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TITLE: PADLOCK WITH A CLOSE BAR

BACKGROUND OF THE INVENTION

This invention relates to a padlock with a close bar,
5 particularly to one having a close bar having an annular
projection to stop a prying tool from reaching a deadbolt to
press down to unlock the padlock.

A known conventional padlock with a close bar shown
in Figs. 1, 2 and 3, includes a main body A, an auxiliary body
10 B combined securely in a way which the auxiliary body has a
horizontal projecting post C to insert in a post hole in the
main body, and secured together with a bolt or a rivet, but no
mutual pull force to secure tightly together so that they
easily loosen from each other.

15 Further, a close bar D is provided to push in or pull out
in the main body to lock something, having a front head E of
a 1 mm larger diameter than that of the close bar D. So when
the close bar D is inserted in a bar hole F of the main body
A, the bar hole F has an inner diameter at least a little
20 smaller than that of the outer diameter of the front head E to
form a gap (at least 0.5 mm or so) between them as shown in
Figs. 1, 2 and 3. Then a thief can use a steel piece G to
insert in the gap and press down a deadbolt H, freeing the
close bar to unlock the padlock.

25 SUMMARY OF THE INVENTION

This invention has been devised to offer a padlock with a close bar impossible to be pry open by illegal means.

The feature of the invention is the close bar having an annular projection with a larger diameter than that of the close bar body to stop a prying tool inserted through a gap between the close bar and the bar hole in a main body from reaching a deadbolt in the main body to press down to free the close bar to unlock the padlock so far locked.

BRIEF DESCRIPTION OF DRAWINGS

10 This invention will be better understood by referring to the accompanying drawings, wherein:

Figure 1 is a cross-sectional view of a known conventional padlock;

15 Figure 2 is a cross-sectional view of the known conventional padlock being pried open with a piece of steel;

Figure 3 is a cross-sectional view of the known conventional padlock being pried open with the piece of steel inserted in the bolt hole;

20 Figure 4 is a cross-sectional view of a padlock in the unlocked condition in the present invention;

Figure 5 is a cross-sectional view of the padlock in the locked condition in the present invention;

Figure 6 is a side view of a deadbolt in the padlock in the present invention;

25 Figure 7 is a cross-sectional view of the line 7 - 7 in

Fig. 6;

Figure 8 is a cross-sectional view of the padlock to be locked in the present invention; and,

Figure 9 is a cross-sectional view of the padlock in the present invention, showing it in the locked condition and impossible to be pried open.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A preferred embodiment of a padlock in the present invention, as shown in Figs. 4 - 9, includes a main body 2 and an auxiliary body 3, a close bar 1, and a dead bolt 22.

The main body 2 has a horizontal projecting post 23 extending to the left from a left end of the main body 2. The horizontal projecting post 23 inserts in a horizontal hole 31 of the auxiliary body 3, combining the main body 2 with the auxiliary body 3 securely. The post 23 has a vertical through hole 231 near the outer end.

The auxiliary body 3 has a vertical threaded hole 32 communicating with the horizontal hole 31, and the center line of the of the threaded hole 32 is not aligned to the center line of the through hole 231, so when the bolt 33 screws in the through hole 231, it presses the post 23 inward tightly so as to tighten the main body 2 together with the auxiliary body 3. Further, the lower end of the bolt 33 is cone-shaped.

The close bar 1, as shown in Figs. 6 and 7, has an annular groove 11 near an inner head 12 (or end) of a larger diameter than the diameter of the close bar body, an annular projection 13 formed at a left side of the annular groove 11 and of the same diameter of the inner head 12 or of a larger diameter than the close bar body. When the close bar 1 is inserted in a bar hole 21 formed in the main body 2, the annular projection 13 contact a left side surface of the end of the deadbolt 22 fitting in the annular groove 11, preventing an exterior matter such as a steel piece from extending through a gap between the bar hole 21 and the close bar 1 to reach the end of the deadbolt 22 and press down the deadbolt 22 to unlock the padlock, obtaining the anti-theft purpose.

Further, the close bar 1 has a lateral through hole 14 near the annular projection 13 for a bolt 33 to pass through to screw in the auxiliary body 2 and fitting with its end in the through hole 231 of the horizontal projecting post 23 as shown in Figs. 6 and 7, after the main body 2 and the auxiliary body 3 are combined together, as shown in Fig. 4.

The padlock with a close bar in the invention has the following advantage.

1. Provision of the annular projection 13 of the close bar 1 can stop and prevent an exterior matter such as a prying steel piece from extending in the gap formed between

the close bar and the bar hole in the main body 2 to reach the end of the deadbolt 22 to press it down to unlock the padlock.

2. The main body and the auxiliary body are kept
5 combined tightly by means of the bolt 33.

3. It has a simple structure, and high safety with no possible prying open.

4 It improves the disadvantage of the known conventional padlock with a close bar, enhancing anti-theft
10 safety.

While the preferred embodiment of the invention has been described above, it will be recognized and understood that various modifications may be made therein and the appended claims are intended to cover all such
15 modifications which may fall within the spirit and scope of the invention.



I CLAIM

1. A padlock with a close bar comprising a main body and an auxiliary body combined together, and a close bar, said close bar having an annular groove neighboring an inner head of a larger diameter than that of said close bar body; and,

characterized by an annular projection formed at a left side of said annular groove of a larger diameter than that of said close bar body and of the same diameter of said inner head, said annular projection contacting a left side surface of an end of a deadbolt provided in said main body when said close bar is pushed to extend in a bar hole provided laterally in said main body, said annular projection stopping and preventing an exterior matter from passing through a gap between said close bar and said bar hole to reach said deadbolt to press down said deadbolt to unlock said padlock, attaining an anti-theft objective.

2. A padlock with a close bar comprising a main body and an auxiliary body and a close bar, said close bar having an annular groove neighboring an inner head of a larger diameter than that of said close bar body; and,

characterized by an annular projection formed at a left side of said annular groove of a larger diameter than that of said close bar body and of the same diameter of



said inner head, said annular projection contacting a left side surface of an end of a deadbolt provided in said main body when said close bar is pushed to extend in a bar hole provided laterally in said main body, said annular projection stopping and preventing an exterior matter from passing through a gap between said close bar and said bar hole to reach said deadbolt to press down said deadbolt to unlock said padlock, attaining an anti-theft objective;

said main body having a horizontal projecting post extending in a post hole formed in said auxiliary body, said horizontal projecting post having a vertical through hole, said auxiliary body having a vertical threaded hole communicating with said post hole, said through hole of said horizontal projecting post having a center line not aligned to the center line of said threaded hole to permit a lower cone-shaped end of a bolt screw in said threaded hole to tightly press said horizontal projecting post inward tightly so as to keep said main body and said auxiliary body in a tightly combined condition.

3. The padlock with a close bar as claimed in Claim 1, wherein said close bar having a through hole for said bolt to pass through down in said auxiliary body and said main body.

4. The padlock with a close bar as claimed in

Claim 1, wherein said annular projecting of said close bar has the same diameter as that of said inner head of said close bar.

5 5. The padlock with a close bar as claimed in Claim 2, wherein said close bar having a through hole for said bolt to pass through down in said auxiliary body and said main body.

10 6. The padlock with a close bar as claimed in Claim 2, wherein said annular projecting of said close bar has the same diameter as that of said inner head of said close bar.

