

OPINION UNDER SECTION 74A

Patent	GB 2483109 B
Proprietor(s)	Purple Line Limited
Exclusive Licensee	
Requester	Milenco Limited
Observer(s)	Purple Line Limited
Date Opinion issued	31 January 2019

The request

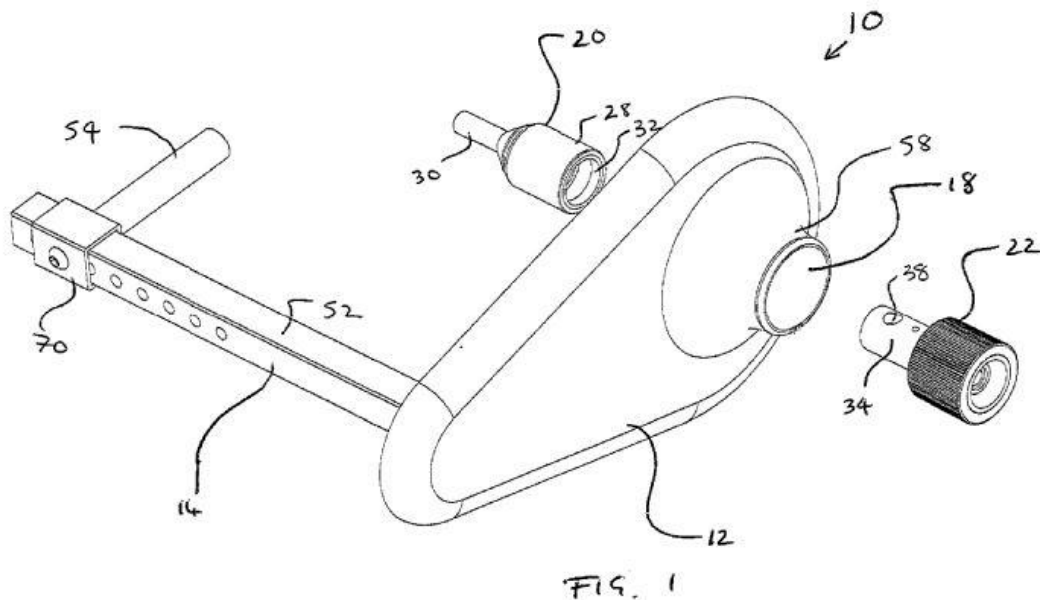
1. The comptroller has received a request from Milenco Limited (the requester) to issue an opinion in relation to the validity of UK patent GB 2483109 B (“the patent”) in the name of Purple Line Limited (the proprietor). The request submits that all of the claims of the granted patent are invalid on the basis that they lack novelty or inventive step over prior art cited in the request.
2. Observations on the request have been received from Dummett Copp LLP on behalf of the proprietor and observations in reply have been received from Richard Turner, Chartered Patent Agent, on behalf of the requester.

Relationship of this opinion to opinion 15/16

3. UKIPO opinion 15/16 was issued on 20 July 2016 in relation to the same patent as the present request. The requester (Maypole Limited) of the earlier request relied upon different prior art documents and different arguments from the present opinion request, contending that the claims of the patent lacked an inventive step. However, on the basis of the evidence and arguments put forth in the earlier request, the examiner was of the opinion that the claims of the patent were valid.
4. In the present request, the requester has commented that the UKIPO viewed the scope of the independent claims more narrowly than they should have in the earlier opinion by considering the novelty and inventiveness of the invention in terms of the patent as a whole rather than the broadest scope of the patent as defined by the actual independent claims. However, I note that the conclusion of the earlier opinion has not been challenged. In considering the present request, I will construe the claims as outlined below under the section “Claim construction”.

The patent

5. The patent was filed on 27 August 2010, was granted on 26 November 2013 and remains in force. The patent relates to a wheel clamp for immobilising a vehicle and, in particular, a wheel clamp that acts as a theft deterrent for a towable vehicle, such as a caravan. Figure 1 of the patent is reproduced below.



6. The main features of the wheel clamp 10 are first locking member 20, second locking member 22, a shield 12 and an immobilising arm 14. The first locking member 20 includes a shaft 30 arranged to engage with a hub of the vehicle. Once installed, the wheel clamp 10 is locked in place by the locking members and the immobilising arm 14 passes through an opening in the wheel such that rotation of the wheel causes the immobilising arm 14 to abut a part of the vehicle.

7. The granted patent has three independent claims, claim 1 (a wheel clamp), claim 19 (an assembly comprising a wheel and a wheel clamp) and claim 25 (a method of securing a wheel clamp). The independent claims are outlined below. Claim 1 has been broken down into the claim elements and respective qualifying clauses identified by the requester in their request. Claim 25 has been broken down into the steps of the method identified by the requester:

1. (1) A wheel clamp
 - (1.1) for securement to a wheel of a wheeled vehicle,
the wheel clamp comprising
 - (2) locking means
 - (2.1) to lock the clamp to the vehicle,
the locking means including
 - (3) a shaft
 - (3.1) which extends through a mounting aperture of the wheel

and

*(3.2) secures the wheel clamp to a rotatable hub of the vehicle,
the wheel clamp further comprising*

(4) a shield

(4.1) which extends from the locking means

and

*(4.2) is arranged, in use, to locate adjacent to a first face of the
wheel,*

the wheel clamp comprising

(5) an immobilising arm

*(5.1) which extends through an opening in the wheel from the
first face of the wheel to a second face of the wheel*

and

*(5.2) wherein rotation of the wheel causes rotation of the wheel
clamp until the immobilising arm abuts a part of the vehicle.*

19. *An assembly comprising a wheel and a wheel clamp, the wheel clamp comprising locking means to lock the clamp to the vehicle, the locking means including a shaft which extends through a mounting aperture of the wheel and secures the wheel clamp to a rotatable hub of the vehicle, the wheel clamp further comprising a shield which extends from the locking means and is arranged, in use, to locate adjacent to a first face of the wheel, the wheel clamp comprising an immobilising arm which extends through an opening in the wheel from the first face of the wheel to a second face of the wheel and wherein rotation of the wheel causes rotation of the wheel clamp until the immobilising arm abuts a part of the vehicle.*

25. *A method of securing a wheel clamp to a vehicle comprising*

*(step 1) moving an immobilising arm of a wheel clamp through an
opening in a wheel of the vehicle*

and

(step 2) locking a shield of the wheel clamp to the wheel

wherein the method comprises

*(step 3) replacing a mounting element of the wheel with a first
locking member in order for the first locking member to be
mounted to a rotatable hub of the vehicle,*

the method comprising

*(step 4) securing the shield to the wheel by locking a second
locking member to the first locking member.*

The law

8. Sections 1(1)(a) and 1(1)(b) of the Patents Act read:

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 sections 2(1) and 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.

Claim Construction

11. Before considering the novelty and inventive step issues raised in the request, I need to construe the claims of the patent – that is to say, I must interpret them in the light of the description and drawings as instructed by Section 125(1) (see below). In doing so, I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately, the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean. This approach has been confirmed in the recent decisions of the High Court in *Mylan v Yeda*¹ and the Court of Appeal in *Actavis v ICOS*².

12. Section 125(1) of the Act states that:

For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of protection conferred by a patent or application for a patent shall be

¹ *Generics UK Ltd (t/a Mylan) v Yeda Research and Dev. Co. Ltd & Anor* [2017] EWHC 2629 (Pat)

² *Actavis Group & Ors v ICOS Corp & Eli Lilly & Co.* [2017] EWCA Civ 1671

determined accordingly.

13. The requester refers to the skilled person as being in the technical field of vehicle anti-theft devices in the form of wheel clamps and wheel locks. The proprietor observes that the person skilled in the art is considered to be a designer of wheel clamps, being familiar with the general features of a wheel lock such as a shield and immobilising arm, and being familiar with the key components and features of a vehicle wheel and the way it is connected to or mounted on the vehicle. I feel that these definitions are generally in agreement and give a well-rounded, accurate representation of the skilled person.

14. In considering the construction of the claims, the requester has focussed exclusively on the wording of claim 1 arguing that several of the qualifying clauses identified in claim 1 (i.e. directed to “a wheel clamp” per se) are unclear as they refer to parts of the vehicle as if they are present and, in their view, these unclear clauses must be construed broadly.

15. Under the subject of “Clarity”, Section 14.131 of the Manual of Patent Practice observes (in part):

Particular care is needed when for example the location of a feature of the invention is defined by reference to apparatus not forming part of the invention claimed..., although there will be many instances when such references are rendered clear by the inclusion of expressions such as “when in use”...

16. Hence, as recognised by the requester in their request, use of the term “in use” in clause 4.2 of claim 1 is entirely reasonable. In my opinion, claim 1 and many of its dependent claims would generally have been clearer if such an expression had been included in other qualifying clauses where reference is made to features of the wheel, which does not form part of the invention claimed in claim 1. However, I believe that a skilled person reading the claim in its current form would seek to find clarity in the claim and thus construe the other qualifying clauses as if they included the missing term “in use”.

17. Following observations from the proprietor and reply to the observations from the requester, it seems apparent to me that the areas of contention in claim 1 are the highlighted features of clauses 3.1 and 3.2 below:

...

the locking means including

(3) a shaft

*(3.1) which extends through **a mounting aperture of the wheel***

and

*(3.2) secures the wheel clamp to **a rotatable hub of the vehicle**,*

...

18. The requester argues that clause 3.1 can only reasonably be interpreted as meaning any hole of the wheel. The requester notes that there is no definition of the term “mounting aperture” in the patent specification and points to the only reference to “mounting aperture” in the description, at lines 28 to 30 of page 11, which reads “the shaft 30 is arranged to extend through a wheel bolt aperture 66 or mounting aperture provided on the wheel 16.” According to the requester, this implies that the mounting aperture is separate from the wheel bolt aperture.

19. The proprietor contends that the “mounting aperture” is not a further feature that is separate and distinct from the wheel bolt aperture but is a different or alternative term to refer to the same feature. In support of this assertion, the proprietor notes that the passage at page 11, line 29 of the patent uses the conjunction “or” to introduce a synonym or explanation of a preceding word or phrase.

20. It is my opinion that a person skilled in the art would understand that the patentee had reason to include the qualifying term “mounting” before the term “aperture” in claim 1. I consider that a person skilled in the art would understand that the term “mounting” puts a limitation on the purpose of the “aperture” of the claim and its context within the claim indicates its suitability for receiving a “shaft” as part of a “locking means” that locks the clamp to the vehicle.

21. I am not convinced by the proprietor’s argument that use of the conjunction “or” would be understood by a skilled person to indicate that “mounting aperture” is a direct synonym for the “wheel bolt aperture” (if that was the intended meaning, I would have thought that the passage should read “a wheel bolt aperture, or mounting aperture, 66”, to clearly indicate that the “mounting aperture” is also represented by reference “66” in the figures). Nevertheless, interpretation of the term “mounting aperture” in the light of the paragraph of the description in which the term appears, in my mind, indicates to a skilled person that it is suitable for receiving a conventional wheel bolt. That would provide, for example, an indicator of the size of the “mounting aperture”.

22. The requester and proprietor were also in disagreement over the meaning of the expression “rotatable hub of the vehicle” in clause 3.2. The proprietor observed that this clause indicates securing the wheel clamp to the hub of the vehicle, which is not part of the wheel. The proprietor states that the skilled person will be familiar with the way a wheel is mounted on a vehicle – namely, a wheel is attached to a hub of the vehicle and the hub connects the wheel to the vehicle axle and suspension.

23. In reply, the requester comments that the definition of “hub” is “the central part of a wheel, as that part into which the spokes are inserted”. They further argue that a “wheeled vehicle” includes things such as bicycles and motorbikes, which do not have a wheel attached to “a hub of the vehicle” but rather the “hub” is part of the wheel in question. The requester contends that the claims are not limited to an arrangement in which the wheel clamp is connected to a hub that is not part of the wheel to which the wheel clamp is connected.

24. In constructing the meaning of the term “rotatable hub of the vehicle”, I am of the opinion that a skilled person would recognise that, in claim 1, the patentee has intentionally distinguished features associated with “the wheel” from features

associated with “the vehicle”. For example, claim 1 defines (emphasis added):

...

(2) *locking means*

(2.1) *to lock the clamp **to the vehicle**,*

the locking means including

(3) *a shaft*

(3.1) *which extends through a mounting aperture **of the wheel***

and

(3.2) *secures the wheel clamp to a rotatable hub **of the vehicle**,*

...

(4) *a shield*

...

(4.2) *is arranged, in use, to locate adjacent to a first face **of the wheel**,*

...

(5) *an immobilising arm*

(5.1) *which extends through an opening **in the wheel** from the first face **of the wheel** to a second face **of the wheel***

and

(5.2) *wherein rotation of the wheel causes rotation of the wheel clamp until the immobilising arm abuts a part **of the vehicle**.*

25. Hence, I do not consider that a skilled person would be left in any doubt that the “rotatable hub” is a part “of the vehicle” rather than a part of the wheel. Therefore, contrary to the requester’s comments in their reply to the proprietor’s observations, I believe that claim 1 would be understood by a skilled person to be limited to an arrangement in which the wheel clamp is connected to a hub that is not part of the wheel. In the context of claim 1, it is only connection to a “hub of the vehicle” that would appear to achieve the claimed purpose of the “locking means”, i.e. “to lock the clamp to the vehicle” (not to the wheel).

26. In summary, it is my opinion that a skilled person would understand the “mounting aperture of the wheel” of claim 1 to mean a hole or aperture of the wheel that is suitable for receiving a “shaft” (comparable to that of a shaft of a conventional wheel bolt) as part of a “locking means” that locks the clamp to the vehicle. Further, I am of the opinion that a skilled person would understand the “rotatable hub of the vehicle” to be limited to a hub as part of the vehicle, rather than being a part of the wheel itself.

27. Although the construction of claims 19 and 25 has not been directly addressed by the requester, I would note that the wording of claim 19 is largely identical to claim 1 (albeit in relation to an “assembly comprising a wheel and a wheel clamp” rather than just the “wheel clamp” itself) and so I am of the opinion that the claim construction outlined above would also apply to claim 19. The wording of

claim 25 is significantly different to that of claims 1 and 19, but has not been directly addressed by the requester. Therefore, I assume that the construction of the claim is not at issue except, perhaps, for the expression “rotatable hub of the vehicle”. However, I am of the opinion that a skilled person would construe this expression in the same way as for claims 1 and 19, as outlined above.

Novelty

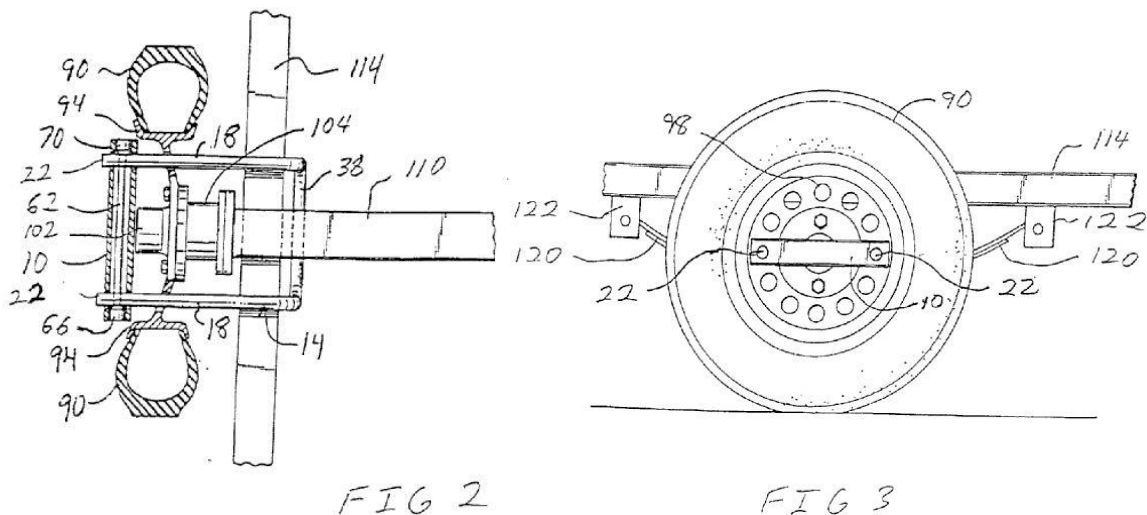
28. The requester has asserted that independent claims 1 and 19, together with dependent claims 2 to 5, 7 to 18, and 20 to 24, lack novelty with respect to the following documents:

D1: US 2002/0053228, published 9 May 2002

D2: US 5787742, published 4 August 1998

29. Whilst the requester has submitted that document D1 discloses every feature of claims 1 and 19, the proprietor has observed that D1 does not disclose “locking means including a shaft which extends through a mounting aperture of the wheel and secures the wheel clamp to a rotatable hub of the vehicle”.

30. Figures 2 and 3 of document D1 are reproduced below. The requester has submitted that the “locking means” defined in claims 1 and 19 are anticipated by the leg 18 (i.e. “a shaft”) positioned through the opening 98 (i.e. “mounting aperture”) of the wheel securing the lock to the wheel. The proprietor argues that the openings 98 in the wheel are not ‘mounting apertures’ as they are not used to mount the wheel to the vehicle and that the leg 18 does not secure the wheel lock to a rotatable hub of the vehicle but instead secures the wheel lock to the wheel itself.



31. I recognise that the requester’s arguments are based on their broad interpretation of the term “rotatable hub of the vehicle” to encompass a hub of the wheel. However, having already construed the claims above and determined that this term does not refer to a hub of the wheel, I am of the opinion that the leg 18 and opening 98 of document D1 do not constitute a “shaft” and “mounting aperture” of a “locking means” as defined in claims 1 and 19 of the patent. In particular, I note that

the leg 18 does not 'secure the wheel clamp to a rotatable hub of the vehicle'. I notice that document D1 does, in fact, disclose a hub 102 of the vehicle connected to an axle 104 and an axle support 110 (see figure 2 above) – I am of the opinion that a skilled person would understand hub 102 to be equivalent to the “rotatable hub of the vehicle” of the claims, but the leg 18 does not secure the wheel lock to hub 102. Therefore, I do not consider claims 1 and 19 to lack novelty with respect to document D1.

32. Next, the requester has submitted that document D2 discloses every feature of claims 1 and 19 whereas the proprietor has again observed that D2 does not disclose “locking means including a shaft which extends through a mounting aperture of the wheel and secures the wheel clamp to a rotatable hub of the vehicle”.

33. Figure 3 of document D2 is reproduced below. The requester has submitted that the “locking means” defined in claims 1 and 19 are anticipated by the second rod segment 14 (i.e. “a shaft”) inserted through the opening 31 (i.e. “mounting aperture”) of the wheel securing the lock to the wheel. The proprietor argues that the opening 31 in the wheel is not a “mounting aperture” as it is not used to mount the wheel to the vehicle and the second rod segment 14, together with a second flange 18 and locking member 20, secures the wheel lock to the wheel, not to a rotatable hub of the vehicle.

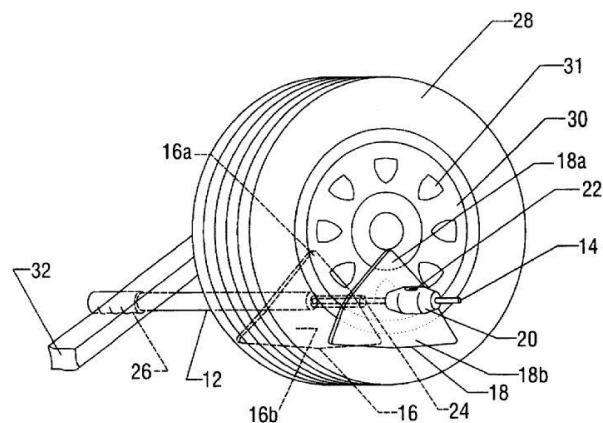


FIG. 3

34. Once again, it is apparent that the requester’s arguments are based on their broad interpretation of the term “rotatable hub of the vehicle” to encompass a hub of the wheel. Thus, I am again of the opinion that the second rod segment 14 and opening 31 of document D2 do not constitute a “shaft” and “mounting aperture” of a “locking means” as defined in claims 1 and 19 of the patent. In particular, I note that the second rod segment 14 does not ‘secure the wheel clamp to a rotatable hub of the vehicle’. Therefore, I do not consider claims 1 and 19 to lack novelty with respect to document D2.

35. Having determined that, in my opinion, both claims 1 and 19 are novel over prior art documents D1 and D2, it follows that claims 2 to 18 and 20 to 24 are also novel over these documents since they are all dependent upon claims 1 and 19.

Inventive step

36. The requester has further asserted that dependent claim 6 and independent claim 25 lack inventive step with respect to either document D1 or D2 above in combination with the following document:

D3: GB 2276133, published 21 September 1994

37. Since it is my opinion that claim 1 is novel over D1 and D2, dependent claim 6 may only lack an inventive step if claim 1 is obvious to a skilled person. However, I cannot see how a skilled person could arrive at the arrangement defined in claim 1 from the teachings of D1 and D2 without an inventive step.

38. Firstly, as indicated in paragraph 31 above, I do not consider that the leg 18 of D1 “secures the wheel clamp to a rotatable hub of the vehicle”. In use, the legs 18 extend in a direction away from the vehicle through the openings 98 of the wheel and engagement portions 22 of the legs 18 position into a lock housing 10 part of the wheel lock (see figures 2 and 3 of D1 in paragraph 30 above). I do not see how or why a skilled person would be motivated to adapt this arrangement of D1 to an arrangement whereby a leg 18 “secures the wheel clamp to a rotatable hub of the vehicle” – this would, in my view, involve a significant adaptation that could not be regarded as obvious particularly, as recognised previously, D1 does disclose a hub 102 that is not involved in any way in the attachment of the wheel lock.

39. Secondly, the wheel lock of D2 is described and illustrated as being for attachment to a wheel *or steering wheel* of a vehicle. I am of the opinion that this alone would dissuade a skilled person from adapting the wheel lock so that, when being used for attachment to a wheel, it attaches to a “rotatable hub of the vehicle” since that would negate its use for attachment to a steering wheel.

40. Hence, as I consider claim 1 to involve an inventive step over both D1 and D2, it follows that I consider that claim 6 is also inventive.

41. Finally, I must consider whether claim 25 lacks inventive step over D1 or D2 in combination with D3. The requester has submitted that steps 1, 2 and 4 of claim 25, as outlined in paragraph 7 above, are disclosed in documents D1 and D2, while step 3 is disclosed in document D3. The proprietor has made no specific observations in relation to claim 25, but rather suggests that their arguments in relation to claims 1 and 6 are also relevant to this claim.

42. Figure 2 of document D3 is reproduced below in which vehicle tyre 1 is carried by wheel 2 having threaded studs 3. Locking nuts 4 having an inner threaded portion that engage the wheel studs 3 and outer threaded portions that engage complimentary threads 5 on arms 6 surmounted by tubular structures 7 through which a locking bar 9 may pass.

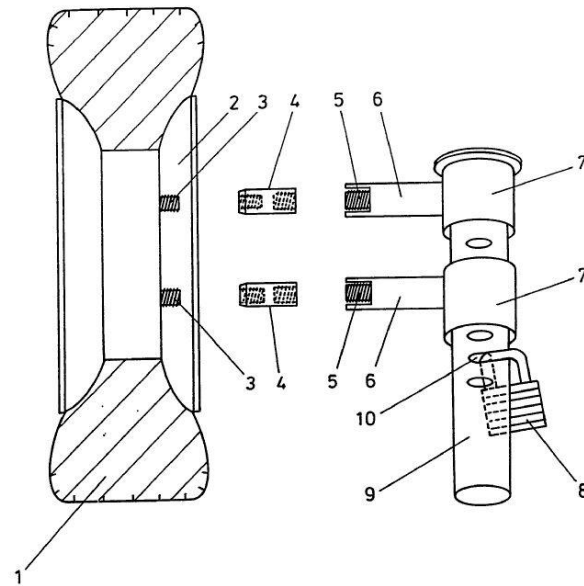


FIG. 2

43. Document D1 does disclose positioning legs 18 of the shackle 14 through openings 98 of the wheel 94 – in my opinion, this does disclose step 1 of claim 25. And, it could be argued that securing lock housing 10 in place may disclose step 2. And, document D2 does disclose a second rod segment 12 that is inserted through an opening 31 of a vehicle wheel 30 – in my opinion, this also discloses step 1 of claim 25. And, locking member 20 together with locking mechanism 22 do secure flange 18 in place – I consider that this discloses step 2 of claim 25.

44. The locking nuts 4 of document D3 do replace a locking nut of a vehicle wheel, as per step 3 and, in my opinion, the threaded studs 3 to which the locking nuts 4 engage are connected to “a rotatable hub of the vehicle”. However, in my view, steps 3 and 4 of claim 25 are intrinsically linked so there would need to be a clear compatibility between the disclosure of step 3 in document D3 and the disclosure of step 4 in document D1 or D2. However, I do not believe that this is the case.

45. The requester has proposed that D1 discloses first and second locking members that secure the shield to the wheel by lock 70 securing lock member 60 in place within housing 10 (see figure 1 of D1 below). To me, there is an inherent incompatibility between the disclosed interaction between lock 70, lock member 60 and housing 10 of D1, and the locking nuts 4 of D3. In use, the lock member 60 of D1 is placed through openings 30 in the legs (i.e. analogous to the “immobilising arm” of claim 25) and locked in place by lock 70 whilst in D3, the locking nuts 4 engage to threaded studs 3 of the wheel. In my view, the teachings of D1 would lead a skilled person away from considering a combination with D3, since the locking members disclosed in D1 do not physically attach to the wheel (or vehicle) in any way. Hence, I am of the opinion that claim 25 is inventive over the combination of documents D1 and D3.

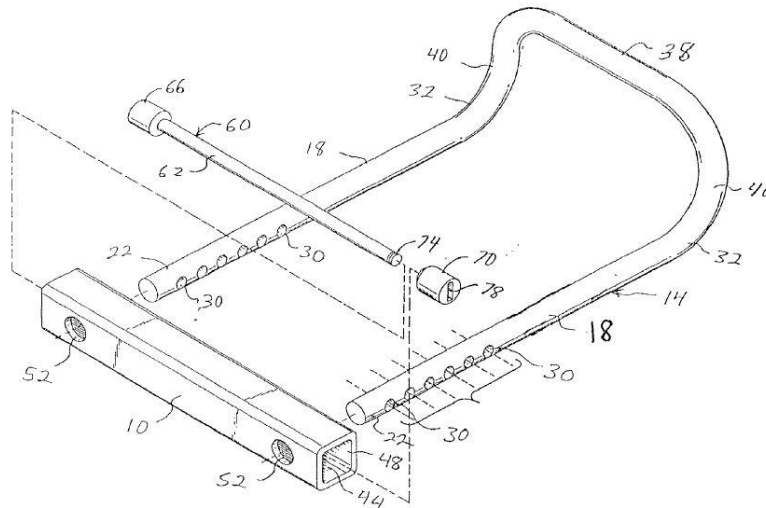


FIG 1

46. The requester has proposed that D2 discloses first and second locking members that secure the shield to the wheel by locking member 20 and locking mechanism 22 (see figure 3 of document D2 above). However, once again I consider that a skilled person would not consider a combination of D2 with the locking nuts 4 of D3, since the operation of the wheel lock of D2 is specifically described and illustrated as being for attachment to a wheel *or steering wheel* of a vehicle. This would lead a skilled person away from considering a combination with D3, since the locking nuts 4 of D3 are purely for securement to threaded studs 3 of a wheel only (i.e. contradicting the suitability to steering wheels of the wheel lock of D2). Hence, I am of the opinion that claim 25 is inventive over the combination of documents D2 and D3.

Opinion

47. It is my opinion that both claims 1 and 19 are novel over prior art documents D1 and D2. It follows that each of claims 2 to 18 and 20 to 24 are also novel over these documents since they are all dependent upon claims 1 and 19.

48. It is also my opinion that claim 1 involves an inventive step over both D1 and D2 and so it follows that I consider that claim 6 is also inventive.

49. Finally, I am of the opinion that claim 25 is inventive over the combination of either document D1 or document D2 with document D3.

Dan Hickery
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.