

OPINION UNDER SECTION 74A

Patent	GB 2508152 B
Proprietor(s)	Albertus Abraham Petrus de Groot
Exclusive Licensee	
Requester	Albright IP Limited
Observer(s)	
Date Opinion issued	15 December 2015

The request

1. The comptroller has been requested by Albright IP Limited (“the Requester”) to issue an opinion as to whether patent GB2508152 (“the Patent”) is valid in light of prior art referred to by the Requester.
2. A request was received from the Requester on 29 September 2015. The request was accompanied by a statement explaining their request as well as copies of five prior art documents as follows:

D1: GB patent application GB2446406 A. The Requester asserts that claim 1 of the Patent is not new in light of this document.

D2: UK Registered Design 2085347. Again the Requester asserts that claim 1 of the Patent is not new in light of this document.

D3: Web page, <http://www.wheelsafety.co.uk/history-wheelnutindicator/>

D4: Web page, <http://www.wheel-check.com/installation.html>

D5: YouTube (RTM) video, <https://www.youtube.com/watch?v=l4iWawNHanc>
<http://tinyurl.com/vosa-vid>

The Requester asserts that claim 1 of the Patent is obvious from the disclosure in D3 in light of common general knowledge illustrated in D4 and D5.

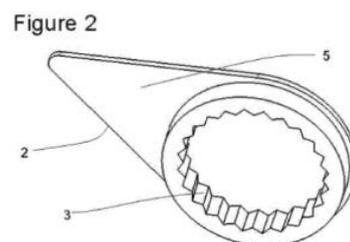
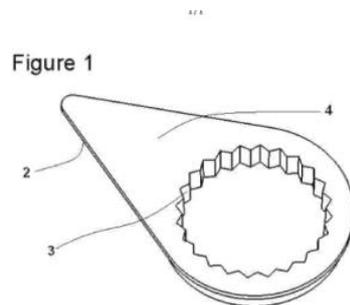
Observations & Observations in reply

3. No observations were received regarding this Opinion and therefore there were also

no observations in reply.

The Patent

4. The Patent entitled 'Double sided indicator' was filed on 21 November 2012. The Patent was granted on 26 November 2014 and is still in force.
5. The Patent relates to a device for indicating loosening of wheel nuts or wheel bolts used to fasten a vehicle wheel to a rotating hub. Such a device is often called a 'wheel nut indicator' and is employed particularly on large vehicles such as trucks, trailers and buses. The device of the Patent fits on the wheel nut or wheel bolt by an inner mating surface 3 (see Figures 1 and 2 of the Patent reproduced below). The device has a pointed end forming a pointer 4. As the nut or bolt loosens the device rotates and the degree of rotation can be checked by noting the position of the pointer relative to a reference position. The Patent explains that it is common to first fit such a device with a pointer having, say, a red colour. After re-torquing, another device of a different colour, say, yellow may be fitted. In the device of the Patent the pointer has a different colour each side 4, 5. Alternatively there are different marks, text or numbers on each side of the pointer. In this way, by distinguishing the two sides of the pointer, it is possible to use a single device rather than two.



6. There are 8 claims including one independent claim, claim 1, which reads as follows:
1. A device, for indicating relative rotational displacement between a first member and a second member sharing a common rotational axis, comprising a body for engaging the second member and a fine-tuning pointer, such that each side of the pointer has a different indication.

7. I will consider first the validity of claim 1. Only if I find it to be invalid will I consider the validity of the dependent claims.

Validity – the law

8. For a patent to be valid it must be both new and involve an inventive step. Section 1(1)(a) & (b) of the Patents Act 1977 reads:

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

- (a) the invention is new;*
- (b) it involves an inventive step;*

9. The relevant provisions in relation to novelty are found in section 2(1) and section 2(2) which read:

2(1) An invention shall be taken to be new if it does not form part of the state of the art.

2(2) The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.

10. The provisions in relation to inventive step are found in section 3 which states:

3 An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

Construction of claim 1

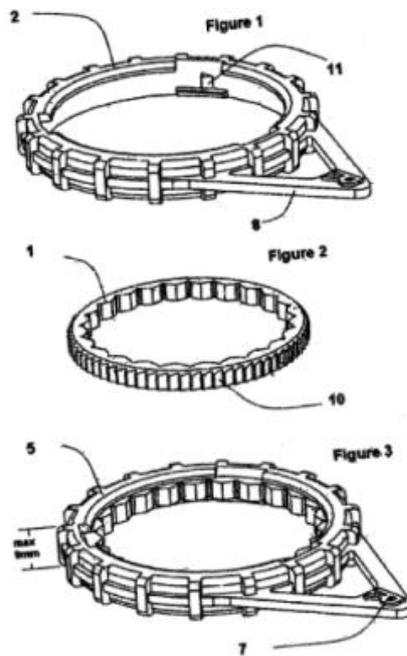
11. I will begin by determining whether claim 1 is novel in light of the prior art referenced above.
12. In order to do this I first need to construe claim 1 of the Patent following the well known authority on claim construction which is *Kirin-Amgen and others v Hoechst Marion Roussel Limited and others* [2005] RPC 9. This requires that I put a purposive construction on the claim, interpret it in the light of the description and drawings as instructed by section 125(1) of the Act and take account of the Protocol to Article 69 of the EPC. Simply put, I must decide what a person skilled in the art would have understood the patentee to have used the language of the claim to mean.
13. I consider the person skilled in the art to be a person familiar with the design, manufacture and use of indicator devices for indicating the loosening of nuts/bolts on vehicle wheels.

14. Claim 1 has a number of features. It is useful to break down the claim and consider each feature in turn.
15. (i) *“A device, for indicating relative rotational displacement between a first member and a second member sharing a common rotational axis”*. The Requester has stated that he finds the statement that the first and second members share a common rotational axis odd in the context of a wheel which rotates on one axis and a wheel nut which is not concentric with the wheel. However, I think the skilled person on reading the Patent will realise that the first member is simply a stud or the like on a rotating hub and the second member is a nut or bolt. The two members are employed to fasten a wheel to the hub. These two members will share a common rotational axis through the centre of each. Therefore I consider this feature to require the device to be suitable for indicating the relative rotational displacement between a first member (e.g. a stud) and a second member (e.g. a nut or bolt).
16. (ii) *“comprising a body for engaging the second member”*. The device must have a body suitable for engaging with the nut or bolt. For example from the Figures of the Patent the body has a hole with inner mating surfaces 3.
17. (iii) *“and a fine-tuning pointer,”* The Requestor has highlighted that it is not clear what makes a pointer a “fine-tuning pointer”. I agree that this feature is not clearly defined. From the description it is clear that the pointer 2 is the pointed end of the body of the device. However, there is no mention in the description of the pointer being a “fine-tuning” pointer. Therefore I consider that this feature should just relate to a pointer of any sort whether it can be considered ‘fine-tuning’ or not as long as it can indicate relative rotational displacement between the two members.
18. (iv) *“such that each side of the pointer has a different indication.”* From a direct reading of the claim this feature requires each side of the pointer to have a different indication or marking. This is confirmed from the description where we are told that each side of the pointer has a different colour or has different markings such as digits, text, numbers etc. The description further explains that the different indication is used to distinguish the two sides of the pointer and allows a single device to be used rather than two by simply turning the device over. Therefore I interpret this feature such that each side of the pointer has a different indication (colour, text, number etc) so that the two sides of the pointer are distinguishable.
19. In order for claim 1 to be anticipated (i.e. not novel) all of these features must be disclosed by a single piece of prior art.

Assessment of the prior art

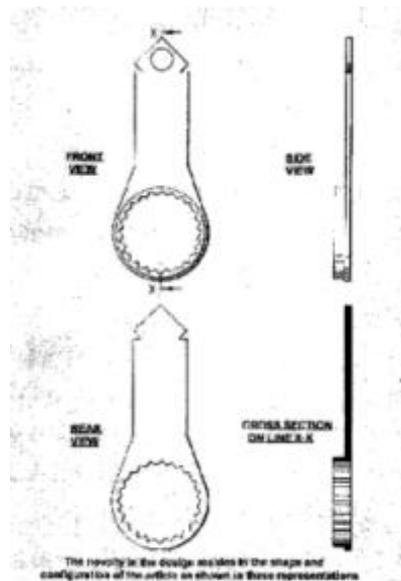
20. As detailed above, the Requester has referred to five pieces of prior art.
21. I will begin by considering D1 and whether it anticipates claim 1. Patent application D1 discloses a device for indicating a rotational position of a nut relative to a threaded stud used in attaching a vehicle wheel to a rotatable hub. The device comprises a body 1 and a pointer 8 which are assembled together to form a single device 5 (see Figures 1-3 reproduced below). The inner ring of the body is designed to lock the device to the nut. The device has an additional feature in that the pointer

can be manually rotated relative to the body in one direction but not the other. The device is attached to the nut so that the allowed rotation is in the opposite direction to the thread of the stud. If the nut loosens the device also rotates. During a torque check, the device can be re-set by manually moving the pointer in the opposite direction to the thread without having to remove the device. In order to accommodate both left-handed and right-handed threads the device must be used the correct way up. The Patent explains that 'To fit the proper way in relation to the threat [sic] of the studs, both sides are marked (7).' From the Figure we see that an 'R' is marked on one side of the pointer. Although not shown, presumably the device has an 'L' or similar marked on the other side.



22. Referring back to claim 1, this device clearly discloses features (i) to (iii). Regarding the last feature "*such that each side of the pointer has a different indication*" the pointer has an 'R' on one side and possibly an 'L' on the other but certainly has a different indication on each side. With the inclusion of these markings the two sides of the pointer are distinguishable. I note the Patent envisages 'marks, digits, text or numbers' as suitable indications. Therefore claim 1 is not novel in light of this disclosure.

23. Moving on to D2, this is a UK Registered Design entitled 'Indicator device, primarily for vehicle wheels'. The disclosure simply includes four different views of the device, reproduced below, namely a front view, rear view, side view and a cross-section. The skilled person would recognize the device as a wheel nut indicator i.e. one for indicating relative rotational displacement between a nut or bolt and stud. I agree with the Requester that it further has a body including an aperture with a serrated inner surface for engaging with a nut or bolt. It also clearly has a pointer. Therefore D2 discloses features (i) – (iii) of claim 1.



24. Regarding feature (iv), from the rear view and front view of the device of D2, the device has a circle on the front of the pointer which is not present in the rear view. Therefore the pointer has a different indication on each side. This would result in the two sides of the pointer being distinguishable. I note again that the Patent envisages 'marks, digits, text or numbers' as suitable indications. Therefore I consider the disclosure of D2 to further satisfy feature (iv) and therefore anticipate claim 1.
25. I will now consider whether claim 1 is obvious in light of D3 as asserted by the Requester.
26. The Court of Appeal in *Windsurfing*¹ formulated a four-step approach for assessing whether an invention is obvious to a person skilled in the art. This approach was restated and elaborated upon by the Court of Appeal in *Pozzoli*.² Here, Jacob LJ reformulated the *Windsurfing* approach as follows:
- (1)(a) *Identify the notional "person skilled in the art"*
 - (1)(b) *Identify the common general knowledge of that person;*
 - (2) *Identify the inventive concept of the claim in question or if that cannot be readily done, construe it;*
 - (3) *Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed.*
 - (4) *Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps that would have been obvious to the person skilled in the art or do they require any degree of invention?*
27. I will therefore use this *Windsurfing/Pozzoli* approach to assess whether claim 1 of the present application involves an inventive step.
28. Regarding steps 1(a) and 1(b) as discussed above, I consider the person skilled in the art to be a person familiar with the design, manufacture and use of indicator devices for indicating the loosening of nuts/bolts on vehicle wheels. The person

¹ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59

² *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

would also be familiar with the related routine maintenance procedures for such vehicle wheels. The common general knowledge of that person would include an appreciation of how these devices are used in practice.

29. Regarding step 2, I consider the inventive concept of claim 1 as construed above to be a device, for indicating relative rotational displacement between a first member (e.g. a stud) and a second member (e.g. a nut or bolt) sharing a common rotational axis, comprising a body for engaging the second member and a pointer, such that each side of the pointer has a different indication so that the two sides of the pointer are distinguishable.
30. Moving on to step 3, I will now consider prior art D3. D3 is a web page from a company's website describing the history of their 'Loose Wheel Nut Indicator'. The web page provides some images of such devices (reproduced below). Each device appears to be a single-piece construction with a serrated aperture presumably for engaging with a wheel nut. Each device clearly has a pointer. The brand name "TESCO" is written on the pointer of one device and the brand name "SCANIA" is written on the pointer of another device. As the Requester points out only one side is shown of each device and it is not evident from the web page what is on the other side of the pointers. Therefore referring again to claim 1, this disclosure has features (i)-(iii) but although it has a marker on one side does not disclose feature (iv).



31. In relation to step 4, the requestor has argued that claim 1 is obvious in light of the disclosure in D3 and the common general knowledge of the skilled person, particularly that disclosed in documents D4 and D5. I will therefore begin this step by considering D4 and D5.
32. D4 is a web page from another company's website. The page describes how to install their wheel nut indicator correctly. The web page also explains the use of yellow and red indicators. It seems that a yellow indicator is installed originally. If the driver notices that a nut has moved, he would remove the yellow indicator, re-torque the loose nut and replace with a red device. This would identify the loose nut to the maintenance shop so they know the whole wheel must be carefully serviced.
33. D5 is a YouTube (RTM) video entitled 'HGV driver's daily walkaround checks'. In one part an engineer demonstrates fitting a yellow wheel nut indicator. He then explains that red indicators are generally fitted by tyre companies to indicate that the wheel nuts have been off for a tyre change and the wheel nuts will need re-torquing after a specified interval.
34. Although web pages and videos do not always form part of the skilled person's

common general knowledge, it seems that D4 and D5 are really just expanding on the principle mentioned in the patent and described above that it is common to fit one device of one colour and then fit another device of another colour to indicate something about the wheel-fastening process. I am willing to accept that such knowledge forms part of the common general knowledge of the skilled person.

35. Returning to step 4, I note that the missing requirement of claim 1 as construed above is that each side of the pointer has a different indication (colour, text, number etc) so that so that the two sides of the pointer are distinguishable. The skilled person would be aware from D3 that a pointer can have a marking (in the form of a brand name) on it. It would be merely a routine modification for the skilled person to include such a marking on only one side. I consider having the brand name as disclosed in D3 on only one side of the pointer sufficient to distinguish the two sides. Therefore I consider claim 1 to be obvious in light of D3. I note that I did not need the particular common general knowledge of the skilled person illustrated in D4 and D5 and discussed above to arrive at this conclusion.
36. I will now briefly consider the dependent claims.
37. Claim 2 further specifies a device '*such that the device is made out of one piece*'. The device illustrated in D2 appears to be a single-piece construction. Therefore claim 2 is anticipated.
38. Claim 3 further requires a device '*where the different indication of the pointer is a difference in colour*'. I think the skilled person would interpret this claim such that each side of the pointer has a different colour in some way not necessarily covering the whole side of the pointer. This would be met by D3 if the coloured brand name appeared on only one side. Therefore claim 3 is obvious.
39. Claim 4 further specifies a device '*where the different indication of the pointer has different marks, digits, text or numbers*'. This is met by the 'R' of D1 or the circle of D2 and so claim 4 is not novel.
40. Claim 5 further requires a device '*where the different indication is a design, not being a uni-colour difference*'. This claim is not very clear but seems to refer to the indication being a design of some sort rather than being a single colour. I consider that the brand name on the pointer of D3 to be sufficient to meet this requirement as the font, letter size etc will have been designed in some way. Therefore in my view claim 5 also lacks the required inventive step.
41. Claim 6 specifies that the device is '*made by an injection moldings process and processes*'. This is a well known manufacturing process that would be known to the skilled person and would be readily employed without exercising any inventive ingenuity. Therefore claim 6 also appears to be obvious.
42. Claim 7 requires a device '*such that the difference of indication of the pointer is by printing*'. Similarly claim 8 requires a device '*such that the difference of indication of the pointer is by depositing colour, design or material*'. Both printing and deposition techniques are likely to be familiar to the skilled person. Either would be readily employed for example to produce the 'R' of D1, the circle mark on D2 or the brand name of D3. Therefore these claims also cannot be regarded as inventive.

Opinion

43. It is my opinion that the Patent is invalid in light of the prior art detailed by the Requester. In particular independent claim 1 is not novel in light of D1 or D2 and is obvious in light of D3. All seven dependent claims are either not novel or lack the required inventive step.

Application for review

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

Susan Dewar
Examiner

NOTE

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