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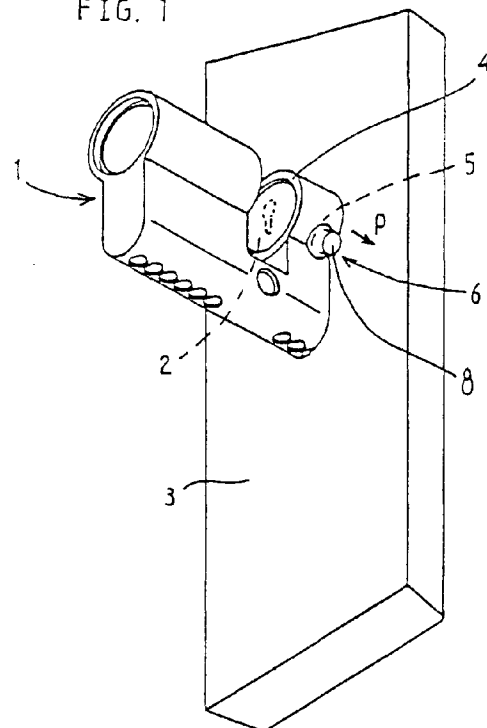
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(54) Cylinder lock

(57) Cylinder lock comprising a safety metalwork (2), which can be secured in a door or the like, a cylinder housing (1) to be fixed in relation to said metalwork, said housing containing an inner cylinder (2) in which a key can be inserted so that the inner cylinder can be rotated and the bolt of said lock can be operated. A tilting pin (6) comprising a head (7) and a shank (8) is mounted in the cylinder housing (1) in such a way that the head (7) of the tilting pin (6) is located in a recess (5) in the wall (4) of said cylinder housing (1) and its shank (8) protrudes beyond said wall (4). The tilting pin (6) is formed such that its head (7), being received in the recess (5), protrudes in relation to the shank (8) of said tilting pin (6) at least in the direction towards said safety metalwork (3). The tilting pin (6) can comprise two cylindrical coaxial parts (7, 8).

FIG. 1



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Description

[0001] The invention relates to a cylinder lock comprising a safety metalwork, which can be secured in a door or the like, a cylinder housing to be fixed in relation to said metalwork, said housing containing an inner cylinder in which a key can be inserted so that the inner cylinder can be rotated and the bolt of said lock can be operated.

[0002] Such cylinder locks are widely used. However, a difficulty thereof is that they are not burglar-proof in every aspect. For example, it is possible to screw a tap bolt into the inner cylinder by means of which then the inner cylinder and a portion of the cylinder housing can be pulled out. After that, the operating mechanism of the bolt of the lock is easily accessible and the door or the like can be opened.

[0003] The object of the invention is to remove this difficulty and to that end provides for, that a tilting pin comprising a head and a shank is mounted in the cylinder housing in such a way that the head of the tilting pin is located in a recess in the wall of the cylinder housing and its shank protrudes beyond the cylinder wall, said tilting pin being formed such that its head, being received in the recess, protrudes in relation to the shank of the tilting pin, at least in the direction towards said safety metalwork.

[0004] Now when a tap bolt is screwed into the inner cylinder and a force is exerted on it, the cylinder housing will break at the position of the operating member of the bolt of the lock. On pulling the assembly further outwards with the help of the tap bolt, the tilting pin shank protruding beyond the cylinder housing will contact the safety metalwork. Due to this, the pin will be tilted and the head edge situated at the greatest distance from the safety metalwork and directed towards the inner cylinder will grasp into said inner cylinder. In the same way, the head edge being directed towards the safety metalwork will grasp into said safety metalwork, by the fact that the tilting pin shank engages the safety metalwork. Owing to this, the inner cylinder with the cylinder housing can not be pulled out further.

[0005] In particular, the tilting pin will consist of two cylindrical, coaxial parts with the head having a larger diameter than the shank. This enables simple manufacturing of the tilting pin. Then the recess in the wall of said cylinder housing, in which the head of the tilting pin is to be mounted, will also have a simple form. At the same time it is achieved that the shank of the tilting pin, on tilting the pin, will not directly contact the wall of the recess in the cylinder housing.

[0006] Obviously, the tilting pin must be able to tilt in relation to the cylinder housing wall but should be fixedly mounted in it, so that it can not drop out of the recess and into the cylinder housing. In connection with that, the head of the tilting pin can be secured by means of a light drive fit or by glueing or in a like way.

[0007] The invention is further explained by way of an

embodiment shown in the drawing, in which:

fig. 1 shows a perspective view of a cylinder housing of a cylinder lock having the accompanying safety metalwork in which the inner cylinder in one part of it has been omitted for reasons of clarity;

fig. 2 shows a perspective view, on an enlarged scale, of a tilting pin used with the lock according to fig. 1; and

fig. 3 shows a perspective view of the lock according to fig. 1 when its cylinder housing has been pulled out over a certain distance and the tilting pin is in its operational position.

[0008] Fig. 1 shows a cylinder housing 1 having in its part at the far right an inner cylinder 2 indicated only by some dash lines. A key can be inserted into the inner cylinder.

[0009] Situated between both cylindrical parts of the cylinder housing 1 are means for actuating the bolt of said lock. The bolt and said means for actuating it can be of known construction and therefore have not been illustrated in the drawing.

[0010] The cylinder housing 1 is received in a safety metalwork 3, which can be fastened onto a door or window.

[0011] A recess is made in the wall 4 of the cylinder housing 1, in which recess a tilting pin 6 is received, in particular its head 7, see Fig. 2, in such a way that the shank 8 of the tilting pin 6 protrudes beyond the cylinder housing 1. The head 7 can be secured in the wall 4 by light drive fit or by glueing.

[0012] When someone tries to pull the inner cylinder 2 out with force in the direction of the arrow P, the cylinder housing 1 will break at the location of the transition 9 between both cylindrical parts, as shown in Fig. 3. Then, the shank 8 of the tilting pin 6 contacts the safety metalwork 3 and the pin will tilt as shown in Fig. 3. Due to that, a part of the edge 10 of the head 7 of the pin 6 will engage the inner cylinder 2 and will grasp into it. The opposite part of the edge 11 of the head 7 will at the same time grasp into the wall of the cavity in the safety metalwork 3, in which cavity the cylinder housing 1 is received.

[0013] The cylinder housing 1 and the inner cylinder 2 can not be pulled out further, so that the lock is protected against burglary.

[0014] Naturally, the tilting pin 6 need not consist of cylindrical parts but said parts can also have a more rectangular shape.

[0015] Therefore, it will be obvious that only one possible embodiment of a cylinder lock according to the invention has been illustrated in the drawing and described above and that many modifications can be made without leaving the inventive idea, as it is indicated in the claims.

Claims

1. Cylinder lock comprising a safety metalwork (2), which can be secured in a door or the like, a cylinder housing (1) to be fixed in relation to said metalwork, said housing containing an inner cylinder (2) in which a key can be inserted so that the inner cylinder can be rotated and the bolt of said lock can be operated, characterized in that a tilting pin (6) comprising a head (7) and a shank (8) is mounted in the cylinder housing (1) in such a way that the head (7) of the tilting pin (6) is located in a recess (5) in the wall (4) of the cylinder housing (1) and its shank (8) protrudes beyond the cylinder wall (4), said tilting pin (6) being formed such that its head (7), being received in the recess (5), protrudes in relation to the shank (8) of said tilting pin (6) at least in the direction towards said safety metalwork (3).
2. Cylinder lock according to claim 1, characterized in that the tilting pin (6) consists of two cylindrical, coaxial parts (7, 8) from which the head (7) has a larger diameter than the shank (8).
3. Cylinder lock according to claim 1 or claim 2, characterized in that the head (7) of the tilting pin (6) is secured in the cylinder housing (1) by means of a light drive fit or by glueing or in a similar way.

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FIG. 2

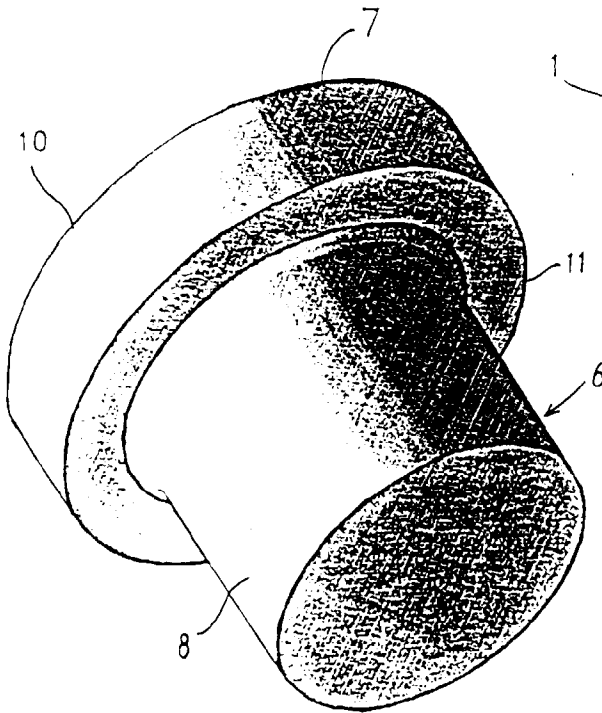


FIG. 1

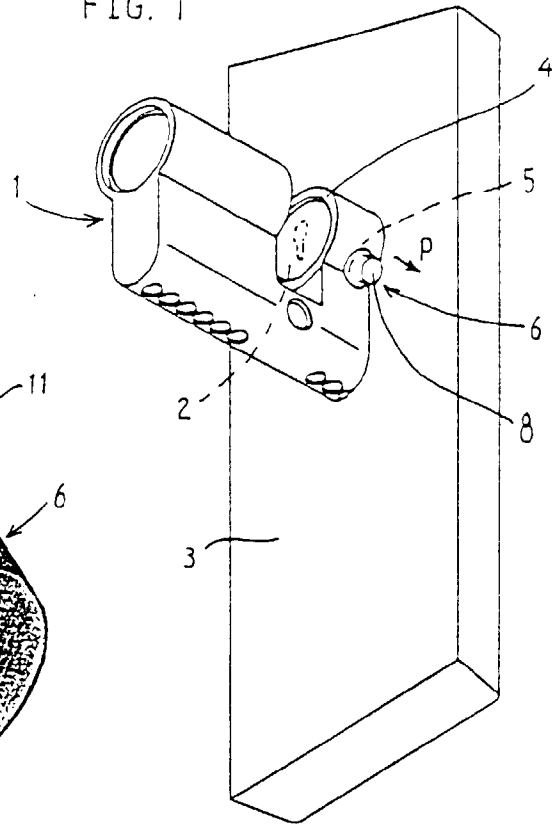
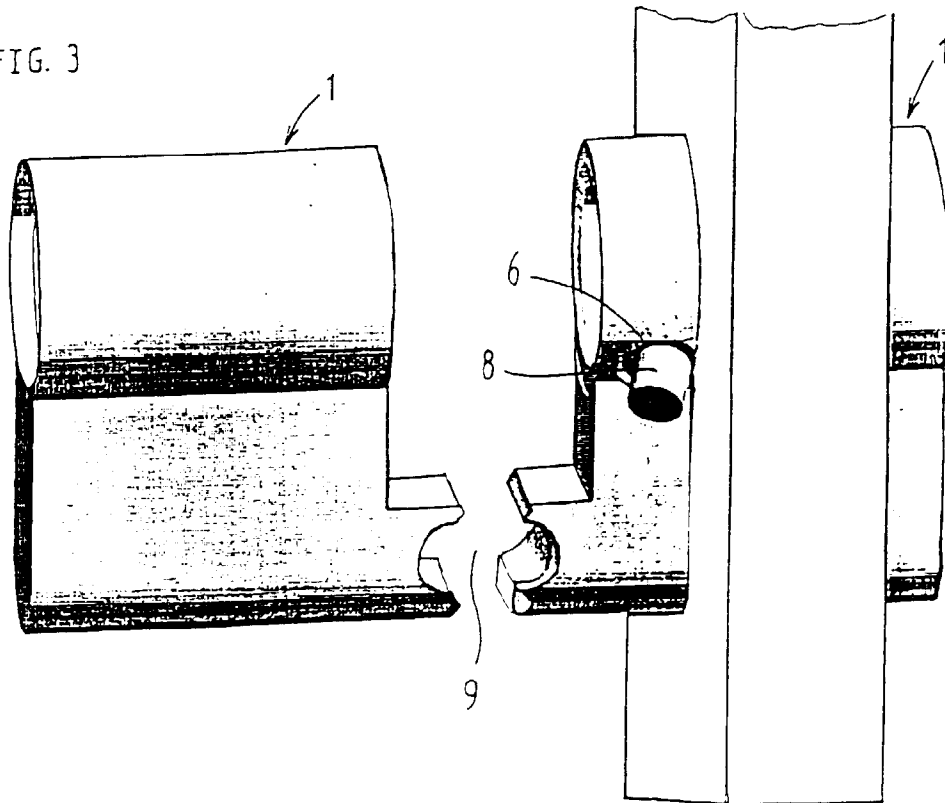


FIG. 3





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EUROPEAN SEARCH REPORT

Application Number
EP 99 20 0139

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25 June 1999	Examiner Westin, K
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