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(54) ANTI-THEFT DEVICE

(71) We, NEIMAN S.A., a French Body Corporate, of 39 Avenue Marceau, 92400 Courbevoie, France do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:-

The invention relates to an anti-theft device for a motorcycle helmet.

In order to prevent the theft of a helmet is must locked to a fixed part, such as a post or a fence or the motorcycle if the latter is itself provided with an anti-theft device. This connection is an extremely delicate question, since regulations at present in force prohibit the modification of the structure of the helmet, for example by drilling or the mounting of additional means.

It has been proposed for this purpose to provide a cradle matching the shape of the helmet and equipped with a lock to which there may be fixed one end of a chain the other end of which is connected to the cradle so as to lock the helmet to the cradle and the chain, which latter is previously passed around a fixed element or the frame of the motorcycle. This cradle is however very bulky when the motorcyclist uses his helmet so that this device has a limited development.

The present invention provides a detachable device which may be secured to a helmet without modification of the latter and is small in size and reliable in operation.

According to the invention, there is provided an anti-theft device for a motorcycle helmet, said helmet having a continuous rib on the periphery of the edge of its opening, wherein there is provided means having a pair of jaws for gripping said edge of the helmet behind said rib, a key controlled lock device for locking said gripping means in the gripping position, a flexible member connected at one end to said gripping means and

at its other end to means for securing the flexible element to an immovable object or to a motorcycle.

The use of gripping means cooperating with the rib possessed by most helmets avoids any transformation of the helmet so that regulations at present in force are respected. The device according to the invention may have a very small size.

In a preferred embodiment, said gripping means is connected to one end of a fixing chain. Preferably, the other end of said chain is connected to the motorcycle.

In one embodiment, the gripping means comprises two branches mounted to pivot about a pin remote from the ends of said branches, two confronting ends of said branches having cooperative nose portions constituting a tongs, and a bolt member actuated by a lock device integral with one of said branches, said bolt member being capable of occupying a first position in which it does not prevent the opening of said tongs and a second position in which it prevents the opening of said tongs.

In a modification, said gripping means comprises two jaws which are movable with respect to each other and elastically biased apart, a screw cooperating with a tapped aperture of one of the jaws and extending through the other jaw, a cap rotatably mounted on the head of the screw and carrying a lock device barrel provided with an eccentric pin, said pin being cooperative, for one angular position of the barrel, with a recess formed in said head and, for another angular position of the barrel, disposed outside said recess. The screw head may thus be rendered integral with the cap for clamping or releasing the gripping means. In the opposite case, the cap turns freely with respect to the screw head which cannot be turned for clamping or releasing the gripping means.

The invention will be understood from

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the ensuing description with reference to the accompanying drawings in which :

Figure 1 is an elevational view of an anti-theft device according to one embodiment of the invention;

Figure 2 is a sectional view taken on line II-II of *Figure 1*;

Figure 3 is a sectional view, partly in elevation, taken on line III-III of *Figure 1*, the left half representing the device in the locking position and the right half in the unlocking position;

Figure 4 is a sectional view, with a part cut away, of an anti-theft device according to a modification of the invention in the locking position;

Figure 5 is a sectional view taken on line V-V of *Figure 4*, and

Figure 6 is similar to *Figure 5*, the anti-theft device being in the locking position.

Reference will first be made to *Figures 1* to *3*. In the illustrated embodiment, the anti-theft device according to the invention comprises two branches *1* and *2* of tongs which are mounted to pivot about a pin *3* and have end nose portions *1'* and *2'* respectively in facing relation and adapted to grip a helmet *4* behind an edge rib *5* on the helmet. A torsion spring *6*, mounted around the pin *3*, acts on the branches *1* and *2* in such manner as to bias the nose portions *1'* and *2'* toward each other.

The branch *2* has in the portion thereof opposed to the nose portion *2'* with respect to the pin *3*, a cavity *7* for a lock device *8* actuated by a key *9*. The lock device *8* is extended axially by a stud *10* (*Figure 3*) and is capable of occupying two axial positions owing to the action of a pin *11* which cooperates with a guide groove *12*. In the locking position (*Figure 1* and the left side of *Figure 3*), the stud *10* projects, whereas in the unlocking position (right side of *Figure 3*) the stud *10* projects, whereas in the unlocking position (right sides of *Figure 3*) the stud *10* is withdrawn. The stud *10* cooperates in the locking position with a blind aperture *13* formed in the branch *1* so that in this position the stud *10* constitutes a stop and precludes the opening of the tongs formed by the nose portions *1'* and *2'*.

A chain *14* is secured to one end of the branch *1* and, at the other end of the chain, to a semi-collar *15* which can be united with another semi-collar *16* by screws *17* which have heads which are capable of being broken off after the mounting of the collar *15-16* on a part of the motorcycle, such as the handlebars or frame.

Reference will now be made to *Figures 4* to *6*. In this embodiment, the anti-theft device comprises two jaws *20* and *21*, the jaw *21* carrying rods *22* which cooperate with apertures *23* in the jaw *20* so as to

ensure a relative guiding of the jaws *20* and *21*. The jaws *20* and *21* have nose portions *20'* and *21'* which respectively cooperate with the helmet *4* and its rib *5* in the same way as in the foregoing embodiment.

The jaw *20* has a tapped aperture *24* with which the screwthread of a screw *25* cooperates, this screwthread having preferably a coarse pitch, the body of the screw extending through an aperture *26* in the jaw *21* and the head *27* of the screw abutting against the jaw *21*. A spring *28* biases the jaws *20* and *21* away from each other and a cover *29* welded on the jaw *20* prevents access to the screw *25*.

A cap *30* surrounds the screw head *27* and a pin *31* of this cap cooperates with a groove *32* in the head *27* so that the cap *30* is free to rotate with respect to the head *27* but is prevented from moving axially relative to the latter.

The cap *30* carries a lock device barrel *33* which is extended by an eccentric stud *34*. In the unlocking position, the stud *34* (*Figures 4* and *5*) is disposed in a slot *35* formed in the head *27* in the radial extension of a blind aperture *36*. This stud renders the barrel *33* fast with the screw head *27*. An action on the cap *30* therefore screws or unscrews the screw *25* and consequently moves the jaws *20* and *21* toward or away from each other.

On the other hand, in the locked position (*Figure 6*), the stud *34* is wholly in the aperture *35* and outside the slot *35*. The cap *30* is no longer connected to rotate with the screw head *27* and the screws *25* cannot be unscrewed (or screwed);

As in the foregoing embodiment, a chain (not shown) is secured to the jaw *21* which has an aperture *37* for this purpose.

WHAT WE CLAIM IS :

1. An anti-theft device for a motorcycle helmet, said helmet having a continuous rib on the periphery of the edge of its opening, wherein there is provided means having a pair of jaws for gripping said edge of the helmet behind said rib, a key controlled lock device for locking said gripping means in the gripping position, a flexible member connected at one end to said gripping means and at its other end to means for securing the flexible element to an immovable object or to a motorcycle.

2. A device as claimed in claim 1, wherein said gripping means comprises two arms mounted to pivot about a pin remote from the ends of said forming tongs, two confronting ends of said arms having cooperative jaws, and a bolt member actuated by the lock device fast with one of said arms, said bolt member being capable of occupying a first position in which it does not prevent the opening of said tongs and a second position in which it prevents the opening of said tongs.

3. A device as claimed in claim 2, wherein the lock device and the bolt member are mounted with a bore in one arm and are arranged to move within said bore on rotation of the key into a locking position where the bolt member engages the other arm.

4. A device as claimed in claim 2 or 3, wherein a torsion spring acts on the arms to urge the jaws towards each other.

5. A device as claimed in claim 2, wherein said gripping means comprises two jaws which are relatively movable in parallel disposition and elastically biased away from each other, said lock device including a screw cooperative with a tapped aperture in one of the jaws and extending through the other jaw, a cap rotatably mounted on the head of the screw and carrying a lock barrel provided with an eccentric stud, said stud being cooperative, in one angular position of the barrel, with a slot formed in said head and, in another angular position of the barrel, being disposed outside said slot.

6. A device as claimed in claim 5, wherein the screw has a coarse pitch.

7. An anti-theft device, substantially as described herein with reference to and as illustrated by the accompanying drawings.

8. A device as claimed in claim 1, substantially as hereinbefore described.

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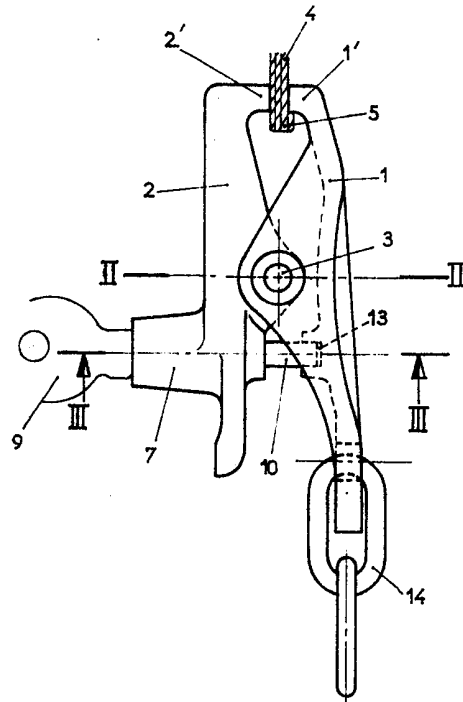


Fig. 1

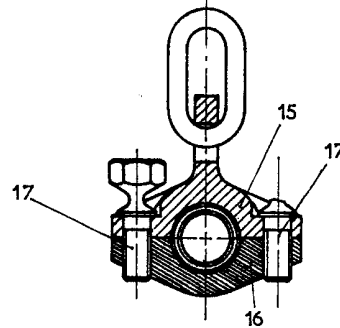


Fig. 2

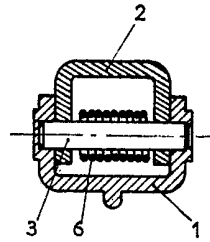
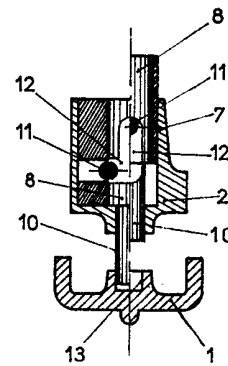


Fig. 3



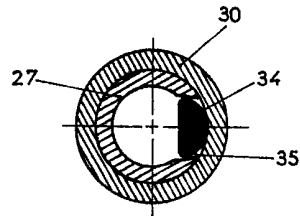


Fig. 5

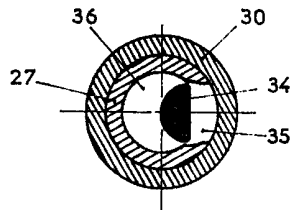


Fig. 6

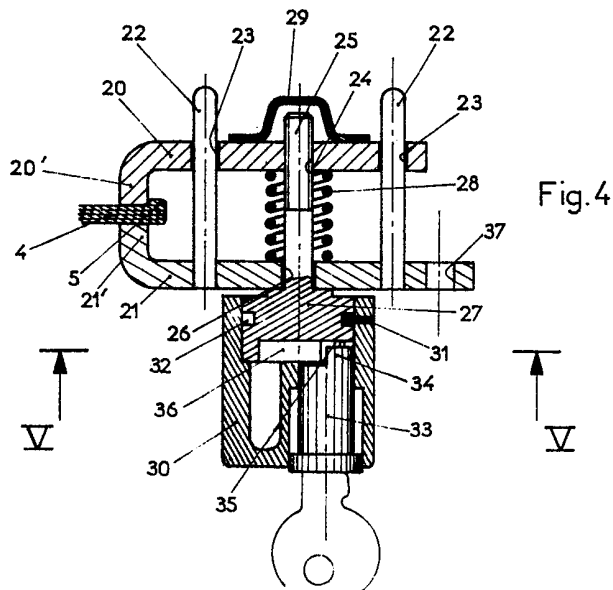


Fig. 4