

(19)



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Office européen des brevets



(11)

EP 1 621 100 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

01.02.2006 Bulletin 2006/05

(51) Int Cl.:

A45C 11/32 (2006.01)

(21) Application number: **05254813.8**

(22) Date of filing: **01.08.2005**

(84) Designated Contracting States:

**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI
SK TR**

Designated Extension States:

AL BA HR MK YU

(30) Priority: **30.07.2004 GB 0416976**

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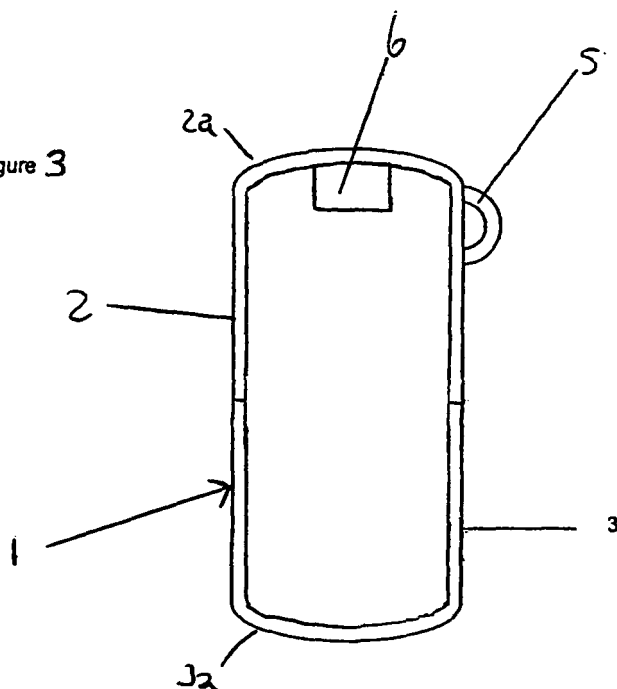
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(54) **Key holder**

(57) The invention provides a key holder that comprises: (a) a housing (1) within which one or more keys can be held, wherein the housing is provided with an opening that can be opened to allow insertion of or removal of a key and that can be closed to enclose a key within the housing; (b) securing means (6) for releasably

holding a key in a desired position within the housing; and (c) attachment means (5) that allow the housing to be attached to a key ring. The key holder may suitably be a lock nut key holder. For example, it may be a holder for a key for a lock nut to secure wheels and/or tyres on a vehicle or for a key for a lock nut to secure propellers to a boat or light aircraft.

Figure 3



Description

[0001] The present invention relates to a key holder, in particular a lock nut key holder, and to uses of said key holder.

[0002] Traditional keys, such as those for doors, are usually kept on a key ring, which allows the key to be easily kept with the owner as required. However, other types of keys that cannot be directly kept on a key ring are now becoming commonplace, such as keys (also known as adaptors) for the insertion and/or removal of lock nuts.

[0003] Lock nuts are widely used to secure various components, in particular components on vehicles. For example lock nuts are used to secure wheels and/or tyres on cars so as to deter theft and lock nuts are used to secure propellers to boats and light aircraft.

[0004] It is generally useful for the owner to be able to easily keep such lock nut keys with them as required. In particular, when the lock nut is for securing wheels and/or tyres on vehicles, it is important that the lock nut key is not stored at home as if a puncture occurs it is difficult if not impossible to change the tyre without the key, whilst the security aspect of the lock nut is lost if the lock nut key is stored inside the vehicle, such as in the glove box, as otherwise if the vehicle is broken into the lock nut key can be obtained and the wheels and/or tyres can then be stolen.

[0005] Accordingly, there is a need for means that allows safekeeping of lock nut keys on the person as required.

[0006] The present invention provides, in a first aspect, a key holder that comprises: a housing within which one or more keys can be held, wherein the housing is provided with an opening that can be opened to allow insertion of or removal of a key and that can be closed to enclose a key within the housing; securing means for releasably holding a key in a desired position within the housing; and attachment means that allow the housing to be attached to a key ring.

[0007] Such a key holder is able to hold a key, such as a lock nut key, inside the housing, and can be easily carried round by a key owner by attachment of the holder to a key ring. The key holder is particularly beneficial in that a key held within the holder is held securely in place and does not rattle around.

[0008] Preferably, the key holder is a lock nut key holder, and the housing is such that it can hold one or more lock nut keys and can be opened to allow insertion or removal of a lock nut key. The lock nut key may, for example, be a key for a lock nut to secure wheels and/or tyres on a vehicle or a key for a lock nut to secure propellers to a boat or light aircraft.

[0009] The securing means may be any means that can releasably secure a key in a desired position within the housing.

[0010] The securing means preferably comprises one or more magnets, located so as to be able to magnetically

hold the key in the desired place within the housing. The magnet may be located inside or outside the housing or may be integral with the housing. The magnet is suitably attached to the housing, and may be attached by any suitable means, for example adhesive.

[0011] Preferably the securing means comprises a magnet located within the housing, for example attached to an inner surface of the housing, at a location such that it can magnetically hold the key in the desired place within the housing.

[0012] The inclusion of one or more magnets is particularly beneficial as a key held within the housing is held securely in place by the magnet, and further when the housing is opened the key will not fall out, and possibly be lost, but rather will continue to be held in place by the magnet.

[0013] The securing means may, alternatively or additionally, comprise a body of deformable or resilient material, such as a body of sponge or foam material, or such as a spring, which is sized and located so as to be able to hold the key in the desired place within the housing.

[0014] For example, a body of sponge or foam material may be included within the housing that fills most or all of the interior of the housing, wherein the space left inside the housing and the deformability of the material is such that a key can be placed inside the housing with the material and is held in place by the material.

[0015] In one embodiment a spring may be included within the housing that fills most or all of the interior of the housing, wherein the space left inside the housing and the resilience of the spring is such that a key can be placed inside the housing with the spring and is held in place by the spring.

[0016] The inclusion of a body of deformable or resilient material is beneficial as a key held within the housing is then prevented from rattling round within the housing. Further, such material can be selected so as to be lightweight and therefore will not cause the holder to become too heavy.

[0017] The housing can be any suitable interior size and shape in view of the intended key or keys to be held within it. In one embodiment, the housing is of an interior size and shape so as to be able to hold a lock nut key, for example the housing may be of an interior size and shape so as to only be able to hold a single lock nut key.

[0018] The housing can be any suitable exterior size and shape. The exterior shape of the housing may suitably be rounded, for example spherical or capsule shaped. This is advantageous because there are then no potentially sharp corners or edges that might otherwise cause discomfort or damage.

[0019] The housing may be any suitable material or combination of materials. The housing may be coated in order to achieve desired properties. Suitably, the housing may be a material or combination of materials that is lightweight and durable. For example, the housing may be metal, such as aluminium, alloys, such as stainless steel, or plastics material, such as polypropylene. In one em-

bodiment, the housing is waterproof; in this case it may be made from a waterproof material or may be coated with a waterproof material.

[0020] The housing may suitably be watertight. This is advantageous as it avoids water entering the housing and potentially damaging a key held therein, for example by rusting. The housing may be provided with a seal around its opening, such as a rubber or plastic ring; for example an o-ring.

[0021] The housing may be such that it floats on water. In particular, the housing may be of a lightweight material and may be provided with a rubber or plastic ring, for example an o-ring, around its outside. It is advantageous for the housing to be such that it floats on water as then it will not be immediately lost if it is dropped into water, for example the sea or a lake. This is clearly of particular use when the key intended to be held in the holder is a lock nut key for a boat.

[0022] The housing may have any suitable opening that can be opened to allow insertion of or removal of a key and that can be closed to enclose a key within the housing. The opening preferably is such that it can be securely closed to securely enclose a key within the housing.

[0023] The housing may suitably comprise two sections that can securely connect together to form an enclosed housing and that can partly or fully disconnect from each other so as to allow the insertion of or removal of a key. The two sections may be connectable and disconnectable by any suitable mechanism, for example a screw, snap fix, bayonet, clip or zip mechanism. In one embodiment the two sections partly disconnect as they are connected by a hinge; accordingly the two sections can move apart from each other about the hinge so as to allow the insertion of or removal of a key.

[0024] The two sections can be substantially the same size or one section may be larger than the other. Accordingly, the opening of the housing may be at or near its middle, or alternatively the opening of the housing may be towards its top end or towards its bottom end.

[0025] The attachment means that allow the housing to be attached to a key ring may be any suitable means. The attachment means are suitably attached to an outer surface of the housing. The attachment means may suitably comprise a hook or loop to which a key ring chain may be attached.

[0026] In one embodiment, the holder further comprises a chain, such as a key ring chain, attached to the attachment means that allow the housing to be attached to a key ring. The holder may also further comprise a key ring attached to the key ring chain.

[0027] The key holder may further comprise any other suitable components, in particular additional components known for inclusion with a key ring. For example, the key holder may further comprise a light, which therefore allows the key holder to act as a small torch when required. In particular, the key holder may comprise an LED and associated power source (e.g. battery). The

light may be provided at any suitable position on the key holder but may, in one embodiment, be provided towards the bottom end of the housing.

[0028] In one embodiment, the key holder further comprises one or more keys, preferably one or more lock nut keys.

[0029] Suitably the key may be located within the housing. Preferably, the key is held in a desired position within the housing by the securing means. In one embodiment, the key holder comprises a lock nut key held in a desired position within the housing by a magnet attached to the housing.

[0030] In a second aspect, the invention provides the use of a key holder in accordance with the first aspect to hold one or more keys.

[0031] The use is preferably the use of a key holder in accordance with the first aspect to hold one or more lock nut keys.

[0032] Preferably, the key holder is used to hold a lock nut key within the housing of the key holder, preferably in a desired position within the housing of the key holder. The key holder may suitably magnetically hold a lock nut key in a desired position within the housing of the key holder.

[0033] The lock nut key may, for example, be a key for a lock nut to secure wheels and/or tyres on a vehicle or a key for a lock nut to secure propellers to a boat or light aircraft.

[0034] The present invention will now be further described, by means of example only, with reference to the drawings in which:

Figure 1 is a perspective view of a holder in accordance with the first aspect in its closed configuration;

Figure 2 is a perspective view of the holder of Figure 1 in its open configuration; and

Figure 3 is a cross section of the holder of Figure 1 in its closed configuration.

[0035] Figures 1 to 3 show a lock nut key holder that comprises a hollow, capsule shaped housing 1 that can hold one or more lock nut keys, such as a key for a lock nut to secure wheels and/or tyres on a vehicle. Approximately halfway along its length the housing 1 is split into an upper section 2 and a lower section 3. Accordingly, the upper section 2 is substantially cup shaped with a closed end 2a and a mouth 2b, and the lower section 3 is also substantially cup shaped with a closed end 3a and a mouth 3b.

[0036] The upper section 2 is provided with screw threads (not shown) around its mouth 2b on its inner surface. The lower section 3 is provided with corresponding screw threads 4 around its mouth 3b on its outer surface.

[0037] The holder also comprises attachment means 5, which is a loop that is attached to the housing 1, on the outside of upper section 2 close to its closed end 2a.

This loop 5 allows the housing 1 to be attached to a key ring (not shown).

[0038] The holder further comprises securing means 6, which is a magnet. The magnet 6 is located inside the housing 1, being attached by adhesive to the inside, of upper section 2 at its closed end 2a.

[0039] Accordingly, the housing 1 can be opened as shown in Figure 2, by unscrewing the upper section 2 from the lower section 3, and a lock nut key (not shown) can be placed inside the housing 1. The lock nut key is secured in place within the housing 1 by being magnetically attracted to magnet 6 within upper section 2. The housing 1 can then be securely closed by screwing together upper section 2 and lower section 3.

[0040] The key holder can then be carried about as needed by attaching it to a key ring via the loop 5. The lock nut key stored within the housing 1 of the key holder is then with the owner when required and can be easily accessed by unscrewing the upper section 2 from the lower section 3 and taking the lock out key out.

[0041] It will be understood that various modifications could be made to the holder shown in Figures 1 to 3 without departing from the scope of the invention.

[0042] For example, the upper and lower sections could be connected by a snap fit or bayonet connection or by the use of clips rather than having a screw connection, the upper and lower sections could be connected via a hinge such that they only partly disconnect from each other, and/or the upper section could be larger than or smaller than the lower section rather than being approximately the same size.

[0043] Equally, the magnet could, for example, be located elsewhere within the upper section or could be located in the lower section, and/or the holder could additionally be provided with a body of deformable or resilient material (e.g. a body of sponge or foam, or a spring) within the housing.

Claims

1. A key holder that comprises:

a housing (1) within which one or more keys can be held, wherein the housing is provided with an opening that can be opened to allow insertion of or removal of a key and that can be closed to enclose a key within the housing; securing means (6) for releasably holding a key in a desired position within the housing; and attachment means (5) that allow the housing to be attached to a key ring.

2. A key holder according to Claim 1, wherein the key holder is a lock nut key holder, and the housing is such that it can hold one or more lock nut keys and can be opened to allow insertion or removal of a lock nut key.

3. A key holder according to Claim 1 or Claim 2, wherein the securing means comprises one or more magnets, located so as to be able to magnetically hold the key in the desired place within the housing.

4. A key holder according to Claim 3, wherein the securing means comprises a magnet located within the housing.

5. A key holder according to Claim 4, wherein the magnet is attached to an inner surface of the housing, at a location such that it can magnetically hold the key in the desired place within the housing.

6. A key holder according to any one of the preceding claims, wherein the securing means comprises a body of deformable or resilient material.

7. A key holder according to Claim 6 wherein the securing mean comprises a body of sponge or foam material.

8. A key holder according to Claim 6 wherein the securing means comprises a spring.

9. A key holder according to any one of the preceding claims wherein the exterior shape of the housing is rounded.

10. A key holder according to any one of the preceding claims wherein the housing is provided with a seal around its opening.

11. A key holder according to any one of the preceding claims wherein the housing comprises two sections (2,3) that can securely connect together to form an enclosed housing and that can partly or fully disconnect from each other so as to allow the insertion of or removal of a key.

12. A key holder according to any one of the preceding claims wherein the attachment means comprise a hook or loop to which a key ring chain may be attached.

13. A key holder according to any one of the preceding claims wherein the holder further comprises a chain attached to the attachment means that allow the housing to be attached to a key ring.

14. A key holder according to Claim 13 wherein the holder further comprises a key ring attached to the chain.

15. A key holder according to any one of the preceding claims wherein the key holder further comprises one or more keys.

16. A key holder according to Claim 15 wherein the key

holder comprises a key located within the housing.

- 17.** A key holder according to Claim 16 wherein the key holder comprises a lock nut key held in a desired position within the housing by a magnet attached to the housing. 5
- 18.** The use of a key holder in accordance with any one of the preceding claims to hold one or more keys. 10
- 19.** Use according to Claim 18 wherein the use is to hold one or more lock nut keys.
- 20.** Use according to Claim 19 wherein the lock nut key is a key for a lock nut to secure wheels and/or tyres on a vehicle or a key for a lock nut to secure propellers to a boat or light aircraft. 15

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Figure 1.

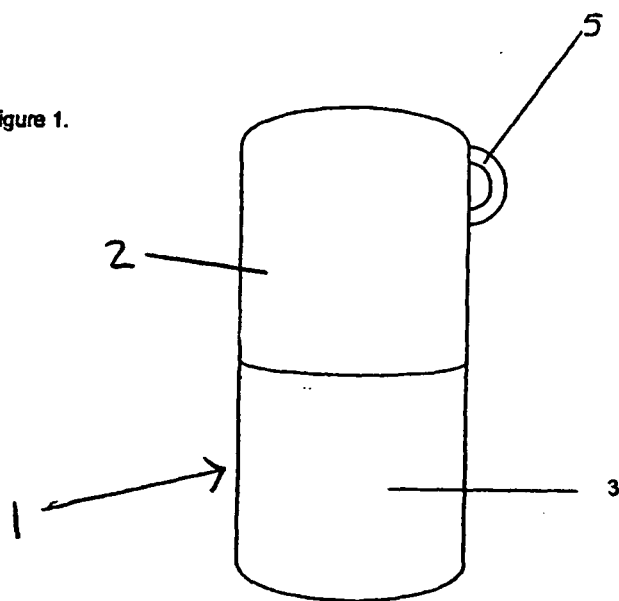


Figure 2

