, and one side does not have to match the other.

32. There is, nonetheless, a suggestion in the evidence that, apart from the 'wet fix' function of the outer ridge in terms of preventing mortar from being washed out, the two ridges either side of the upstand also may have had a utility in terms of providing support for a 'clip' to support small tiles. Mr Avery says in this regard that if small tiles pieces are to be supported, or there is insufficient support from adjacent tiles on the side of the valley, a tile support bridge can be placed over a ridge adjacent to the central upstand underneath the tile, and fixed in place with double sided tape on the underside of the bridge. The bridge is simply a bent metal section with a thin cut edge sufficient to allow any fixing to the water channel base. Installing it over the ridges provides sideways movement restraint and allows adhesive contact between the inside face of the bridge and the side face of the ridge. He also notes however that a clip has since been introduced to replace this method and which connects the small tile cut to the adjacent tile.

33. He says that for ideal positioning and functioning, the roofing underlay material used to cover the roof under the outer covering of e.g. tiles, must cover at least two of the small outer ridges and the fitting of the underlay is, in fact, made more difficult by the presence of the second ridge on either side. This is to dispel any contention that the ridges in some way facilitate the cutting or fitting of the any underlay or sheeting. Further, that none of the ridges support any of the tile weight, neither are they designed to support any of the materials used underneath the roofing tiles, nor to keep them in place, nor to withstand footfall by the fitter when building the roof.

34. In terms of the patents, he says at para 5(i) and (j) of his witness statement that, of both patents already extensively discussed, the 'two ridges are not claimed as part of the function of the invention applied for'. I shall return to this phrase in due course in my decision.

35. As regards, secondly, of the factual evidence of use of the mark, exhibit CJA02 comprises evidence of early use of the mark, including extracts from brochures dating back to September 2000, a leaflet entitled 'It's here at last' showing the mark in use dating back to August 2001, a fax dated 2001 referring to fitting demonstrations to fourteen gangs of fitters employed by Forrester Roofing, and an advertisement featuring a competition called 'The sights and sounds of summer' which featured a diagram and stated that prizes would be issued in Sept 2004.

36. Mr Avery says the mark has been in continuous use by the applicant or with its authorisation since 1997.

37. Exhibit CJ03 comprises examples of Danelaw's branding dating back to 1988.

38. Exhibit CJA04 comprises a schedule detailing annual sales of the goods of the mark before the date of application.

39. Exhibit CJA05 comprises evidence of sales of the goods in the form of batches of invoices.

40. I have not reproduced in this decision these figures from CJA04 and CJA05, firstly because I am not convinced of their materiality in terms of my final analysis of acquired distinctiveness and secondly, because the applicant has, in any event, requested confidentiality in respect of these exhibits.

41. Annual amounts spent by the applicant in promoting the goods of the marks are provide as follows:

Year	**Marketing spend**
2012	£12,0552
2013	£94,614
2014	£118,095
2015	£127,074
2016 (1/1-9/16)	£124,881

42. Exhibit CJA06 comprises evidence of advertising and marketing of the mark and these include items such as product leaflets dating from 2003 for a campaign with S.I Group, another campaign with SIGR Group dating back to 2004, a brochure dating from 2005, a

counter top display unit to advertise DFVT from 2007, a promotional leaflet entitled 'Best of British' dating from 2012, another entitled 'Thunder bolts and lightning' dating from 2012, a calendar from 2013, an advertisement from RCI Roof Cladding and Insulation magazine dated Sept 2013, an advertisement from Housing Association and Building and Maintenance Magazine dated Sept 2013, an extract from the applicant's website dated June 2016, and invoices for annual membership of associations, software and website support, design and artwork suppliers and so forth.

43. Mr Avery says that the applicant has attended exhibitions at which buyers from UK customers have been present. The DFVT has been included in the material presented at these exhibitions, either in the form of a sample, drawings or photographs.

44. Exhibit CJA07 is an illustrative selection of evidence of attendance at exhibitions, including the NMBS Exhibition in 2013 at the Telford International Centre, the 100% Detail Show, the Ecobuild Show, the RCI Show and the NSBR Show.

45. Mr Avery says the mark has been supplied to customers across the UK and that he supplies sole traders, SME's, and larger corporations. 384 individual merchant branches took delivery of the DFVT in 2016.

46. Exhibit CJA09 comprises two photographs of completed roofs using the product intended for protection. Mr Avery says the central upstand and close fitting roof tiles make either or both outer ribs redundant. The DFVT does not need to hold the batten under the tiles back, and the batten has been cut accordingly.

47. Exhibit CJA10 comprises an illustrative selection of drawings of the mark as the goods are meant to be fitted. These are leaflets intended for fitters and include the use of the support bridge as above.

48. Mr Avery concludes by submitting that the shape of his product departs significantly from the norm, and that there are other goods available on the DFVT market which perform an identical function which include an upstand but which do *not* include additional ridges. He submits that he does not seek a monopoly on the shape of products which perform the same generic function.

49. There is evidence in the form of a witness statement dated 10 March 2017 from Laurence Sands of Waverley Communications Ltd, which is responsible for the publication of HA Magazine. Mr Sands is responsible for the procurement of advertising and editorial content of that magazine. The magazine is aimed at the UK Social and Affordable Housing Construction market. He says he recognises the shape of the product and associates it with the applicant. He says that he makes that association as a result of his dealing with, and reading editorial content and advertising submitted to him and his colleagues by, the applicant. He has been familiar with the shape for approximately 20 years and has always associated it with the applicant or its predecessor. He is not familiar with any other manufacturers for this type of product nor with any products from any other manufacturers which are similar.

50. There is a witness statement from Paul John Pugh dated 9 March 2017. He is a roofing specialist, merchant and company owner. He recognises the shape of the product as being

a ‘dry valley’ which was designed by his father, Norman Pugh. Some of the elements of the shape were protected by patents filed by his father. He has known the product since approximately 1996. He is not aware of anyone else using exactly the same shape in the UK for the same purpose. He is aware that there are other products of different shapes from that shown which perform exactly the same function.

51. There is a witness statement from John Arnold Dodd of John Dodd Consulting Ltd, a roofing consultancy business. He says he recognises the shape as being a product of the applicant because of the distinctive vertical upstand with a tightly curved radius at the top, with flat sections adjacent, incorporating two smaller upstands either side. He has known of the shape for 15 years. He says the shape does not provide support for raking cut tiles or slates and does not require counter battens for support. In this way the shape is different from other products on the market for the same purpose. To his knowledge, there are approximately 6 other manufacturers or suppliers who manufacture and/or sell similar products for the same purpose. But, he says, the shape is well known in the UK and the applicant’s shape is easily recognisable since it is very distinctive.

52. There is a witness statement from John Watson who is Sales and Operations Director for Rinus Roofing Supplies Ltd, a roofing material distributor. He recognises the shape as being that of a dry valley product with which he has been familiar for approximately 12 years. The product is sold by the applicant. To his knowledge other products are offered by other manufacturers for the same purpose but they are of a different shape.

53. There is a witness statement by James Hastings who is Sales Manager at TSP Media which publishes Specification Magazine. He recognises the shape as a dry seal roofing product sold by the applicant. The shape of the product consists, he says, of peaks and troughs, the middle trough i.e. the trough on either side of the largest ridge is for drainage. He is not aware of anyone else making or supplying a product of exactly the same shape in the UK, nor is he aware of any other products which perform the same overall function.

54. There is a witness statement by Graham John Mercer who is a Technical Manager for a roof tile manufacturer. He says the shape is instantly recognisable as a product made by the applicant. It is the only shape he knows of which has the combination of a central upstand and smaller bars either side. The shape is different from competitor products, the nearest equivalent has water troughs. He is not aware of any other product in this exact shape for this purpose. He is aware of a competitor who makes a product with a central upstand, but it has different side features.

55. On 27 March 2017 I wrote to the applicant to summarise and distil its legal submissions to date and also to draw attention to what appeared to me to be competitors’ products having similar features, as regards the ridges, to the applicant. I referred to the MARLEY ETERNIT UNIVERSAL range, the REDLAND MONIER range, the LAGANTILE range, as well as the FILON product and CORODRAIN product. I had conducted my own research in relation to these products and sought the applicant’s view on the internet hits that I had found. The prompt for conducting this research had come from the applicant’s own evidence in so far as it made reference to the wider market and to competitors’ products.

56. On 24 May 2017 the applicant responded stating that, as far as the MARLEY, REDLAND and LAGANTILE products are concerned, these are all the applicant’s own products, sold under different brands but with the applicant’s approval. As far as the

FILON and CORODRAIN products are concerned, both products are the old wet-lay open valley design which requires mortar. The FILON image shows the mortar between the two ridges on either side. If, says the applicant, I were to perform an internet search of the words 'dry-fix valley', the FILON product would be different in shape to the applicant's. However, the same search would reveal a product or products sold by Ariel Plastics, under either the HARCON or CORODRAIN brands, which is, says the applicant, a direct copy of the applicant's product, introduced after the filing of the present application. It is plainly this product(s) which gives the applicant most concern, and it makes clear that identification of this 'copy product' as a result of a search conducted *after* the date of filing does not help establish that the shape was generic *before* the date of filing.

57. The applicant has supplied screen prints taken from the website www.roofingsuperstore.co.uk showing the extent to which its own products have penetrated the overall market, albeit sold under different brands.

58. The applicant has also supplied further evidence in the form of witness statements from Mr Kevin Taylor, dated 17 May 2017, and Mr David James Childerhouse. These are intended to reinforce the applicant's submission that, in a 'dry-fix' valley trough, at least one of the ridges is technically redundant, thereby supporting the case for distinctiveness in the *prima facie* or of acquired distinctiveness.

59. Mr Taylor is Head of Technical Services at The National Confederation of Roofing Contractors Ltd ('NFRC') after being involved for 35 years in the roofing business both as contractor and lecturer. He says that he is familiar with the applicant's dry-fix product. He says he is aware of a number of products on the market which perform the function of covering over a gap between two roofs to prevent the ingress of water into the areas between or under the coverings of the respective roofs. To his knowledge, there are no others of the identical shape of the applicant. The shape he says *"has been designed to provide a join between two roofs where rainwater is collected in the channels next to the upstand and is then allowed to drain out at the eaves or onto a lower roof as appropriate"*. He then exhibits two leaflets issued by the NFRC. The first of these is entitled 'Technical Bulletin 08 PITCHED ROOFING VALLEYS - DESIGN CONSIDERATIONS', issued in November 2015. The leaflet shows the usual design of a valley trough, whether wet- or dry-fix. The product on the leaflet has only one pointed ridge on either side of the water channel. This is very different, Mr Taylor alleges, to the shape of the applicant's product, where a large upstand divides the water channel. The second leaflet is entitled 'Technical Bulletin 28 INCLINED PREFORMED GRP VALLEY TROUGHS' which was also issued in November 2015 and features a similar product to Technical Bulletin 08. From this, he says that he does not believe that the second ridge on either side of the upstand is required for the dry valley to function.

60. Mr Childerhouse has provided a witness statement dated 17 May 2017. He is a Logistics Manager at Breckland Roofing Ltd, having been a roofer for almost 30 years. He exhibits at DJC02 a drawing of the shape of the product (the representation contained in the trade mark application) which he identifies as being that of the applicant. His company supplies and fits a number of the applicant's products, including the product in question. He explains that the purpose of the DFVT is to join two roofs where they meet to stop leaks. The DFVT is shaped so that the ends of the adjoining roofs slope down to meet the highest middle ridge over a drainage channel and this is point at which the tiles are cut to make pleasing looking straight tiles. Rainwater runs

down from the roofs into the trough under the joined roofs, which is normally sloped at an angle.

61. He says that, historically, such products were fitted with mortar ('wet-fix'). The outer smaller bar on either side of the product was intended to keep mortar under the roof covering, ensuring that none leaked out from under the roof into the drainage channel next to the middle ridge. The outer bar also ensured that with the mortar in place, no water could enter under the roof covering. The roof battens were fixed under the outer ridge of the wet-fix fitting.

62. He says that the product has been designed with one ridge on either side of the middle ridge to ensure that no water gets under the roof covering. The second ridge has no purpose and is superfluous. If water does touch the side of the larger ridge, the water should never get to the first, inner ridge, due to the shape of the product in situ and therefore the second ridge will never be used to contain water, or mortar, as the product is dry-fix. The second ridge is also not purposed with bearing any roof battens, since the fitting itself is not designed to load bearing.

63. He concludes that he has not seen many different products for the same purpose but he believes the applicant's is definitely the best. He does not know the names and shapes of any competitor products and believes the applicant's is the one which is used by 99% of the roofing market.

64. On 16 June 2017, I formally refused the application, giving my short reasons for doing so. In response, and as invited, the applicant has filed a Form TM5 asking for my reasons in full which I now give.

Decision

Preliminary comments

65. Before going into detail in terms of the specific grounds of objection I find it helpful to provide a few contextual, preliminary comments.

66. It is not disputed that the mark, being the subject of this application, is the shape of a product, specifically a roofing product. That is, notwithstanding that the representation shows the product on a horizontal plane and as it would be sold, rather than how it may look *in situ* and once fixed in place.

67. The applicant says 'the product' is a 'dry-fix' (i.e. without mortar) GRP valley trough used to construct a valley between two adjoining pitched roofs. It is noted, however, that the *goods of the specification* are not limited to 'dry-fix' products and no limitations or exclusions have been offered by the applicant in this regard. It must be assumed, then, that the goods of the specification will include items are both wet (with mortar) and/or dry-fixed. However, I should make clear that, even if the applicant had proposed to limit the goods of its specification to 'dry-fix', this would not have affected my overall conclusions.

68. The goods covered by the specification are, *in their substance*, 'functional' items. Factors such as: material, regulations, ease of fitting, efficiency of operation and life span will inevitably be key factors in the purchase of such an item.

69. This is not to say that aesthetic considerations would play no part in the selection of the product, but it should be recognised that the relevant consumer in this case is most likely to be a specialist roofing professional or general builder as I shall discuss further below. Unless such a person has discussed with the home owner, developer or whoever he or she is working for, exactly what aesthetic considerations should apply to the finished roof, it is unlikely that such considerations will play a large part in the purchasing process, especially where the parts of the shape most hotly contested in this case, are, in fact, not even visible once the part is in situ.

70. It is further worth mentioning that the method of tiling a roof, including, I assume, the fixing of valley troughs, of whatever sort, will be subject to changing building standards or regulations, whilst the product itself, may be subject, perhaps, to certificates of usability. This angle was not covered in the various exchanges, but I know from my own research into the market as a whole that a BS standard[1] in the construction of roofs exists, as well as individual product certificates, all of which must cast some further doubt on submissions which rely upon elements of the shape being primarily 'decorative'.

71. It is also the case that the applicant's product (whether 'wet-' or 'dry-fix') has been the subject of patents which have been disclosed, at my request, by the applicant which I have annexed to this decision. Patent GB 2307922B expired on 2 September 2016 and patent GB 2334980B also expired on 2 September 2016. Both patents were filed on 3 September 1996. The filing date of the trade mark application is 8 April 2016.

72. I also need to record that the applicant has not contended that any of the specified goods obviously fall outside the scope of any of my alternative objections and nor have I found that to be case, even in the absence of specific submissions. On that basis, I am treating all of the goods as being equally susceptible to the objections. The application is thus treated as refused in its entirety.

73. I will now proceed to consider each of the grounds of objection individually.

Grounds of objection

Section 3(2)(a) and (b)

74. Section 3(2)(a) and (b) read as follows

> *2) A sign shall not be registered as a trade mark if it consists exclusively of-*
>
> *(a) the shape which results from the nature of the goods themselves,*
>
> *(b) the shape of goods which is necessary to obtain a technical result, or*
>
> *(c) …*

[1] British Standard BS 5534:2014 for slating and tiling seems to be most relevant. In Feb 2015 an update of this standard became mandatory and this update included that the sole use of mortar as a means of fixing roof tiles and fittings was deemed insufficient. Tiles or fittings bedded with mortar were also required to be mechanically fixed.

75. These provisions are derived from Art 3 of the relevant Directive and have been construed by the Court of Justice of the European Union ('CJEU'). It is important to be aware that the individual provisions must be interpreted, both in the light of the underlying public interest behind each and in a way which is consistent. That much is made obviously clear in from the case of *C-205/13 Hauck GmbH v Stokke A/S, Stokke Nederland BV, Peter Opsvik and Peter Obsvik A/S* (the 'Tripp Trapp' chair) as follows:

> *"17. The Court has already held that the various grounds for refusal of registration listed in Article 3 of the trade marks directive must be interpreted in the light of the public interest underlying each of them (see, to that effect, judgment in Windsurfing Chiemsee, C-108/97 and C-109/97, EU:C:1999:230, paragraphs 25 to 27, and judgment in Philips, C-299/99, EU:C:2002:377, paragraph 77).*
>
> *18. In that regard, concerning the second indent of Article 3(1)(e) of the trade marks directive the Court has stated that the rationale of the grounds for refusal of registration laid down in Article 3(1)(e) of the trade marks directive is to prevent trade mark protection from granting its proprietor a monopoly on technical solutions or functional characteristics of a product which a user is likely to seek in the products of competitors (judgment in Philips, EU:C:2002:377, paragraph 78, and - regarding Article 7(1)(e) of Council Regulation (EC) No 40/94 of 20 December 1993 on the Community trade mark (OJ 1994 L 11, p. 1), a provision which is essentially identical to Article 3(1)(e) of the trade marks directive - judgment in Lego Juris v OHIM, C-48/09 P, EU:C:2010:516, paragraph 43).*
>
> *19. The immediate aim of the prohibition on registering purely functional shapes set out in the second indent of Article 3(1)(e) of the trade marks directive and the prohibition on registering shapes which give substantial value to the goods set out in the third indent of that provision is to prevent the exclusive and permanent right which a trade mark confers from serving to extend indefinitely the life of other rights which the EU legislature has sought to make subject to limited periods (see, to that effect, judgment in Lego Juris v OHIM, EU:C:2010:516, paragraph 45).*
>
> *20. As the Advocate General observed in points 28 and 54 of his Opinion, it should be noted that the ground for refusal of registration set out in the first indent of Article 3(1)(e) of the trade marks directive pursues the same objective as the grounds set out in the second and third indents of that provision. Accordingly, the first indent must be interpreted in a way that is consistent with the aims of the other two indents.*
>
> *21. Consequently, in order to apply the first indent of Article 3(1)(e) of the trade marks directive correctly, it is necessary to identify the essential characteristics - that is, the most important elements - of the sign concerned on a case-by-case basis, that assessment being based either on the overall impression produced by the sign or on an examination of each the components of that sign in turn (see, to that effect, judgment in Lego Juris v OHIM, EU:C:2010:516, paragraphs 68 to 70).*
>
> *22. In that regard, it must be emphasised that the ground for refusal of registration set out in the first indent of Article 3(1)(e) of the trade marks directive cannot be applicable where the trade mark application relates to a shape of goods in which another element, such as a decorative or imaginative element, which is not inherent*

to the generic function of the goods, plays an important or essential role (see, to that effect, judgment in Lego Juris v OHIM, EU:C:2010:516, paragraphs 52 and 72).

23. Thus, an interpretation of the first indent of that provision whereby that indent is to apply only to signs which consist exclusively of shapes which are indispensable to the function of the goods in question, leaving the producer of those goods no leeway to make a personal essential contribution, would not allow the objective of the ground for refusal set out therein to be fully realised.

24. Indeed, an interpretation to that effect would result in limiting the products to which that ground for refusal could apply to (i) 'natural' products (which have no substitute) and (ii) 'regulated' products (the shape of which is prescribed by legal standards), even though signs consisting of the shapes formed by such products could not be registered in any event because of their lack of distinctive character.

25. Instead, when applying the ground for refusal set out in the first indent of Article 3(1)(e) of the trade marks directive, account should be taken of the fact that the concept of a 'shape which results from the nature of the goods themselves' means that shapes with essential characteristics which are inherent to the generic function or functions of such goods must, in principle, also be denied registration

26. As the Advocate General indicated in point 58 of his Opinion, reserving such characteristics to a single economic operator would make it difficult for competing undertakings to give their goods a shape which would be suited to the use for which those goods are intended. Moreover, it is clear that those are essential characteristics which consumers will be looking for in the products of competitors, given that they are intended to perform an identical or similar function.

27. Consequently, the answer to the first question is that the first indent of Article 3(1)(e) of the trade marks directive must be interpreted as meaning that the ground for refusal of registration set out in that provision may apply to a sign which consists exclusively of the shape of a product with one or more essential characteristics which are inherent to the generic function or functions of that product and which consumers may be looking for in the products of competitors.

Section 3(2)(a)

76. According to the above guidance I am required, firstly, to identify the essential characteristics of the shape for which application is made. In my opinion, and as stated in correspondence issued after the *ex parte* hearing, those essential characteristics can be described in the following terms:

> 'An elongate strip with central longitudinal 'upstand' or 'barrier'. To either side of the upstand are longitudinal ridges, an inner and an outer, being equidistant from the upstand and each other. The ridges are significantly lower than the central upstand and the outer one appears to be marginally higher than the inner one'.

77. The question for me is whether the essential characteristics which I have identified above are inherent to the generic functioning of the shape. If I find that to be the case, then inevitably the application must be refused under section 3(2)(a). The generic functioning of the shape in situ is reasonably easy to articulate, being the effective

collection of water and debris from two adjoining roofs and its removal. It must, though, be accepted that features of the shape may also arise as a result of its manner of fixing and/or its relationship with other products, particularly those adjacent to which it will eventually be placed. In other words, 'generic functioning' is not a term that is necessarily restricted to the end objective of a particular shape.

78. It seems to me that the applicant has effectively conceded that, in 'wet-fix' mode, all the essential characteristics of the shape are inherent to its generic functioning. That is to say that, in operation, the central upstand primarily prevents water and debris from one roof interfering with that of the other (potentially leading to clogging), whilst the presence of *all* the ridges is required, in particular but not necessarily exclusively, to prevent any mortar or other fixing material from getting washed out.

79. The core submission by the applicant is that, in 'dry-fix' mode, one of the outer ridges is effectively redundant. Even if the applicant were correct in that, which I do not accept, that would not necessarily be sufficient to avoid the objection. The guidance from the Court quoted above at para 22 says that the provision may be avoided with the presence of another element, *such as one which is 'decorative' or 'imaginative', which is not inherent to the generic function of the goods, but which does still play an important or essential role.* In my opinion, the presence of a second ridge either side of the upstand cannot be said to be 'decorative' or 'imaginative' as it was originally conceived as being functional - if not entirely enabling wet-fixing, then at least primarily preventing any mortar from later washing out. In my opinion, the ridges were not conceived as being either 'decorative or imaginative', nor would they be perceived as such by the relevant consumer.

80. As far as the question of *'playing an important or essential role*' is concerned, the applicant's whole 'dry-fix application' argument is based on at least one of the ridges *not* performing an important or essential role. Therefore, this important qualification runs completely counter to the applicant's core submission.

81. For these reasons the objection under section 3(1)(a) is upheld

Section 3(2)(b)

82. My analysis under this section commences with the same statement of essential characteristics as I adopted above. I should add that if the applicant's contention is, for example, that one or both the ridges are *not* 'essential characteristics' of the shape, in terms of them having to be included within my analysis under section 3(2)(b), then the outcome must inevitably be that they must be excluded from the analysis altogether, leaving only other characteristics I have deemed to be essential. This must result in refusal under section 3(2)(b) since I have already said that the central upstand performs a technical function. I am assuming, then, that the applicant's position is that the both the ridges, either side of the upstand, are manifestly within the scope of the analysis I am required to make.

83. The application of this section is, then, dependent upon each of those essential characteristics performing a technical function.

84. Following from my conclusions in relation to section 3(2)(a), it seems to me that the applicant effectively concedes the case as far as 'wet-fix' mode is concerned. Each of

the essential characteristics performs a technical function, specifically, the second, outer ridge is intended to prevent any mortar or other fixing material from washing out. The applicant's case is founded upon the submission that, in 'dry-fix' mode (only), at least one of the ridges becomes technically redundant, and so cannot be said to perform a technical function.

85. At the outset, and given the nature of the product and the patents to which I have referred which expressly claim the four ridges (see Claim 11 of patent GB 2307922B,and Claim 4 of 2334980B), the applicant is confronted with persuading me that something which is expressly claimed in the patents has, in reality, no technical function at all. To put this another way, if one or both ridges either side the upstand perform no technical function, why are they present in the claims of the patents and in the specifications in the first place? Mr Avery's answer to this is not to deny that the four ridges are expressly claimed, which he cannot do, but to say that they are not claimed as part of the function of the invention applied for. What he may mean by this is that the patents as a whole do not prescribe four ridges, or that the utility or advantage of the ridges is not fully explained in the context of the disclosure as a whole. I am not persuaded that the distinction he seeks to make allows me to effectively ignore or otherwise water down the clear public interest obligation on me to take account of the fact that the subject matter of the trade mark application has also been the subject matter of patent rights.

86. It is a strand of the applicant's argument that the intent behind the ridges reflects a desire on the applicant's part to 'bring to mind' the horns of a Viking helmet, being reflective at least of the applicant predecessor's branding and name. Whether this is a true statement of intent and/or of consequent consumer perception, I have only the applicant's word to go on. This is in the face of an appraisal of the nature and shape of the goods themselves (which do not obviously bring a Viking helmet to mind), a concession that the ridges prevent mortar from being washed out in 'wet-fix' mode, the claims of the patents, and, as I shall discuss further below, the fact that the evidence appears not to corroborate any intended linkage between the shape and a Viking helmet. In light of the aforementioned factors, I have little difficulty in placing very little weight (if any) on the claim that shape is intended to symbolise the horns of a Viking helmet. I will, however, reflect further on this theme later in my decision.

87. I should also say that to the extent that the applicant at various points has intimated that certain features (such as the upstand) may have an aesthetic input alongside the conceded technical function, I would not hesitate to say that any aesthetic input is far outweighed by technical utility. This product is not, in short, a triumph of form over function.[2]

88. To return to the question of the ridges' technical redundancy at least in 'dry-fix' mode, my references to claims presented in patent GB2334980B identify a potential technical utility served via the ridges or corrugations. Those claims are as follows:

> *"Serving substantially to prevent water escaping sideways from the channels thereby formed" (page 8, lines 23 - 24);*
>
> *"The undersides of the tiles rest on the apex of the outer corrugation" (page 9, line 5);*

[2] See, by way of contrast, BL O/017/06 Chair device at para 16.

"The roofing underfelt is preferably cut to finish between two corrugations on each lateral portion" (page 5, line 25).

89. There is further reference to the need to preserve the underfelt in patent GB2307922B, at page 8, lines 27-30:

"It is important for the underfelt to be cut to finish over and within the outer channel created by the two corrugations in order so that the channels can collect moisture from the underfelt and avoid capillary attraction which would cause deterioration of the felt"

90. In submissions and correspondence, the applicant has stated that, in 'dry-fix' mode, none of the above actually requires the presence of two ridges either side of the upstand; notably the patents do not explain why there should be two. Moreover, the applicant contends that, as far as the outer ridge is concerned, it does not bear any load from the tiles or any other material, notwithstanding the patent explanation quoted above.

91. The difficulty I have to grapple with here is that I am required to interpret the provision in a way that protects the public interest against the unjustifiable extension of patent rights by registration as a trade mark. In these circumstances, I think it is justifiable to take the wording and claims of the patent at their word and on face value. That is to say, in these circumstances, where all the essential characteristics of the shape are the subject of patent protection, there must at least be a very heavy presumption of technical functionality and utility. As I have suggested, that which has been the express subject of a patent claim, sufficient to warrant patent protection, should, it seems to me, become almost impossible to deny or otherwise explain away for the purposes of securing registered trade mark rights.

92. In my opinion, the applicant has simply made a useful discovery in the sense that a shape conceived to function in 'wet-fix' mode also works in 'dry-fix' mode. However, switching the mode of fixing does not render all (or, in this case, just one) of the essential characteristics of the shape applied for inevitably redundant or, more importantly, avoid the objection.

93. In my opinion, the presence of the ridges is almost bound to contribute to the objective of preventing water and debris from getting under the tiles and potentially causing damage, including the premature deterioration of any underlay. The submission that certain features are decorative is hard to accept given the product's nature, the patent protection and technical constraints of fixing, including the tangential relationship with other roofing members.

94. I would add that even if the applicant were correct in claiming that one of the ridges is redundant when used in 'dry-fix' mode, I am still required to interpret this provision in light of the clear public interest of preventing the unjustifiable extension of patent rights. The presence of an element which has little or no actual utility only when used in one particular mode of fixing or application cannot, in my opinion, render the ground of objection inoperable.

95. For these reasons the objection is also, and alternatively upheld under section 3(2)(b)

Section 3(1)(b)

96. The section, including the proviso regarding acquired distinctiveness, reads:

> *3. - (1) The following shall not be registered –*
>
> *(a) ...*
>
> *(b) trade marks which are devoid of any distinctive character,*
>
> *(c) ...*
>
> *(d) ...*
>
> *Provided that, a trade mark shall not be refused registration by virtue of paragraph (b), (c) or (d) above if, before the date of application for registration, it has in fact acquired a distinctive character as a result of the use made of it.*

97. The legal principles behind this provision are well known and can be shortly expressed by reference firstly to the CJEU case of *Koninklijke KPN Nederland NV v Benelux-Merkenbureau (Postkantoor)* (C-363/99) where, at paragraph 34, the Court stated:

> *" A trade mark's distinctiveness within the meaning of Article 3(1)(b) of the Directive must be assessed, first, by reference to those goods or services and, second, by reference to the perception of the relevant public, which consists of average consumers of the goods or services in question, who are reasonably well informed and reasonably observant and circumspect (see inter alia Joined Cases C-53/01 to 55/01 Linde and Others [2003] ECR I- 3161, paragraph 41, and C-104/01 Libertel [2003] ECR I-3793, paragraphs 46 and 75)."*

98. A further vital principle to apply in this case is where the mark comprises the shape of a product. The Court's guidance on that question can be expressed in terms of it not being appropriate to apply more stringent criteria, or to impose stricter requirements when assessing the distinctiveness of three dimensional marks consisting of the shape of the goods (such as the one sought in the present case), than those which are applied in the case of other categories of marks (see judgments of the General Court ('GC') of 19 September 2001 in Case T-30/00 *Henkel KGaA v OHIM* [2001] ECR II-2663, at paragraph 48 and of 7 February 2002 in Case T-88/00 *Mag Instrument Inc. v OHIM,* [2002] ECR II-0467, at paragraph 32).

99. But, importantly, a three-dimensional mark which consists of the shape of the product itself is not necessarily perceived by the relevant consumers in the same way as a word or figurative mark which consists of a sign which is not dependent on the appearance of the goods designated by the mark (see CJEU judgments of 29 April 2004 in Joined Cases C-456/01 and C-457/01 *Henkel KGaA v OHIM* at paragraph 38; and of 12 February 2004 in Case C-218/01, referral for a preliminary ruling from the Bundespatentgericht: Henkel KGaA, at paragraph 52). This is because the average consumer is not in the habit of making assumptions about the origin of products based on their shape in the absence of any graphic or word element.

100. Finally, as regards the question of 'shape of product' marks, it is worth noting that, whilst the European authorities tend to apply an unqualified 'test', whereby the shape concerned must simply be 'outside the norms and customs of the trade', when applied by the UK courts it is qualified as representing *only a necessary but not a sufficient* requirement for registration in the *prima facie*, see, e.g. *London Taxi Corporation Ltd v Frazer-Nash Research Ltd and Ecotive Ltd, [2016] EWHC 52 (Ch)* at para 172 (applying an earlier case, *Bongrain SA's Trade Mark Application [2005] RPC 14*).

Application of the principles under section 3(1)(b) in the *prima facie*

101 As I have said in my preliminary comments, in my opinion the relevant consumer in this case will be a professional roofer or builder. Such a person will be a specialist. It is conceivable that a DIY-confident member of the public may also be a consumer, but these will be in the minority, as compared to professionals.

102 The case law tells me that I must look at matters through the eyes of the relevant consumer and consider their perceptions and recollections as far as this shape is concerned. In particular, I must ask whether or not the shape, in its inherent characteristics (and without being over-analytical), is capable of performing the essential function of a trade mark. The essential function of a trade mark is understood to be that of guaranteeing the origin of the goods. As discussed above, relevant consumers may not be in the habit of thinking that the shape of a product may also be a trade mark. I would add that this must especially be true of an essentially functional item such as this.

103 My view is that the relevant consumer is, first and foremost, focussed upon whether the product in question is fit for its purpose, which would include being relatively easy to fit and being compliant with any relevant building regulations. The consumer is also likely to be familiar with the differences between 'wet-fix' and 'dry-fix', including all advantages and disadvantages. To that extent, the consumer will, in my view, view the shape as being entirely consistent with fitting in a 'wet-fix' mode, and that the ridges have the technical advantages highlighted in the patents, as well as preventing the mortar from washing out once in situ.

104 The applicant then poses the question as to whether the same would be true if the trough were intended to be 'dry-fixed'. In that regard, the consumer may be familiar with other, alternative shapes (for example, with or without an upstand). However, all, including the applicant's shape, ought, first and foremost, to be fit for technical purpose. At best, he or she may pause to wonder why there are two ridges either side of the upstand and what function both may or may not play in a 'dry-fix' mode, but that is far from assuming any trade mark significance in the presence of either or both.

105 The applicant asks me to assume that the alleged lack of utility of one of the ridges can somehow transform the shape into one which is 'outside the norms and customs' of the trade - at least when used in 'dry-fix' mode. This I decline to do. A possible absence of utility in a feature of a shape in a certain mode of fixing would not, in my opinion, lead to the conclusion that this shape was 'outside the norms and customs of the trade'.

106 This is, after all, a shape which, at the date of filing, would have little or no inherent 'novelty' (in the sense of being 'new') about it, having, according to the evidence, been used over many years in 'wet-fix' mode. The inherent characteristics of the shape have not changed and the shape will be both familiar and utilitarian to the consumer. All that has changed is

that the applicant has discovered the shape's utility as regards 'dry-fixing'; this should not, in my opinion, suddenly render the shape outside the norms and customs of the trade. That assumes of course that the test is 'outside the norms and customs of the trade'. The UK Courts have expressly not accepted that as being sufficient to avoid objection. I have no need to consider in full what the test is exactly since I have concluded that the mark is not even outside the norms and customs of the trade.

107 For these reasons the alternative objection under section 3(1)(b) is upheld in the *prima facie* case.

Acquired distinctiveness

108 The legal principles for acquired distinctiveness can be expressed as follows:

- The proviso to section 3 based on acquired distinctiveness does not establish a separate right to have a trade mark registered. It allows an exception to, or derogation from, the grounds of refusal listed in sections 3(1)(a) - (d) and as such, its scope must therefore be interpreted in light of those grounds of refusal.[3]

- Mere evidence of use, even if substantial, does not make the case for acquired distinctiveness.

- The use made by the applicant must be use as a trade mark.[4]

- In this context it is legitimate for the tribunal to consider whether the evidence shows that a person would rely on a sign as denoting the origin of the goods if it were used on its own.

- If in any case it is shown that consumers have come to rely upon the mark as an indication of origin then this will establish acquired distinctiveness.[5]

- The fact that consumers may merely associate a shape with a particular undertaking is not sufficient to show acquired distinctiveness.[6]

- A significant proportion of the relevant consumers need to be educated that the sign has acquired distinctiveness.[7]

- If, to a real or hypothetical individual, a word or mark is ambiguous in the sense that it may be distinctive or descriptive then it cannot comply with the requirements of the Act for it will not provide the necessary distinction or guarantee.[8]

---

[3] See e.g. Case T-359/12 *Louis Vuitton Malletier v OHIM* and case law referred to at para [83].
[4] See e.g. *Societe des Produits Nestle SA v Cadbury UK Ltd* CoA [2017] EWCA Civ 358 at para [83] ('KIT KAT')
[5] 'KIT KAT' para [84]
[6] 'KIT KAT' para [87]
[7] This has recently been considered to be more than *de minimis* but less than half - *Mermeren Kombinat AD v Fox Marble Holdings PLC* EWHC 1408 (IPEC)
[8] Both the second and fourth principles are stated in *Bach and Bach Flower Remedies Trade Marks* [2000] RPC 513, paras [49] and [45] respectively.

- Acquired distinctiveness cannot be shown by reference only to general, abstract data such as predetermined percentages (see also *Windsurfing* (para [52]) case and others);

- The mark must have acquired distinctiveness through use throughout the territory of the UK;

- In assessing whether a trade mark has acquired a distinctive character, the competent authority must make an overall assessment of the relevant evidence, which in addition to the nature of the mark may include: (i) the market share held by goods bearing the mark; (ii) how intensive, geographically widespread and long-standing the use of the mark has been; (iii) the amount invested by the proprietor in promoting the mark; (iv) the proportion of the relevant class of persons who, because of the mark, identify the goods or services as emanating from the proprietor; (v) evidence from trade and professional associations; and (vi) (where the competent authority has particular difficulty in assessing the distinctive character) an opinion poll. If the relevant class of persons, or at least a significant proportion of them, identifies goods or services as originating from a particular undertaking because of the trade mark, it has acquired a distinctive character;[9]

- The position must be assessed at the date of application, being 8 April 2016.

- It is also recognised, of course, that acquired distinctiveness may arise as a result of the use of a sign as part, or a component of, another sign or in conjunction with another sign, but this is not inevitably the case and the evidence must be capable of supporting such a conclusion.[10]

Application of the legal principles regarding acquired distinctiveness

109 The analysis starts with the nature of the product itself, and as I have already said in my preliminary comments and above in regard to section 3(1)(b), this is a functional product (whether wet- or dry-fix), first and foremost. Aesthetic considerations, if they apply at all, are not as important as the product's utility, including its ease of fitting and compliance with building regulations.

110 There is no question that the applicant is a more-than-significant player in the market of wet and/or dry valley roofing troughs and has been for some while. Mr Childerhouse, for example, says that the product supplied by the applicant is one which is used by 99% of the roofing market. In correspondence, I asked about what I assumed to be competitor products and it turns out that even what may, at first sight, be assumed to be competitors' products are, in fact, produced by the applicant. But, as I know from the legal principles above, the case for acquired distinctiveness cannot be made by market dominance or share, abstract figures shown by invoices or turnover figures or, simply, extended use of the shape applied for.

[9] *Windsurfing*; Case C-342/97 *Lloyd Schuhfabrik Meyer & Co GmbH v Klijsen Handel BV* [1999] ECR I-1318 at [23], *Philips v Remington* at [60]-[62], *Libertel v Benelux-Merkenbureau* at [67], *Nestlé v Mars* at [31] and C-25/05P *August Storck KG v Office for Harmonisation in the Internal Market (Storck II)* [2006] ECR I-5719 at [75].

[10] See e.g. Case C353/03 Nestle [2005] ECR I-6135 para 30 and others

111 Primarily, as the case law tells me, the applicant must have *used the sign as a trade mark* and this, to me, is where the application falls at its very first hurdle. There is no evidence of consumers (or the applicant) relying upon the sign, in and of itself, as being a trade mark - either in a transactional context as mentioned in the KIT KAT case or, assuming it is possible, any other context for that matter.

112 The witnesses invariably attest to the fact that the sign is unique in some way to the applicant; they know of no other manufacturer who makes a trough to this particular configuration. But at best such evidence only makes the case that the witnesses may *associate* the shape of the product with the applicant. The KIT KAT case in the Court of Appeal emphatically says that this will not be enough.

113 I am still faced with the questions of *if* and *how* the applicant may have impacted upon the perceptions of the relevant consumer by its use of the sign as a trade mark. At paragraph 9 of his witness statement, Mr Avery speaks of the ridges as being:

> *"...an element inherited from a previous successful product of my Company, which required the application of mortar when the product was being fitted in situ. The decision was made when the mark was adopted that the four smaller ridges should remain to act as a feature which customers and prospective consumers would recognise as denoting a product of my company, being also reminiscent of the horns of the Danelaw Laminates Ltd branding."*

114 The language used by Mr Avery sounds calculated, he says the mark was 'adopted', and also, says the company believed the ridges situated either side of the upstand would signify to the consumer the origin of the product by virtue of their visual connection to the predecessor's 'Viking helmet' branding. In short, and to use Mr Avery's description, the ridges are said to be the applicant's 'signature'. However, if I am to accept this level of calculation or brand awareness, as dispelling any initial scepticism, I think Mr Avery's words need to be supported by the manner in which the applicant has promoted and used the shape.

115 It is reasonable to expect that, through its promotional material, the applicant would have drawn attention to the ridges in a manner which would signal to the consumer that they are to be regarded as indicating the origin of the product. It is not for me to be prescriptive about that manner; that is something over which there should be flexibility. But it could be, for example, that the ridges are in some way referenced to the Viking helmet, or that they are simply presented in some way such that the consumer would be left in no doubt that they are intended to be something more than a simple feature and, over and above that, to function as an indication of origin. Exhibit CJA 03 shows the Danelaw Branding as it was back in 1988, and this shows use of a Viking Helmet. However, as far as I am aware that exhibit is the only incidence of a Viking Helmet being used in the branding of the applicant or its predecessor. And even when Danelaw Ltd is using the device, no connection or link between the helmet and the shape of any product is made. The helmet obviously references and links to the word 'Danelaw', and no more than that. I have no difficulty in maintaining anything but a sceptical view as far as the claim that the shape 'brings to mind' the horns of a Viking helmet; the evidence simply does not support that contention.

116 It could be said that, in paradigm form, complete reliance upon a shape as a trade mark is achieved by use of that shape alone in promotional material. But I should remind myself that the case law to which I have referred above does not require this. However, I

am still left looking to see how the applicant may have used the sign as a trade mark, with or without other indications of origin.

117 The applicant draws my attention to the fact that some of the applicant's other products may also utilise two ridges (such as e.g. BONDING GUTTERS and soakers) but this is not enough. The fact is that many of the applicant's products do *not* utilise two ridges, and even if some of them do, it still does not take me to the point that I can conclude that the ridges are intended to be, and have the effect of, indicating the origin of the product.

118 Rather, the evidence shows me that, in its promotional material, the applicant has focussed upon the technical and practical benefits of 'dry-' over 'wet-' fix. Inevitably, only the technical characteristics of the product, and its mode of fixing, are highlighted; there is no mention of Viking helmets and nor is there indication that the ridges, in and of themselves or as part of the product, function as a means of indicating origin.

119 As far as I can see from the evidence, the product itself is treated (meaning, depicted and described) in exactly the same way as the applicant's other products. There is no mention of trade marks and, whilst perhaps in law there need not be, it is hard to see how the consumer will get any message from the promotional material that the ridges are anything other than a simple feature of the product (a technically redundant feature or otherwise), as distinct from being a trade mark. The only IP rights the applicant draws attention to in its promotional material are, in fact, its patents.

120 Taken as a whole then, I find, simply, that the evidence does not allow me to conclude that the applicant has used the sign as a trade mark and that this is inevitably fatal to the case for acquired distinctiveness.

Other comparable marks: equal treatment

121 Finally, I should mention that during the processing of the application, the applicant has drawn my attention to other registered trade marks which, it says, are on all fours with this application. The applicant mentions UK registration numbers 2172176, 3020207, 3020210 and 2633554, along with EU registration numbers 380253 and 9259128.

122 The strict legal position is that these registrations cannot be binding upon the Registrar, and to say otherwise would potentially be to open the door to the perpetuation of error. Further, I have no idea of the circumstances under which these registrations were accepted. Whilst I have considered the registrations, my view then is that they have not altered, in any way, the findings that I have already arrived at above and neither could they, in law.

Conclusion

123 The application is refused in its entirety under the alternative grounds of sections 3(2)(a), 3(2)(b) and 3(1)(b). Further, the proviso to section 3(1) cannot be relied upon.

Dated this 29th day of March 2018

Edward Smith
For the registrar
The Comptroller-General

(12) UK Patent (19) GB (11) 2 307 922 (13) B

(54) Title of Invention

Roof valley units

(51) INT CL*; **E04D 13/04**

(21) Application No
9618355.3

(22) Date of filing
03.09.1996

(30) Priority Data

(31) **9523934**

(32) **23.11.1995**

(33) **GB**

(60) Parent of Application No(s)
9913871.1
under Section 15(4) of the Patents Act 1977

(43) Application published
11.06.1997

45) Patent published
10.11.1999

(52) Domestic classification
(Edition Q)
E1D DDJ D120 D401 D501 D543

(56) Documents cited
GB2211867 A

(58) Field of search

As for published application 2307922 A *viz:*
UK CL(Edition O) **E1D DDJ DF120 DPD**
INT CL* **E04D**
updated as appropriate

(72) Inventor(s)
Norman J Pugh

(73) Proprietor(s)
Hambleside Danelaw Limited

(Incorporated in the United Kingdom)

2 Lancer House
Hussar Court
Waterberry Drive
Waterlooville
Hampshire
PO7 7SE
United Kingdom

(74) Agent and/or
Address for Service
Hepworth Lawrence Bryer & Bizley
Bloxam Court
Corporation Street
Rugby
Warwickshire
CV21 2DU
United Kingdom

1/4

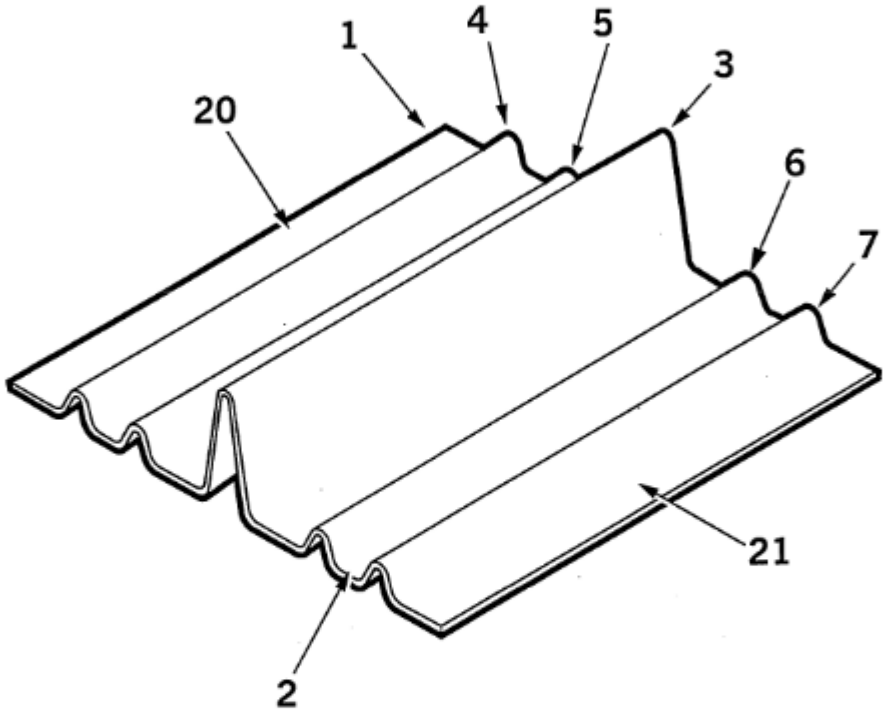


FIG. 1

2/4

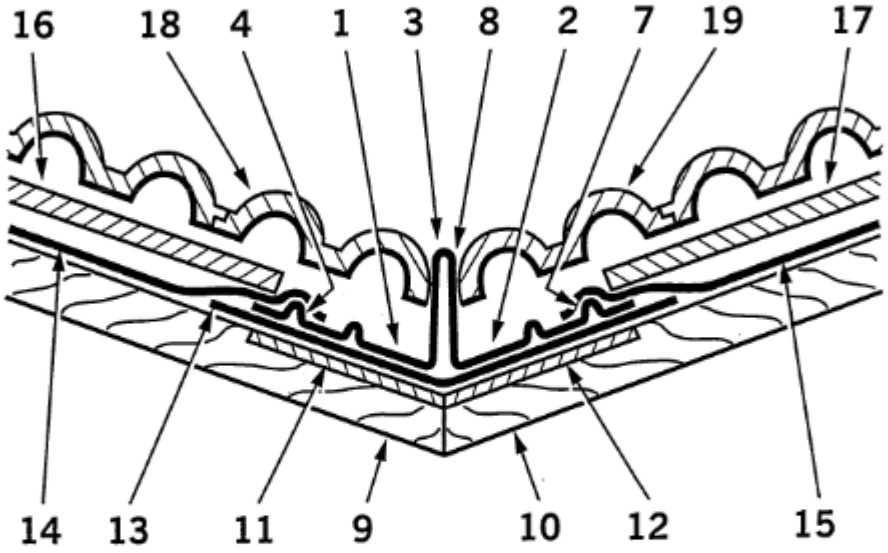


FIG. 2

3/4

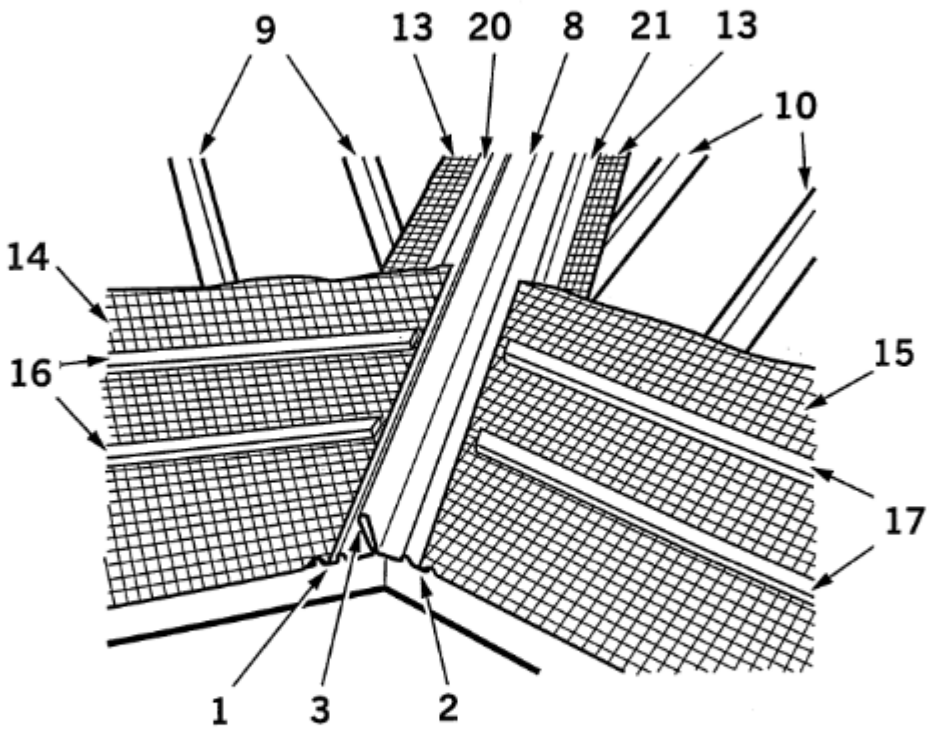


FIG. 3

4/4

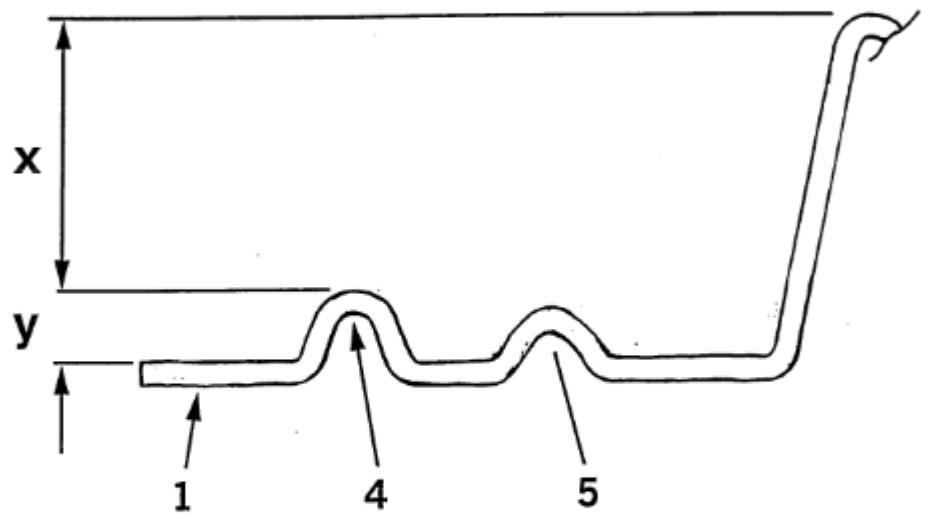


FIG. 4

ROOF VALLEY UNITS

The invention relates to roof valley units for installation at valleys between pitched roof sections.

Many buildings have a roof consisting of a plurality of overlapping shingles or coverings, for example slates or tiles. The shape of the roof and the overlapping of the shingles provides suitable drainage for precipitation. Conventional roofs have a support frame comprising inclined rafters meeting together at a ridge and supported at their lower ends on wall plates. The lower ends of the rafters are frequently tied together by cross beams to define an A frame or truss. Adjacent trusses or A frames are spanned by transversely extending battens which constitute the immediate support for the roof cladding elements, which are typically secured to the battens by fixings, usually pins or nails, driven through the cladding elements into the battens. The pattern of fixing roof cladding elements from the ridge to the eave typically comprises rows of staggered shingles, generally offset by one half their width from adjacent overlying and underlying rows.

Where two pitched roof sections meet a valley is created at the intersection which cannot easily be covered with cladding. This valley must be made watertight. Conventially, this is done by laying a row of trough tiles up the valley and filling the gaps between the trough tiles and the edge shingles or coverings of the adjacent roof sections with cement mortar. The edge shingles have to be cut at an angle. In more recent times, one or more elongate strips of suitably formed plastics material, possibly reinforced with glass fibres, have been used instead of the trough tiles, but the gap between this material and the edge tiles still needs to be filled with cement mortar. Such elongate strips or troughs may have a generally V or U shaped cross-section and are commonly known as valley troughs or strips.

The operation of filling the gaps with cement mortar is time-consuming and should not be performed in wet or frosty weather. It is unfortunately a common practice for excess mortar to be applied, resulting in spillage and possibly blocking of the trough.

It has therefore been much desired to construct valleys without using mortar (or "dry"), especially since all other roof areas can normally be constructed without mortar. To that end, various proposals have been made for "dry" valley troughs.

Valley troughs may be laid along the roof valley and attached to roof battens by pinning at their edges. Shingles are laid on top of the longitudinal edges of the valley trough. Thus some drainage and weather protection is provided at roofing section valleys. However, existing dry valley troughs have encountered problems in use and, despite considerable efforts to design acceptable dry valley troughs, an acceptable structure has not hitherto been found. A particular difficulty has been the transverse movement of water and debris such as leaves across the trough and under the shingles. If wet leaves collect beneath the shingles they will tend to cause a gradual decay in the roof by, for example, rotting the rafters or battens. This is a particular problem with tiled roofs since tiles generally have a thickness of the order to 2 cm, in contrast to thinner slates. When tiles are laid in the usual overlapping relation with one another, a relatively large gap is created beneath the tiles at the edge of the roof section at the step between one tile and its overlying neighbour. This gap can allow water and debris to collect beneath the tiles.

In an endeavour to enable valley units to be installed without mortar, designs have been made in which upstanding walls have been provided on either side of a central trough channel and shaped to provide a laterally facing longitudinal slot for receiving the edges of the shingles adjacent the valley. The upstanding walls are typically provided with through holes to permit water, but not large debris, to pass into the central channel. None of the "dry" valley units made hitherto has proved to be successful. Some designs have combined a propensity to let water and debris go under the shingles with a multi-part construction or a configuration which could have been especially designed not to be stackable.

GB 1 409 732 discloses a gulley comprising an elongate member of waterproof material with a central upstanding member and a masking member. There is a channel

either side of the central member formed from flanges extending laterally from the central member.

GB 2 211 867 discloses a valley trough comprising an elongate section having generally a shallow V shaped cross-section with an upstanding abutment extending longitudinally along the section substantially in the longitudinal centre. A gutter is located on each side of the abutment.

The prior art teaches the use of valley troughs to replace traditional methods explained above. However, there are problems associated with such use not disclosed in the prior art. For example a roof valley unit must be universal in application because of the wide selection of roof coverings and the requirement to fit with variable roof pitches and sizes. Secondly, for a valley unit to function, it must be adapted to provide drainage for both the roof covering and the under layer, e.g. felt, without deteriorating those materials. For example capillary attraction in felt is a common factor in its deterioration at soak away points. The prior art does not provide solutions to these problems.

By contrast the present inventor has, by going in a direction contrary to conventional thought, designed a "dry" valley unit which has proved successful in *in situ* trials even though it dispenses with features previously considered essential, such as a central channel to carry all the valley water

In one embodiment, the present invention provides a roof valley unit comprising lateral wing portions extending from respective sides of a longitudinally extending upstanding portion, each wing portion having a lateral margin in the form of a flat sheet area wherein the upstanding portion comprises opposed walls interconnected at an apex which is capable of acting as a hinge, such that the opposed walls may contact each other.

Preferably, the lateral margin is capable, when installed in a roof valley, of being positioned beneath an end region of a batten fixed to the roof.

The roof valley unit is preferably made in one piece. It is normally made of plastics material, for example extruded plastics material, and preferably with a low co-efficient of expansion reinforced by glass or other fibre. Alternatively, the roof valley unit is made of GRP (glass reinforced plastics - e.g. glass reinforced polyester) by a pultrusion process.

In one class of embodiments, the roof valley unit is made of flexible material.

Each wing portion is preferably provided with a longitudinally extending raised portion, e.g. a rib, intermediate the upstanding portion and the lateral margin of the wing portion. Preferably, each wing portion is provided with two, or possibly more than two, such raised portions in laterally spaced relationship.

The upstanding portion is preferably of such a height that it will extend above adjacent coverings when the valley unit is incorporated in a roof valley. Roof valley units having upstanding portions of different heights may therefore be made for tiles and slates. For tile roofs, the upstanding portion preferably has an apex at least 5 cm above the highest area of the wing portions, which usually means at least 5 cm above the raised portions (ribs) of the wings, preferably, the apex of the upstanding portion is at least 6 cm above the highest area of the wing portions (e.g. 6-7 cm) and is suitably about 6.5 cm thereabove. For slate roofs, whether of natural or artificial slate, the upstanding portion is desirably lower and preferably 4-5 cm e.g. 4.5 cm or more.

Roof valley units made of flexible plastics material may have wing portions which are generally planar in orientation when not flexed. The wing portions are capable of being flexed to a suitable relative angle when the unit is attached to a roof valley. In other embodiments the roof valley units are manufactured with wing portions which are oriented upwardly and outwardly.

The roof valley units of the invention are preferably stackable, but this is not essential.

In one class of embodiments, the roof valley unit is capable of being lapped at its ends by another said roof valley unit.

The invention further includes a method of making a roof valley unit of the invention, comprising extruding plastics material through an extrusion die shaped to extrude a said roof valley unit. It includes a method of making a roof valley unit of the invention from GRP (glass reinforced plastics e.g. glass reinforced polyester) by a pultrusion process.

In another aspect the invention provides a method of installing on a roof area a roof valley unit of the invention wherein the roof valley unit is located in the valley between two pitched roof sections and fastened to the roof area. Typically, a central region of the unit is pushed to the bottom of the valley such that the wings flex in an upward and outward direction and the sides of the upstanding portion are brought into contact with each other.

A preferred option is for the roofing underfelt to be cut to finish between the two raised portions or corrugations where applicable. The battens are connected to the roof and may overlay the roof valley units.

Preferably, roof coverings are applied such that edges of the coverings abut or juxtapose the upstanding portion of the roof valley unit, which edges may have been cut as necessary prior to the roof coverings being applied.

The present invention is further described by way of example only with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a roof valley unit of the invention;

Figure 2 is a schematic cross section through a roof valley incorporating the roof valley unit of Figure 1;

Figure 3 illustrates a partially constructed roof valley incorporating the roof valley unit of Figure 1; and

Figure 4 is an end elevation of a second roof valley unit of the invention.

Figure 1 illustrates a roof valley unit comprising lateral wings 1, 2 extending from respective sides of a longitudinally extending upstand 3, each wing having a lateral margin in the form of a flat sheet area capable, when installed in a roof valley, of being positioned beneath an end region of a batten fixed to the roof.

The upstanding portion comprises opposite walls interconnected at an apex capable of acting as a hinge which allows opposed walls to contact each other when in use.

In the illustrated embodiment the roof valley unit is made of flexible plastics material, which is desirably fibre-reinforced. It is most preferred that the unit be made of GRP (e.g. glass reinforced polyester) material, formed by pultrusion into an elongate strip. The roof valley unit is preferably made in one piece.

The wings 1, 2 of the flexible unit shown in Figure 1 have an approximately planar orientation in the unflexed state. Alternatively, the wings 1, 2 are raised towards their free edges; for example, they may be angled upwardly from the base of the upstand 3. In one class of embodiments the lateral edge portion of each wing is elevated.

The wings 1, 2 of preferred embodiments are each provided with at least one longitudinally oriented raised portion spaced from the upstand 3. Thus, Figure 1 shows that each wing 1, 2 has two longitudinally extending and spaced apart ribs 4, 5, 6, 7. The wings 1, 2 of preferred units have flat (not raised) side margins 20, 21.

Figure 2 is a schematic drawing which shows a dry valley unit of Figure 1 in position in a valley between two pitched roof sections. The roof valley unit is indicated by numeral 8. The Figure shows inclined rafters 9, 10 behind which a series of spaced apart rafters (not shown) form frameworks for the roof sections.

Layboards 11, 12 are shown to be disposed on the rafters 9, 10. Each layboard 11, 12 comprises an elongate wooden board extending over and supported by a multiplicity of rafters. The use of layboards in roof valleys incorporating a dry valley unit of the invention is optional but preferred.

A section of roofing felt 13 is preferred to be laid over the layboards 11, 12 but may be dispensed with. The roof valley unit 8 is seated over the felt 13. During installation, the roof valley unit 8 was pressed firmly into place such that the centre of the unit 8 (the base of the upstand 3) was pushed into the bottom of the valley and the wings 1, 2 flexed upwardly from the upstand 3; the roof valley unit 8 was then nailed into position. The roof valley unit 8 *in situ* forms a trough divided into two channels by a dam formed by the upstand 3. Preferably, the upstanding portion walls are brought into contact with each other by the use of the hinge 3a so the unit is in a state of tension before the roof valley unit is nailed into position.

In the illustrated arrangement sections of roofing felt 14, 15, each on a respective pitched roof section, each have an edge portion overlying an edge portion of a respective wing 1, 2 of the roof valley unit; the roofing felt sections 14, 15 extend over the laterally outer ribs 4, 7 of the roof valley unit.

Battens 16, 17 are seen to have end regions overlying side margins 20, 21 of each wing 1, 2 as do successive battens (not shown) of each roof section. The battens 16, 17 support tiles 18, 19. The upstand 3 preferably stands proud of adjacent tile edges.

Figure 3 shows a roof valley in the course of construction. Roofing felt 13 obscures underlying layboards and is in turn covered by a roof valley unit 8 secured to rafters 9, 10. Further sections of roofing felt 14, 15 have edge portions each overlying an edge

portion of a respective roof valley wing 1, 2. Battens 16, 17 have been cut to size for their ends to extend over the flat side margins 20, 21 of the roof valley unit 8 and been fixed at their ends by nailing to the supporting layboards. After the felt and battens have been secured to the roof frame, shingles are applied, their edges adjacent the valley being cut to abut or juxtapose the upstand 3. The upstand 3 is able to withstand small cuts therein.

In use, the upstand 3 acts as a barrier to resist passage of water and debris across the unit 8. Water and debris leaving the edge of a tile, such as tiles 18 and 19, are normally prevented by the upstand 3 from traversing to the opposite side of the valley from that on which the tile is located. Separate channels are formed on each side of the upstand 3, with the ribs 4, 5, 6, 7 as well as the inclined wings 1, 2 serving substantially to prevent water escaping sideways from the channels 1, 2.

It is important for the underfelt to be cut to finish over and within the outer channel created by the two corrugations in order so that the channels can collect moisture from the underfelt and avoid capillary attraction which would cause deterioration of the felt.

It will be appreciated that the upstand 3 preferably stands proud of the shingles. for the purpose of preventing water or debris leaving a roof section on one side of the upstand 3 and traversing the valley unit to the opposite side of the upstand 3. For tile roofs, it is preferred for the upstand to have an apex about 6-7 cm, e.g. 6.5 cm. above the highest area of the wings. The upstand may be higher than 7 cm but a greater height is excessive for ordinary tile roofs and not preferred. A lesser height may be acceptable, e.g. 5 cm.

Figure 4 is a partial end elevation of a preferred embodiment of the invention adapted for a tile roof. The undersides of the tiles rest on the apex of the outer rib 4. The separation y between the apex of the rib 4 and the upper surface of the wing 1 where it is not elevated is about 1.5 to 3 cm, e.g. about 2 cm.

The separation x between the apex of the rib 4 and the apex of the upstand 3 is preferably between 6 and 7 cm, most preferably about 6.5 cm. The width of the roof valley unit is typically between 30 and 50 cm and more preferably between 35 and 40 cm, e.g. 37 cm.

The inner rib 5 is slightly lower than the outer rib 4 in the illustrated embodiment, but such a configuration is not essential.

In trials, it has been proved that the invention enables provision of "dry" valley units which are effective in draining roof valleys without any noticeable water entering the structure of the roof. Not only is movement of water and debris across the valley unit controlled, but also the unit lacks the debris traps of some prior art proposals; moreover entry of debris into the water channels defined by the valley unit is normally restricted by a small separation between the upstand and adjacent shingle edges.

The unit should be universal in its application so that it will fit variable roof pitches and adapt to various roof coverings. Optionally, the unit can be manufactured into standard lengths being cut to the correct lengths in situ. The profile of the unit should enable overlapping end to end to form a close fitting joint.

The upstand 3 of preferred embodiments provides increased strength to the valley units of the invention by the shape of the upstand and the state of tension it is under and protects against damage to the valley by feet during construction or maintenance of a roof. The upstand also maintains an aesthetically pleasing straight line appearance to a roof valley, regardless of badly cut tiles. The roof valley units of preferred embodiments are readily stacked.

It will be seen that the present invention provides a roof valley unit comprising lateral wing portions extending from respective sides of a longitudinally extending upstanding portion, each wing portion having a lateral margin in the form of a flat sheet area, wherein the upstanding portion comprises opposed walls interconnected at

10

an apex capable of acting as a hinge such that the opposed walls may contact each other.

The invention enables provision of such a roof valley unit which is stackable.

5

CLAIMS

1. A roof valley unit comprising lateral wing portions extending from respective sides of a longitudinally extending upstanding portion, each wing portion having a lateral margin in the form of a flat sheet area, wherein the upstanding portion comprises opposed walls interconnected at an apex capable of acting as a hinge such that the opposed walls may contact each other.

2. A roof valley unit of claim 1 which is made in one piece.

3. A roof valley unit of claims 1 to 2, which is made of flexible material.

4. A roof valley unit of claim 3, wherein the flexible material is a plastics material with low co-efficient of expansion, for example fibre reinforced plastics.

5. A roof valley unit of claims 3 or 4 wherein the flexible material is GRP (e.g. glass reinforced polyester).

6. A roof valley unit of any of claims 3 to 5, wherein the wing portions are generally planar in orientation when not flexed.

7. A roof valley unit of claim 6, wherein the upstanding portion has an apex at least 4.5 cm above the highest area of the wing portions.

8. A roof valley unit of claim 7, wherein the upstanding portion has an apex about 6-7 cm above the highest area of the wing portions.

9. A roof valley unit of any of claims 1 to 5, wherein the wing portions are orientated upwardly and outwardly.

10. A roof valley unit of any of claims 1 to 9, wherein each wing portion is provided with a longitudinally extending raised portion intermediate the upstanding portion and the lateral margin of the wing portions.

11. A roof valley unit of claim 10, wherein each wing portion is provided with two said raised portions in laterally spaced relationship.

12. A roof valley unit of any of claims 1 to 11, which is stackable.

13. A roof valley unit according to any of the preceding claims which is capable of being lapped at its ends by another roof valley unit.

14. A roof valley unit according to any of the preceding claims wherein each lateral margin is capable when installed in a roof valley of being positioned beneath an end region of a batten fixed to the roof.

15. A roof valley unit substantially as hereinbefore described.

16. A roof valley unit substantially as hereinbefore described with reference to or as illustrated in Figures 1, 2, 3 or 4 of the accompanying drawings.

17. The use of a roof valley unit of any of claims 1 to 16 to construct a mortarless roof valley.

18. A mortarless roof valley comprising a roof valley unit of any of claims 1 to 16 whose margins are disposed beneath roof coverings edging the valley and which is secured to the roof frame.

19. A roof valley of claim 18, wherein the upstanding portion of the roof valley unit stands proud of the covering edges adjacent thereto.

20. A method of making a roof valley unit of any of claims 1 to 16 comprising extruding plastics material through an extrusion die shaped to extrude a said roof valley unit.

21. A method of making a roof valley unit of any of claims 1 to 16 comprising pultruding GRP.

22. A method of installing on a roof area a roof valley unit according to claims 1 to 16 wherein the roof valley unit is located in the valley between two pitched roof sections and fastened to the roof area.

23. A method according to claim 22, wherein a centre region of the unit is pushed to the bottom of the valley such that the wings flex in an upward and outward direction and the sides of the upstanding portion are brought into contact with each other.

24. A method according to claim 23, wherein roof coverings are applied to the roof area such that edges of the coverings abut or juxtapose the upstanding portion of the roof valley unit which edges may have been cut as necessary prior to the roof coverings being applied.

(12) UK Patent (19) GB (11) 2 334 980 (13) B

(54) Title of Invention

Roof valley strips

(51) INT CL[6]: E04D 13/04

(21) Application No
9913871.1

(22) Date of filing
03.09.1996

(22) Date Lodged
16.06.1999

(30) Priority Data

(31) 9523934

(32) 23.11.1995

(33) GB

(62) Divided from Application No. 9618355.3 under Section 15(4) of the Patents Act 1977

(43) Application published
08.09.1999

(45) Patent published
26.04.2000

(52) Domestic classification (Edition R)
E1D DDJ D120 D401 D501 D543

(56) Documents cited
GB2211867 A
GB1409732 A
EP0383604 A
WO95/02097 A1

(58) Field of search

As for published application 2334980 A *viz:*
UK CL(Edition Q) E1D DDJ DF120 DPD
INT CL[6] E04D 1/30 13/00 13/04
Online: WPI, PAJ, EPODOC updated as appropriate

(72) Inventor(s)
Norman J Pugh

(73) Proprietor(s)
Hambleside Danelaw Limited

(Incorporated in the United Kingdom)

2 Lancer House
Hussar Court
Waterberry Drive
Waterlooville
Hampshire
PO7 7SE
United Kingdom

(74) Agent and/or Address for Service
Hepworth Lawrence Bryer & Bizley
Bloxam Court
Corporation Street
Rugby
Warwickshire
CV21 2DU
United Kingdom

1/4

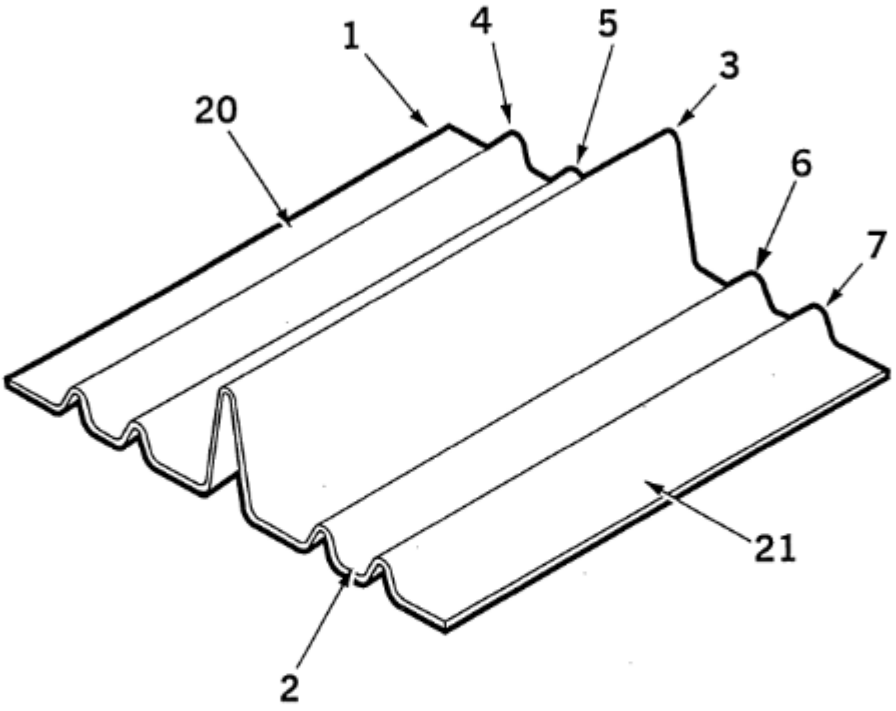


FIG. 1

2/4

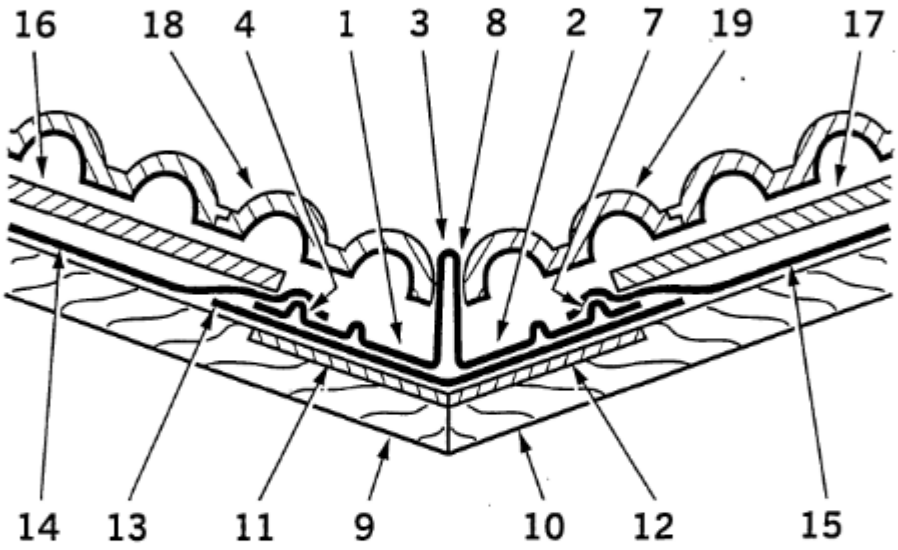


FIG. 2

3/4

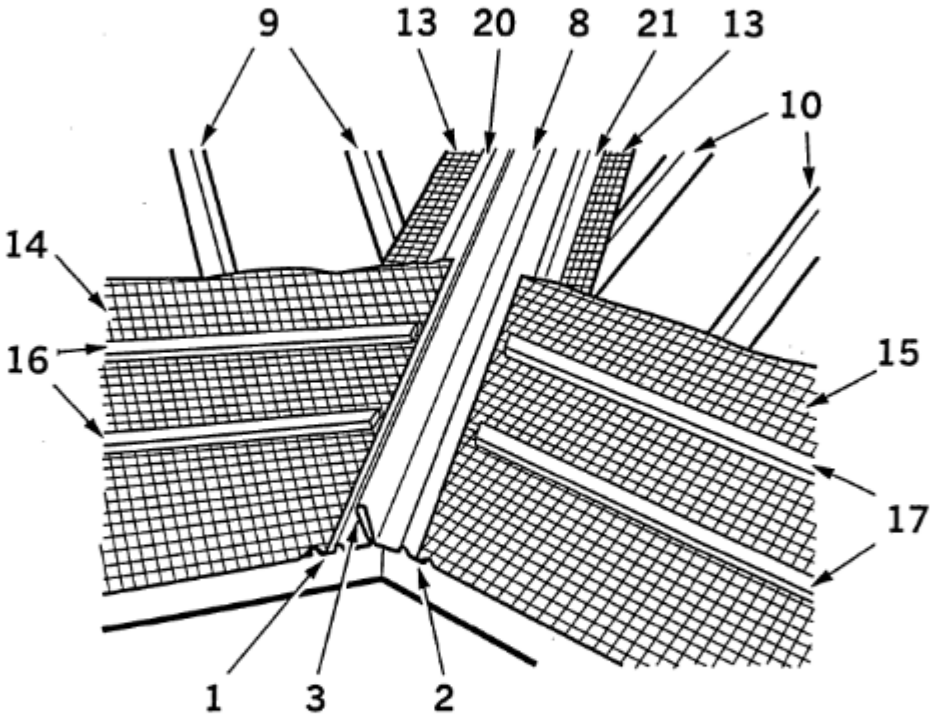


FIG. 3

4/4

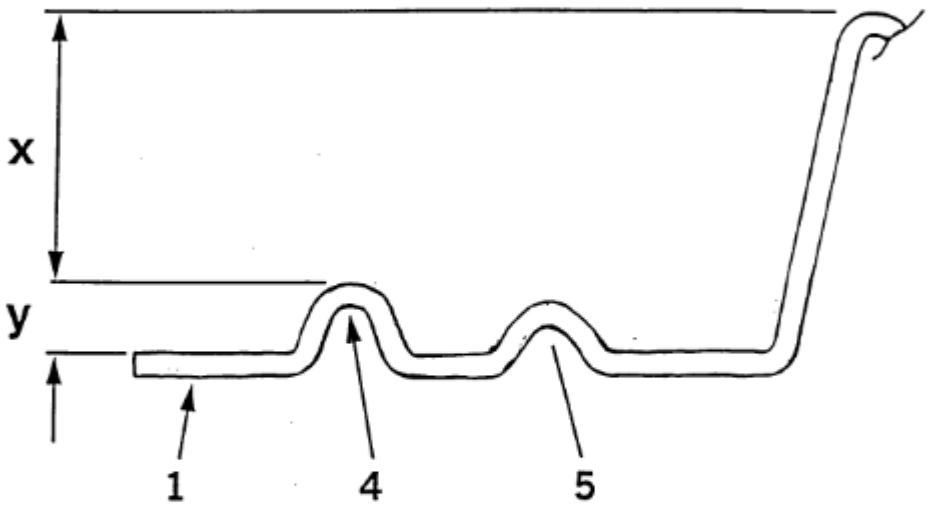


FIG. 4

1

ROOF VALLEY STRIPS

The invention relates to roof valley strips for installation at valleys between pitched roof sections.

Many buildings have a roof consisting of a plurality of overlapping shingles or coverings, for example slates or tiles. The shape of the roof and the overlapping of the shingles provides suitable drainage for precipitation. Conventional roofs have a support frame comprising inclined rafters meeting together at a ridge and supported at their lower ends on wall plates. The lower ends of the rafters are frequently tied together by cross beams to define an A frame or truss. Adjacent trusses or A frames are spanned by transversely extending battens which constitute the immediate support for the roof cladding elements, which are typically secured to the battens by fixings, usually pins or nails, driven through the cladding elements into the battens. The pattern of fixing roof cladding elements from the ridge to the eave typically comprises rows of staggered shingles, generally offset by one half their width from adjacent overlying and underlying rows.

Where two pitched roof sections meet a valley is created at the intersection which cannot easily be covered with cladding. This valley must be made watertight. Conventionally, this is done by laying a row of trough tiles up the valley and filling the gaps between the trough tiles and the edge shingles or coverings of the adjacent roof sections with cement mortar. The edge shingles have to be cut at an angle. In more recent times, one or more elongate strips of suitably formed plastics material, possibly reinforced with glass fibres, have been used instead of the trough tiles, but the gap between this material and the edge tiles still needs to be filled with cement mortar. Such elongate strips or troughs may have a generally V or U shaped cross-section and are commonly known as valley troughs or strips.

The operation of filling the gaps with cement mortar is time-consuming and should not be performed in wet or frosty weather. It is unfortunately a common practice for excess mortar to be applied, resulting in spillage and possibly blocking of the trough.

It has therefore been much desired to construct valleys without using mortar (or "dry"), especially since all other roof areas can normally be constructed without mortar. To that end, various proposals have been made for "dry" valley troughs.

Valley troughs may be laid along the roof valley and attached to roof battens by pinning at their edges. Shingles are laid on top of the longitudinal edges of the valley trough. Thus some drainage and weather protection is provided at roofing section valleys. However, existing dry valley troughs have encountered problems in use and, despite considerable efforts to design acceptable dry valley troughs, an acceptable structure has not hitherto been found. A particular difficulty has been the transverse movement of water and debris such as leaves across the trough and under the shingles. If wet leaves collect beneath the shingles they will tend to cause a gradual decay in the roof by, for example, rotting the rafters or battens. This is a particular problem with tiled roofs since tiles generally have a thickness of the order to 2 cm, in contrast to thinner slates. When tiles are laid in the usual overlapping relation with one another, a relatively large gap is created beneath the tiles at the edge of the roof section at the step between one tile and its overlying neighbour. This gap can allow water and debris to collect beneath the tiles.

In an endeavour to enable valley units to be installed without mortar, designs have been made in which upstanding walls have been provided on either side of a central trough channel and shaped to provide a laterally facing longitudinal slot for receiving the edges of the shingles adjacent the valley. The upstanding walls are typically provided with through holes to permit water, but not large debris, to pass into the central channel. None of the "dry" valley units made hitherto has proved to be successful. Some designs have combined a propensity to let water and debris go under the shingles with a multi-part construction or a configuration which could have been especially designed not to be stackable.

GB 1 409 732 discloses a gully comprising an elongate member of waterproof material with a central upstanding member and a masking member. There is a

channel either side of the central member formed from flanges extending laterally from the central member.

GB 2 211 867 discloses a valley trough comprising an elongate section having generally a shallow V shaped cross-section with an upstanding abutment extending longitudinally along the section substantially in the longitudinal centre. A gutter is located on each side of the abutment.

The prior art teaches the use of valley troughs to replace traditional methods explained above. However, there are problems associated with such use not disclosed in the prior art. For example a roof valley unit must be universal in application because of the wide selection of roof coverings and the requirement to fit with variable roof pitches and sizes. Secondly, for a valley unit to function, it must be adapted to provide drainage for both the roof covering and the under layer, e.g. felt, without deteriorating those materials. For example capillary attraction in felt is a common factor in its deterioration at soak away points. The prior art does not provide solutions to these problems.

By contrast the present inventor has, by going in a direction contrary to conventional thought, designed a "dry" valley strip which has proved successful in *in situ* trials even though it dispenses with features previously considered essential, such as a central channel to carry all the valley water

In one embodiment, the present invention provides a roof valley strip, comprising a sole having first and second ends and opposed sides, the sole being provided in a central region thereof with raised barrier means extending between said first and second ends and having on each side of the barrier means a lateral portion for forming a channel base for water and a lateral margin wherein at least one upstanding corrugation lies between the channel base and the lateral margin. Preferably the channel base and lateral margin may be capable of lying in generally the same plane. Alternatively the channel and lateral margin may lie in generally different planes.

According to an optional feature of this aspect of the invention two upstanding corrugations may lie between the channel base and the lateral margin.

According to another optional feature of this aspect of the invention a roof valley strip may be made in one piece.

According to a further optional feature of this aspect of this invention a roof valley strip may be made of flexible material. Preferably the flexible material may be a plastics material with low co-efficient of expansion, for example fibre reinforced plastics.

According to an optional feature of this aspect of the invention the flexible material may be GRP (e.g. glass reinforced polyester).

The barrier means is preferably of such a height that it will extend above adjacent coverings when the valley strip is incorporated in a roof valley. Roof valley strips having barrier means of different heights may therefore be made for tiles and slates. For tile roofs, the barrier means preferably has an apex of at least 5 cm above the highest area of the lateral portions, which usually means at least 5 cm above the corrugations of the lateral portions, preferably, the apex of the barrier means is at least 6 cm above the highest area of the lateral portion (e.g. 6-7 cm) and is suitably about 6.5 cm thereabove. For slate roofs, whether of natural or artificial slate, the barrier means is desirably lower and preferably 4-5 cm e.g. 4.5 cm or more.

According to a further optional feature of this aspect of the invention the lateral portions may be orientated upwardly and outwardly.

According to yet another optional feature of this aspect of the invention a roof valley strip may be capable of being lapped at its ends by another roof valley strip.

According to yet another optional feature of this aspect of the invention each lateral margin may be capable when installed in a roof valley of being positioned beneath an end region of a batten fixed to the roof.

According to yet another optional feature of this aspect of the invention the roof valley strip may be used to construct a mortarless roof valley.

According to another optional feature of this aspect of the invention of the invention there is provided a mortarless roof valley comprising a roof valley strip whose margins are disposed beneath roof coverings edging the valley and which is secured to the roof frame. Preferably, the barrier means of the valley strip may stand proud of the covering edges adjacent thereto.

Another optional feature of this aspect of the invention provides method of making a roof valley which may comprise extruding plastics material through an extrusion die shaped to extrude a said roof valley strip.

A further optional feature of this aspect of the invention provides a method of making a roof valley strip which may comprise pultruding GRP.

A yet further optional feature of this aspect of the invention provides a method of installing on a roof area a roof valley strip wherein the roof valley strip may be located in the valley between two pitched roof sections and fastened to the roof area. Preferably a centre region of the strip is pushed to the bottom of the valley such that the margins flex in an upward direction. The roofing underfelt is preferably cut to finish between two corrugations on each lateral portion

An optional feature of this aspect of the invention provides a method wherein roof coverings may be applied to the roof area such that edges of the coverings abut or juxtapose the barrier means of the roof valley strip, which edges may have been cut as necessary prior to the roof coverings being applied.

The present invention is further described by way of example only with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a roof valley strip of the invention;

Figure 2 is a schematic cross section through a roof valley incorporating the roof valley strip of Figure 1;

Figure 3 illustrates a partially constructed roof valley incorporating the roof valley strip of Figure 1; and

Figure 4 is an end elevation of a second roof valley strip of the invention.

Figure 1 illustrates a roof valley strip comprising lateral portions 1, 2 extending from respective sides of a longitudinally extending upstanding barrier means 3, each lateral portion having a lateral margin in the form of a flat sheet area capable, when installed in a roof valley, of being positioned beneath an end region of a batten fixed to the roof.

The upstanding portion comprises opposite walls interconnected at an apex capable of acting as a hinge which allows opposed walls to contact each other when in use.

In the illustrated embodiment the roof valley strip is made of flexible plastics material, which is desirably fibre-reinforced. It is most preferred that the strip be made of GRP (e.g. glass reinforced polyester) material, formed by pultrusion into an elongate strip. The roof valley strip is preferably made in one piece.

The lateral portions 1, 2 of the flexible strip shown in Figure 1 have an approximately planar orientation in the unflexed state. Alternatively, the portions 1, 2 are raised towards their free edges; for example, they may be angled upwardly from the base of the barrier means 3. In one class of embodiments the lateral margin of each lateral portion is elevated.

The lateral portions 1, 2 of preferred embodiments are each provided with at least one longitudinally oriented raised portion spaced from the barrier means 3. Thus, Figure 1 shows that each portion 1, 2 has two longitudinally extending and spaced apart corrugations 4, 5, 6, 7. The lateral portions 1, 2 of preferred strips have flat (not raised) lateral margins 20, 21.

Figure 2 is a schematic drawing which shows a dry valley strip of Figure 1 in position in a valley between two pitched roof sections. The roof valley strip is indicated by numeral 8. The Figure shows inclined rafters 9, 10 behind which a series of spaced apart rafters (not shown) form frameworks for the roof sections.

Layboards 11, 12 are shown to be disposed on the rafters 9, 10. Each layboard 11, 12 comprises an elongate wooden board extending over and supported by a multiplicity of rafters. The use of layboards in roof valleys incorporating a dry valley strip of the invention is optional but preferred.

A section of roofing felt 13 is preferred to be laid over the layboards 11, 12 but may be dispensed with. The roof valley strip 8 is seated over the felt 13. During installation, the roof valley strip 8 was pressed firmly into place such that the centre of the strip 8 (the base of the barrier means 3) was pushed into the bottom of the valley and the lateral portions 1, 2 flexed upwardly from the barrier means 3; the roof valley strip 8 was then nailed into position. The roof valley strip 8 *in situ* forms a trough divided into two channels by a dam formed by the barrier means 3. Preferably, the walls of the barrier means are brought into contact with each other by the use of the hinge 3a so the strip is in a state of tension before the roof valley strip is nailed into position.

In the illustrated arrangement sections of roofing felt 14, 15, each on a respective pitched roof section, each have an margin overlying an margin of a respective lateral portions 1, 2 of the roof valley strip; the roofing felt sections 14, 15 extend over the laterally outer corrugations 4, 7 of the roof valley strip.

Battens 16, 17 are seen to have end regions overlying lateral margins 20, 21 of each lateral portion 1, 2 as do successive battens (not shown) of each roof section. The battens 16, 17 support tiles 18, 19. The barrier means 3 preferably stands proud of adjacent tile edges.

Figure 3 shows a roof valley in the course of construction. Roofing felt 13 obscures underlying layboards and is in turn covered by a roof valley strip 8 secured to rafters 9, 10. Further sections of roofing felt 14, 15 have margins each overlying an margin of a respective roof valley lateral portion 1, 2. Battens 16, 16', 17 , 17' have been cut to size for their ends to extend over the flat lateral margins 20, 21 (or fixing strip) of the roof valley strip 8 and been fixed at their ends by nailing to the supporting layboards. After the felt and battens have been secured to the roof frame, shingles are applied, their edges adjacent the valley being cut to abut or juxtapose the barrier means 3. The barrier means 3 is able to withstand small cuts therein.

In use, the barrier means 3 acts as a barrier to resist passage of water and debris across the strip 8. Water and debris leaving the edge of a tile, such as tiles 18 and 19, are normally prevented by the barrier means 3 from traversing to the opposite side of the valley from that on which the tile is located. Separate channels are formed on each side of the barrier means 3, with the corrugations 4, 5, 6, 7 as well as the inclined lateral portions 1, 2 serving substantially to prevent water escaping sideways from the channels 1, 2 thereby formed.

It is important for the underfelt to be cut to finish over and within the outer channel created by the two corrugations in order so that the channels can collect moisture from the underfelt and avoid capillary attraction which would cause deterioration of the felt.

It will be appreciated that the barrier means 3 preferably stands proud of the shingles, for the purpose of preventing water or debris leaving a roof section on one side of the barrier means 3 and traversing the valley strip to the opposite side of the barrier means 3. For tile roofs, it is preferred for the barrier means to have an apex about 6-7 cm,

e.g. 6.5 cm, above the highest area of the lateral portions. The barrier means may be higher than 7 cm but a greater height is excessive for ordinary tile roofs and not preferred. A lesser height may be acceptable, e.g. 5 cm.

Figure 4 is a partial end elevation of a preferred embodiment of the invention adapted for a tile roof. The undersides of the tiles rest on the apex of the outer corrugation 4. The separation y between the apex of the corrugation 4 and the upper surface of the lateral portion 1 where it is not elevated is about 1.5 to 3 cm, e.g. about 2 cm.

The separation x between the apex of the corrugation 4 and the apex of the barrier means 3 is preferably between 6 and 7 cm, most preferably about 6.5 cm. The width of the roof valley strip is typically between 30 and 50 cm and more preferably between 35 and 40 cm, e.g. 37 cm.

The inner corrugation 5 is slightly lower than the outer corrugation 4 in the illustrated embodiment, but such a configuration is not essential.

In trials, it has been proved that the invention enables provision of "dry" valley strips which are effective in draining roof valleys without any noticeable water entering the structure of the roof. Not only is movement of water and debris across the valley strip controlled, but also the strip lacks the debris traps of some prior art proposals; moreover entry of debris into the water channels defined by the valley strip is normally restricted by a small separation between the barrier means and adjacent shingle edges.

The strip should be universal in its application so that it will fit variable roof pitches and adapt to various roof coverings. Optionally, the strip can be manufactured into standard lengths being cut to the correct lengths in situ. The profile of the strip should enable overlapping end to end to form a close fitting joint.

The barrier means 3 of preferred embodiments provides increased strength to the valley strips of the invention by the shape of the barrier means and the state of tension it is under and protects against damage to the valley by feet during construction or

maintenance of a roof. The barrier means also maintains an aesthetically pleasing straight line appearance to a roof valley, regardless of badly cut tiles. The roof valley strips of preferred embodiments are readily stacked.

It will be seen that the present invention provides a roof valley strip, comprising a base having first and second ends and opposed sides, the base being provided in a central region thereof with raised barrier means extending between said first and second ends, and having on each side of the barrier means a lateral portion for forming a channel for water and a lateral margin wherein at least one upstanding corrugation lies between the channel base and the lateral margin.

CLAIMS

1. A roof valley strip, comprising a sole having first and second ends and opposed sides, the sole being provided in a central region thereof with raised barrier means extending between said first and second ends and having on each side of the barrier means a lateral portion for forming a channel base for water and a lateral margin wherein at least one upstanding corrugation lies between the channel base and the lateral margin.

2. A roof valley strip of claim 1, wherein the channel base and lateral margin are capable of lying in generally the same plane.

3. A roof valley strip of claim 1 wherein the channel and lateral margin lie in generally different planes.

4. A roof valley strip of any preceding claim wherein two upstanding corrugations lie between the channel base and the lateral margin.

5. A roof valley strip of any preceding claim which is made in one piece.

6. A roof valley strip of any preceding claim which is made of flexible material.

7. A roof valley strip of claim 6 wherein the flexible material is a plastics material with low co-efficient of expansion, for example fibre reinforced plastics.

8. A roof valley strip of claim 6 or claim 7 wherein the flexible material is GRP (e.g. glass reinforced polyester).

9. A roof valley strip of any preceding claim wherein the barrier means has a highest point at least 4.5cm above the highest area of the lateral portions.

10. A roof valley strip of claim 9, wherein the barrier means has a highest point about 6-7cm above the highest area of the lateral portions.

11. A roof valley strip of any preceding claim wherein the lateral portions are orientated upwardly and outwardly.

12. A roof valley strip according to any of the preceding claims which is capable of being lapped at its ends by another roof valley strip.

13. A roof valley strip according to any of the preceding claims wherein each lateral margin is capable when installed in a roof valley of being positioned beneath an end region of a batten fixed to the roof.

14. The use of a roof valley strip of any of claims 1 to 13 to construct a mortarless roof valley.

15. A mortarless roof valley comprising a roof valley strip of any of claims 1 to 13 whose margins are disposed beneath roof coverings edging the valley and which is secured to the roof frame.

16. A roof valley of claim 15 wherein the barrier means of the valley strip stands proud of the covering edges adjacent thereto.

17. A method of making a roof valley strip of any of claims 1 to 13 comprising extruding plastics material through an extrusion die shaped to extrude a said roof valley strip.

18. A method of making a roof valley strip of any of claims 1 to 13 comprising pultruding GRP.

19. A method of installing on a roof area a roof valley strip according to claims 1 to 13 wherein the roof valley strip is located in the valley between two pitched roof sections and fastened to the roof area.

20. A method according to claim 19 wherein a centre region of the strip is pushed to the bottom of the valley such that the margins flex in an upward direction.

21. A method according to claim 20 wherein roofing underfelt is cut to finish between two corrugations on each lateral portion

22. A method according to any one of claims 20 to 21 wherein roof coverings are applied to the roof area such that edges of the coverings abut or juxtapose the barrier means of the roof valley strip, which edges may have been cut as necessary prior to the roof coverings being applied.