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| FD3 | 1 of 17 | 67% |

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Spare Set of Claims

CLAIMS

1. A road-spray remover unit for a bicycle, ~~consisting~~ ✓
~~of comprising:~~

a body with at least two flexible wipers ~~at least one~~ ✓
~~group of bristles~~, in use the wipers ~~bristles~~ being
inclined at an angle towards the rotation of ~~the~~ ✓
of the bicycle to reduce the friction on the wheel and
assist in the removal of water,

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wherein in use the unit is attached to the frame of
the bicycle by at least one ~~two~~ ✓ stays and is movable
between an engaged position, where the wipers ~~bristles~~
are in contact with the wheel, and a disengaged position,
where they are lifted from the wheel; and

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a channel extending through the body between the at
~~least two wipers for expelling water.~~ ✓

11

2. A road-spray remover unit as claimed in claim 1 that has
an attachment which allows it to be clipped to the
bicycle frame on or near the brake-mount, thereby holding
the unit in the disengaged position.

3. A road-spray remover unit as claimed in claim 1 or 2,
where the at least one ~~stays~~ is ~~are~~ configured to pivot
at the point where it is ~~they are~~ attached to the frame.

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4. A road-spray remover unit according to claim 3, where the ✓
at least one ~~stays~~ is configured to be ~~are~~ attached to

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the frame at a point above the axle but level with it in the front-rear direction, so that rotation of the unit to the disengaged position lifts the bristles from the wheel.

5. A road-spray remover unit as claimed in any preceding claim and having a ~~large red~~ rear reflector mounted on it. ✓

6. A road-spray remover unit according to claim 5, wherein the rear reflector is L-shaped such that a reflecting surface is configured to be presented rearwards in engaged position and the disengaged position. ✓

7. A road-spray remover unit according to any preceding claim, wherein the flexible wipers each comprise a row of bristles. ✓

8. A road-spray remover unit according to any preceding claim, wherein the angle is about 25-50 degrees. ✓

9. A road-spray remover unit according to any preceding claim, wherein the at least two flexible wipers comprises 3 flexible wipers.

10. A road-spray remover unit according to any preceding claim, wherein the at least two flexible wipers comprises 4 flexible wipers.

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11. A road-spray remover unit according to any preceding claim, wherein the at least two flexible wipers are circumferentially spaced around the wheel in use.
12. A road-spray remover unit according to any preceding claim, further comprising a stop configured to limit movement of the unit when moved to the engaged position. ✓
13. A road-spray remover unit according to any preceding claim, wherein the body comprises a solid plastic piece.
14. A road-spray remover unit according to any preceding claim, wherein the solid plastic piece is made from nylon or PP.
15. A road-spray remover unit according to claim 7 or any of claims 8 to 14 when dependent on claim 7, wherein the bristles are made of nylon or rubber.
16. A road-spray remover unit according to any preceding claim, wherein the end of each flexible wiper is straight. ✓
17. A road-spray remover unit according to any preceding claim, wherein the end of each flexible wiper is rounded to conform to the profile of a tyre of the wheel.

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18. A road-spray remover unit according to any preceding claim, wherein the channel extends at about the same angle as the at least two flexible wipers.
19. A road-spray remover unit according to claim 9, claim 10, or any of claims 11 to 18 when dependent on claim 9 or claim 10, wherein the channel comprises a number of channels between each of the flexible wipers.
20. A road-spray remover unit according to any preceding claim, wherein the at least one stay comprises two stays.
21. A bicycle comprising the road-spray remover unit of any preceding claim.
22. The bicycle of claim 21, where the road-spray remover unit is mounted to the rear wheel of the bicycle.

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✓

MARKS AWARDED: 24/35

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UKIPO LETTER

GB1919191.9

26 October 2022

Dear W Biggins

I respond to the examination report dated 25 July 2022 relating to the above-identified application within the deadline of 25 November 2022.

I submit the following amendments and observations which address all of the issues raised in the report. In the following, p means page/s and l means line/s.

AMENDMENTS

Claim 1

- Claim 1 has been amended to recite- at least two flexible wipers and a channel extending through the body between the at least two wipers for expelling water. Basis for flexible wipers may be found at p5, l11. Basis for at least two may be found at pp6, l25 (Note that whilst this passage refers to rows of bristles, p6, l7-9 clearly indicates that the rows of bristles are flexible wipers). Basis for the channels may be found at p4, l29 - p5, l1 and p5, l30-33.

“below and between”

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- Consisting of has been replaced with comprising. It is clear from the general disclosure of the specification and the additional features of the dependent claims that the unit may have more features than those only recited in claim 1. ✓
- Group of bristles has been replaced with flexible wiper. It is clear from p5, I11-12, p5, I1-2 (“other flexible wiping arrangements”) and p6, I12 (“flexible edge”) that wipers other than bristles are envisioned in the specification. ✓
Therefore, the bristles are non-essential to the invention and there is basis to remove this feature from claim 1.
- The term “in use” has been inserted into the claim 1 to clarify that the wheel and the frame of the bike are not claimed as such. ✓
- “the wheel” has been replaced with “a wheel of the bicycle” for clarity purposes. ✓
- “two stays” has been replaced with “at least one stay”. It is clear from p6, I17-20 that only one stay is envisioned and would allow the invention to function. Therefore, having two stays is inessential and there is basis to remove this feature from claim 1. ✓

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Dependent Claims

- Claims 3 and 4 have been amended for consistency with amended claim 1 which recites at least one stay. ✓
- Claim 5 has been amended to delete the words large and red. There is no mention of the reflector being large and red in the specification at p6, I6-13 and therefore these features are clearly not essential to the reflector and can be removed.

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New dependent claims have been inserted into the claim set:

- New claim 6 recites that the rear reflector is L-shaped such that a reflecting surface is configured to be presented rearwards in engaged position and the disengaged position. Basis = p6, 17-9.
- New claim 7 recites that the flexible wipers each comprise a row of bristles. Basis = former claim 1 and p5, 111-12.
- New claim 8 recites that the angle is about 25-50 degrees. Basis = p4, 117.
- New claim 9 recites that the at least two flexible wipers comprises 3 flexible wipers. Basis = p5, 121. Note that whilst this passage refers to rows of bristles, p6, 17-9 clearly indicates that the rows of bristles are flexible wipers.
- New claim 10 recites that the at least two flexible wipers comprises 4 flexible wipers. Basis = p5, 121. Note that whilst this passage refers to rows of bristles, p6, 17-9 clearly indicates that the rows of bristles are flexible wipers. ✓
- New claim 11 recites that the at least two flexible wipers are circumferentially spaced around the wheel in use. Basis = p5, 118.
- New claim 12 recites comprising a stop configured to limit movement of the unit when moved to the engaged position. Basis = p4, 126-27.
- New claim 13 recites that the body comprises a solid plastic piece. Basis = p4, 128-29 and p5, 112.
- New claim 14 recites that the solid plastic piece is made from nylon or PP. Basis = p5, 112-13.

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- New claim 15 recites that the bristles are made of nylon or rubber. Basis = p5, l14.
- New claim 16 recites that the end of each flexible wiper is straight. Basis = p5, l22.
- New claim 17 recites that the end of each flexible wiper is rounded to conform to the profile of a tyre of the wheel. Basis = p5, l23-24.
- New claim 18 recites that the channel extends at about the same angle as the at least two flexible wipers. Basis = p6, l2.
- New claim 19 recites that the channel comprises a number of channels between each of the flexible wipers. Basis = p5, l30 (“corresponding number”).
- New claim 20 recites that the at least one stay comprises two stays. Basis = former claim 1 and p6, l20.
- New claim 21 recites a bicycle comprising the road-spray remover unit of any preceding claim. Basis = p5, l3.
- New claim 22 recites that the road-spray remover unit is mounted to the rear wheel of the bicycle. Basis = Figure 1 & p5, l5-7.

CLARITY

In response to section 6 of the report, claim 1 has been amended to specify that the wipers are inclined “in use” with respect to the wheel and the unit is attached to the frame and is moveable “in use”. In this way, it is clear that claim 1 does not claim a bicycle, only the unit. These amendments also clarify claims 3 and 4 in the same way. Note that it is clear from p7, l1 that the unit can

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be mounted to the front wheel or the back wheel and thus requiring claim 1 to specify a particular wheel would unfairly limit the protection afforded to the applicant.

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In response to section 7 of the report, the word large has been deleted from claim 5 and thus this objection is no longer relevant.

NOVELTY

Amended claim 1 is novel with respect to D1 because amended claim 1 requires at least two flexible wipers and a channel extending through the body of the unit between the at least two flexible wipers for expelling water. Instead, D1 only discloses a single flexible wiper in cutout 46 and no channel extending through the body of the shield 44. In case the Examiner considers each slit 48 to be a flexible wiper, there is still no channel extending through the body for expelling water because the body of shield 44 is solid and uninterrupted and cannot let water pass through it. ✓

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Amended claim 1 is novel with respect to D2 because amended claim 1 requires at least two flexible wipers and a channel extending through the body of the unit between the at least two flexible wipers for expelling water. Instead, D2 only discloses a single flexible wiper in the form of bursh 9 or a rubber sheet (p15, I12-13). Given that there is only one brush, there cannot be a channel between the at least two wipers as required in claim 1. There is a gap between plates 1 and 5 – however, the brush is mounted in this gap and there are no channels so water cannot pass through this gap.

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The dependent claims are novel at least by virtue of their dependency on an allowable independent claim.

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INVENTIVE STEP

Applying Pozzoli:

The person skilled in the art is a designer of mud guards and road-spray removers.

Their common general knowledge includes mud guards and road-spray removers found on the market at the time of filing of the application. It further includes D2 because it has been known since 1948 and is cited at p4, I11. ✓

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The inventive concept is to avoid clogging between flexible wipers (p6, I4-5) by provision of a channel extending through the body between the at least two wipers for expelling water. ✓

Starting from D1 because it discloses the device most similar to the claimed arrangement:

Claim 1 differs from D1 by provision of a channel extending through the body between the at least two wipers for expelling water.

The skilled person would not be motivated to modify the apparatus of D1 towards the claimed invention because D1 aims to provide a lightweight alternative solution to mudguards (p10, I1-2 and I16-18). Therefore, the skilled person would not add more flexible wipers to the apparatus as required by claim 1 because this will add unwanted weight to the system. ✓

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Even if the skilled person did look to increase the number of flexible wipers, it would not be obvious to implement a channel extending through the body between the at least two wipers for expelling water because there is no teaching or suggestion in D1 or the common general knowledge which discloses such a feature.

Note that the skilled person would be unlikely to start from D2 because it relates to an apparatus which attaches onto a mud guard but the present invention relates to an apparatus for replacing a mudguard (p4, l1-2). Nevertheless, starting from D2, claim 1 is different because there is provided a channel extending through the body between the at least two wipers for expelling water.

It still would not be obvious to implement a channel extending through the body between the at least two wipers for expelling water because there is no teaching or suggestion in D2 or the common general knowledge which discloses such a feature.

Even if the skilled person were to combine D1 and D2 they still would not arrive at the claimed arrangement because neither document teaches or suggests the missing features. Accordingly, amended claim 1 is inventive.

The dependent claims are inventive at least by virtue of their dependency on an allowable independent claim.

Yours sincerely

Mr Mudd

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ADVICE

Claudia Butlin

26 October 2022

The deadline for responding to the examination report is 25 November 2022. A 2 month as of right extension which can be requested retrospectively is available for no cost if necessary. ✓

D1 discloses a device similar to that claimed by former claim 1 because the unit/body = shield 44 and the row of bristles = slots 48 and arm 28 = stays. ✓
Note that whilst figure 2 only discloses one arm, it is envisioned that two could be used and thus two stays are disclosed. ✓

We note the client's belief that D2 is not relevant. However, whilst it has a different implementation to the present invention in use (mounted to a mudguard), it has a similar purpose (for engaging the wheel to wipe mud/water off). Thus, D2 is a relevant teaching for assessing novelty and inventive step for the present invention. The Examiner's position that the mudguard constitutes a stay would be difficult to contest because there is no clear definition of a stay in the specification or claim set. ✓

not quite

In summary, I think the examiners current position is reasonable and given the similarities between D1 and former claim 1 in particular, I think it is necessary to amend claim 1 to differentiate from the cited documents. 4

I considered amending claim 1 to include the L-shaped reflector because this is not disclosed in the cited documents and provides the advantage of visibility in both configurations. ✓

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However, I actually amended claim 1 to include at least two flexible wipers and a channel extending through the body between the at least two wipers for expelling water. I chose this amendment because neither D1 nor D2 disclosed these features and it does not require a reflector to be attached to the unit like the amendment considered above. In particular, neither cited document disclosed a channel extending through the body between the at least two wipers for expelling water. This amendment covered the features which you considered to provide an advantage over the prior art in your letter (p2, I9-18). Whilst it does not cover simpler cheaper styles, we note that you wish this patent covers the premium embodiment with many rows of bristles which this amendment does (p2, I6-8).

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true

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I could have amended claim 1 to include the feature of the flexible wipers being circumferentially spaced about the wheel to improve the strength of our novelty and inventive step arguments. However, I chose not to include this wording and only to include essential structural detail to try and obtain a broad scope of protection.

Without the feature of circumferentially spaced groups or rows of flexible wipers in claim 1, there is a risk that the Examiner could consider each individual flap 48 in D1 to be a wiper and the gaps between them to be channels. Whilst I think this mapping is a stretch because the gaps between the flaps 48 do not extend through the body and are not for expelling water, there is a small possibility the Examiner will require further amendment to highlight the differences.

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For this reason, I have included that the flexible wipers are spread circumferentially in a dependent claim (new claim 11) which would overcome this potential problem. ✓

I have provided additional fallback positions in new dependent claims. The full list of features covered by dependent claims is:

- New claim 6 recites that the rear reflector is L-shaped such that a reflecting surface is configured to be presented rearwards in engaged position and the disengaged position. Basis = p6, l7-9.
- New claim 7 recites that the flexible wipers each comprise a row of bristles. Basis = former claim 1 and p5, l11-12.
- New claim 8 recites that the angle is about 25-50 degrees. Basis = p4, l17.
- New claim 9 recites that the at least two flexible wipers comprises 3 flexible wipers. Basis = p5, l21. Note that whilst this passage refers to rows of bristles, p6, l7-9 clearly indicates that the rows of bristles are flexible wipers.
- New claim 10 recites that the at least two flexible wipers comprises 4 flexible wipers. Basis = p5, l21. Note that whilst this passage refers to rows of bristles, p6, l7-9 clearly indicates that the rows of bristles are flexible wipers.
- New claim 11 recites that the at least two flexible wipers are circumferentially spaced around the wheel in use. Basis = p5, l18.
- New claim 12 recites comprising a stop configured to limit movement of the unit when moved to the engaged position. Basis = p4, l26-27.

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- New claim 13 recites that the body comprises a solid plastic piece. Basis = p4, l28-29 and p5, l12.
- New claim 14 recites that the solid plastic piece is made from nylon or PP. Basis = p5, l12-13.
- New claim 15 recites that the bristles are made of nylon or rubber. Basis = p5, l14.
- New claim 16 recites that the end of each flexible wiper is straight. Basis = p5, l22.
- New claim 17 recites that the end of each flexible wiper is rounded to conform to the profile of a tyre of the wheel. Basis = p5, l23-24.
- New claim 18 recites that the channel extends at about the same angle as the at least two flexible wipers. Basis = p6, l2.
- New claim 19 recites that the channel comprises a number of channels between each of the flexible wipers. Basis = p5, l30 (“corresponding number”).
- New claim 20 recites that the at least one stay comprises two stays. Basis = former claim 1 and p6, l20.
- New claim 21 recites a bicycle comprising the road-spray remover unit of any preceding claim. Basis = p5, l3.
- New claim 22 recites that the road-spray remover unit is mounted to the rear wheel of the bicycle. Basis = Figure 1 & p5, l5-7.

For clarity purposes, I amended claim 1 to specify that it is only “in use” that the references to the bicycle apply, thereby clarifying that the bicycle is not

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required by claim 1. In this way, those selling just the unit are direct infringers of claim 1 rather than indirect if the bicycle were to be claimed. I also amended claims 3 and 4 for consistency with new claim 1.

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Note that I broadened claim 1 by changing group of bristles to flexible wipers and two stays to at least one stay to increase the scope of protection as neither of these features in former claim 1 appeared to be essential. This ✓ increases the scope of protection. The features deleted from claim 1 are included in dependent claims for safety.

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I also broadened claim 5 by removing the requirement for the reflector to be large and red as these did not appear to be essential features.

The L-shaped reflector is covered in a dependent claim but this only covers the Unit with the L-shaped reflector mounted to it and not by itself. It is possible that use by unauthorised others of the L-shaped reflector constitutes an indirect infringement of the claim.

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For optimal protection for the L-shaped reflector, consider filing a divisional application towards this feature. This must be done whilst the application is pending. Note that the divisional applications require similar costs as when prosecuting this application. ✓

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Unfortunately there is no light (see p2, I21) mentioned in the specification so we could not include this in a dependent claim or file a divisional towards this feature. However, amended claim 1 does not disclaim a light being present so it does protect units with a light despite not being explicitly claimed.

✓

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ie. push - pull
The new circumferential embodiment (p2, I23-25) is also covered by amended claim 1 despite not being specified in a dependent claim or mentioned

✓

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in the spec because amended claim does not specify how the movement between the two positions takes place. Therefore, you could use this patent application, once granted, to prevent others using such a modification. ✓

However, for optimal protection, consider filing a new application towards the circumferential embodiment once you have completed your research. Please provide me with all the details of this new modification. As the present application is already published, we cannot claim priority to it and it will be fully citeable prior art. Thus, any new applications filed will have to be novel and inventive over this application. ✓

The simpler and cheaper style with fewer rows of birstles will be covered by amended claim 1 if it has two or more rows of bristles. Those with 1 row of bristles will not be covered but as I understand it this is not a must have for this patent to cover. If protection is desired for a single row of bristles, a divisional application can be filed. However, if the simpler and chepaer styles requires features not disclosed in the present specification you will need to file a new application.

MARKS AWARDED: 20/34

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