

[0006] According to a first aspect the present invention there is provided a towable vehicle security apparatus comprising a base securable to a suspension component of a towable vehicle chassis and a locking assembly releasably securable to said base, the locking assembly, in use, being positionable through an aperture of a wheel of the towable vehicle to prevent the rotation of the wheel relative to the suspension component to which the base is secured, characterised in that the locking assembly includes a securing means to releasably secure the locking assembly to the base, the securing means having a threaded portion receivable by the base, wherein the interface between the locking assembly and the base is shielded by the vehicle wheel, suspension component and underside of the towable vehicle, in use.

[0011] The locking assembly preferably includes an elongate locking member ~~and a securing means to releasably secure the locking member to the base.~~ The locking member includes an end which, in use, may be receivable in the seat portion of the base. In an alternative embodiment the locking member may not be receivable in the base. In such an embodiment the securing means may extend from the locking member to the base. The locking member preferably includes an interface portion adapted to fit closely to an aperture of a wheel of the towable vehicle. The interface portion may preferably fully conform to the shape of said aperture. The interface portion may preferably take the form of a flange or boss of the locking member. The flange or boss may be provided with a protective coating. The interface portion may be formed integrally with the locking member. In an alternative embodiment the interface portion and locking member may comprise separate components which can be associated with one another. In such an embodiment the interface portion may be provided with an aperture configured to receive the locking member therethrough. The aperture may be tapered and configured to receive a complementarily tapered portion of the locking member.

[0015] According to a second aspect of the present invention there is provided a towable vehicle having a chassis and at least one wheel, the vehicle further including a security apparatus comprising a base secured to a suspension component of the chassis and a locking assembly releasably securable to said base, the locking assembly, in use, extending through an aperture of said at least one wheel to prevent the rotation thereof relative to the suspension component, characterised in that the locking assembly includes a securing means to releasably secure the locking assembly to the base, the securing means having a threaded portion receivable by the

base, wherein the interface between the locking assembly and the base is shielded by said at least one wheel, suspension component and underside of the towable vehicle, in use.

1. A towable vehicle security apparatus (10,100,120,130) comprising a base (12) securable to a suspension component (20) of a towable vehicle chassis and a locking assembly (14) releasably securable to said base, the locking assembly (14), in use, being positionable through an aperture of a wheel (126) of the towable vehicle to prevent the rotation of the wheel (126) relative to the suspension component (20) to which the base (12) is secured, characterised in that the locking assembly (14) includes a securing means (82,134) to releasably secure the locking assembly member (14) to the base (12), the securing means (82) having a threaded portion (86) receivable by the base (12), wherein the interface between the locking assembly (14) and the base (12) is shielded by the vehicle wheel, suspension component (20) and underside of the towable vehicle, in use.
2. A security apparatus (10,100,120,130) as claimed in claim 1 wherein the base (12) is provided with an attachment portion (16) to permit the base to be secured to the suspension component (20) and a seat portion (18) adapted to receive a portion of the locking assembly (14).
3. A security apparatus (10,100,120,130) as claimed in claim 2 wherein the seat portion (18) includes a recess (45) within which a portion of the locking assembly (14) is receivable.
4. A security apparatus (10,100,120,130) as claimed in claim 2 or claim 3 wherein the base (12) is provided with a threaded recess (46) accessible through the seat portion (18) by the locking assembly (14).
5. A security apparatus (10,100,120,130) as claimed in any preceding claim wherein the locking assembly (14) includes an elongate locking member (64,104,132) ~~and a securing means (82,134) to releasably secure the locking member (64,104,132) to the base (12).~~
6. A security apparatus (10,100,120,130) as claimed in claim 5 wherein the locking member (64,104,132) includes an interface portion (68,102) shaped to fit closely to an aperture of a wheel (126) of the towable vehicle.
7. A security apparatus (10,100,120,130) as claimed in claim 6 wherein the interface portion (68,102) comprises a flange (140) of the locking member (644,104,132).

8. A security apparatus (10,100,120,130) as claimed in claim 6 or claim 7 wherein the interface portion (102) and locking member (104) comprise separate components which are fittable to one another.
9. A security apparatus (10,100,120,130) as claimed in claim 8 wherein the interface portion (102) is provided with an aperture (106) configured to receive the locking member (104) therethrough.
10. A security apparatus (10,100,120,130) as claimed in claim 9 wherein the aperture (106) of the interface portion (102) is tapered and configured to receive a complementarily tapered portion (108) of the locking member (104).
11. A security apparatus (10,100,120,130) as claimed in any of claims 6 to 10 wherein a portion 124) of the locking assembly is configured so as to cover one or more of the wheel nuts or wheel bolts used to the attach the wheel (120) to the towable vehicle.
12. A security apparatus (10,100,120,130) as claimed in claim 11 wherein the interface portion (60,102) of the locking assembly is provided with an extension which, in use, overlies the one or more wheel nuts or wheel bolts.
13. A security apparatus (10,100,120,130) as claimed in any of claims 5 to 12 wherein the securing means (82,134) comprises an elongate member which, in use, extends through a longitudinal bore (76,110) of the locking member (64,104,132).
14. A security apparatus (10,100,120,130) as claimed in claim 13 wherein ~~said~~ a first end (86) of the elongate member is threaded.
15. A security apparatus (10,100,120,130) as claimed in ~~claim 13 or~~ claim 14 wherein the opposite end (84) of the elongate member is provided with a formation mateable with an appropriately configured tool to assist in the fitting and removal of the elongate member to the base (12).

16. A security apparatus (10,100,120,130) as claimed in any of claims 13 to 15 wherein the locking assembly (14) includes a plug fittable to the longitudinal bore (76,110) of the locking member to shield the securing means (82,134) and prevent access thereto.
17. A security apparatus (10,100,120,130) as claimed in claim 16 wherein the plug is in the form of a barrel lock (112).
18. A towable vehicle having a chassis and at least one wheel (120), the vehicle further including a security apparatus (10,100,120,130) comprising a base (12) secured to a suspension component (20) of the chassis and a locking assembly (14) releasably securable to said base (12), the locking assembly (14), in use, extending through an aperture of said at least one wheel to prevent the rotation thereof relative to the suspension component (20), characterised in that the locking assembly (14) includes a securing means (82,134) to releasably secure the locking assembly (14) to the base (12), the securing means (82,134) having a threaded portion (86) receivable by the base (12), wherein the interface between the locking assembly (14) and the base (12) is shielded by said at least one wheel, suspension component (20) and underside of the towable vehicle, in use.
19. A towable vehicle as claimed in claim 18 wherein the base (12) is secured to a suspension arm (24) of the chassis.
20. A towable vehicle as claimed in claim 18 or claim 19 wherein the base (12) comprises an attachment portion (16) secured to the suspension component (20) and a seat portion adapted to receive a portion of the locking assembly (14).
21. A towable vehicle as claimed in claim 20 wherein the seat portion (18) includes a recess (54) within which a portion of the locking assembly (14) is receivable.
22. A towable vehicle as claimed in claim 20 or claim 21 wherein the base (12) is provided with a threaded recess (46) accessible through the seat portion (18) by the threaded portion of the locking assembly (14).

23. A towable vehicle as claimed in any of claims 18 to 22 wherein the locking assembly (14) includes an elongate locking member (64,104,132) ~~and a securing means (82,134) to releasably secure the locking member (64,104,132) to the base (12).~~

24. A towable vehicle as claimed in claim 23 wherein the locking member (64,104,132) includes an interface portion (68,102) shaped to fit closely to an aperture of a wheel (26) of the towable vehicle.

25. A towable vehicle as claimed in claim 24 wherein the interface portion (68,102) comprises a flange (140) of the locking member (64,104,132).

26. A towable vehicle as claimed in claim 24 or claim 25 wherein the interface portion (102) and locking member (104) comprise separate components which are fittable to one another.

27. A towable vehicle as claimed in claim 26 wherein the interface portion (102) is provided with an aperture (106) configured to receive the locking member (104) therethrough.

28. A towable vehicle as claimed in claim 9 wherein the aperture of the interface (106) portion is tapered and configured to receive a complementarily tapered portion (108) of the locking member (104).

29. A towable vehicle as claimed in any of claims 24 to 28 wherein a portion (124) of the locking assembly (14) is configured so as to cover one or more of the wheel nuts or wheel bolts used to the attach the wheel (126) to the towable vehicle.

30. A towable vehicle as claimed in claim 29 wherein the interface portion (68,102) of the locking assembly (14) is provided with an extension which, in use, overlies the one or more wheel nuts or wheel bolts.

31. A towable vehicle as claimed in any of claims 23 to 30 wherein the securing means (82,134) comprises an elongate member which, in use, extends through a longitudinal bore (76,110) of the locking member (64,104,132).

32. A towable vehicle as claimed in claim 31 wherein ~~said~~ a first end (86) of the elongate member is threaded.

33. A towable vehicle as claimed in ~~claim 31 or~~ claim 32 wherein the opposite end (84) of the elongate member is provided with a formation mateable with an appropriately configured tool to assist in the fitting and removal of the elongate member to the base (12).

34. A towable vehicle as claimed in any of claims 30 to 33 wherein the locking assembly (14) includes a plug fittable to the longitudinal bore (76,110) of the locking member (64,104,132) to shield the securing means (82,134) and prevent access thereto.

35. A towable vehicle as claimed in claim 34 wherein the plug is in the form of a barrel lock (112).

36. A towable vehicle security apparatus substantially as hereinbefore described with reference to or as shown in the Figures 1 to 5, 6 to 8, 9 and 10, or 11 of the accompanying drawings.

37. A towable vehicle has a chassis and at least one wheel, and including a security apparatus substantially as hereinbefore described with reference to or as shown in the Figures 1 to 5, 6 to 8, 9 and 10, or 11 of the accompanying drawings.