

Description

Padlock

5 Technical field

The present invention relates to the technical field of locks, more specifically, to a padlock.

Background technology

10 The existing padlock comprises a lock body and a lock beam, the lock body is provided with a lock beam hole, inserting the lock beam into the lock beam hole, and then the padlock will be in a locked state. Usually, when using the padlock, the user will pass the lock beam through the lock nose on the door and insert it into the lock beam hole, so that the padlock locks the door. At this moment, the padlock is hung on the door and is not easy to be lost. When the user does not use the padlock, the padlock will be placed by hand, which easily causes the padlock to dropped or lost.

15 The existing padlock that can be fixed on the door weighs about 1 kg and is worth about RMB 300, i.e. it is large in volume and expensive, so it cannot meet the daily needs of users.

Therefore, the existing padlocks have the problem of easily being dropped or lost, which cannot meet the daily needs of users.

20 Content of invention

The purpose of the present invention is to solve the problem that the existing padlock is easily dropped or lost.

The present invention provides a padlock, of which the lock beam hole is connected with the lock nose by a fastener, so that the padlock is fixed on the door and prevented from dropping or

25 being lost, which is convenient for the user to use.

In order to solve above technical problems, the embodiment of the present invention discloses a padlock, which comprises a lock body provided with a lock beam hole; a lock beam for inserting into the loc beam hole; a fastener capable of passing through a lock nose on the door into one lock beam hole to connect the lock beam hole with the lock nose, the fastener having a through passage

30 for the lock beam to pass through.

By using above technical solution, the lock beam hole is connected with the lock nose by the fastener, so that the padlock is fixed on the door, so as to prevent the padlock from dropping or being lost, facilitate the user to use, meet the daily needs of the user and solve the problem that the existing padlock is easy to drop or be lost.

Optionally, the lock beam hole is provided with an internal thread, the fastener comprises a fixing body, the fixing body is provided with an external thread, and the fixing body is capable of passing through the lock nose to threaded connect with the lock beam hole.

5 By using above technical solution, the padlock is fixed on the door by thread connection between the fastener and the lock body.

Optionally, the fastener further comprises a flange provided at one end of the fixing body, and the flange abuts against the lock nose along the inserting direction of the lock beam.

Optionally, the flange is fitted with the lock nose along the inserting direction of the lock beam.

10 By using above technical solution, the padlock is fixed on the door under the clamping effect of the fastener and the lock body to the lock nose.

Optionally, the padlock further comprises a gasket provided with a through hole, the fixing body is capable of passing through the through hole and the lock nose successively and protruding into one lock beam hole, so that the gasket is fitted with the lock nose along the inserting direction of the lock beam, and the flange abuts against the gasket along the inserting direction of the lock beam

By using above technical solution, the padlock is fixed on the door under the common clamping action of the fastener, the gasket and the lock body to the lock nose.

20 Optionally, the gasket further comprises a clamping portion arranged at both ends of the extending direction of the gasket for clamping the lock nose.

Optionally, the lock nose is a plate provided with a through hole, and the plate is fixedly connected with the door.

Optionally, the lock nose is a C-shaped rod with both ends fixedly connected to the door.

25 Optionally, the padlock is a transversely-opened padlock comprising a lock beam being linear; a lock body provided with two lock beam holes arranged at intervals along the inserting direction of the lock beam, and a groove is provided between two lock beam holes for accommodating the lock nose.

30 Optionally, the padlock is a U-shaped padlock comprising a lock body provided with two lock beam holes arranged at intervals thereon; a locking beam being U-shaped for inserting into two lock beam holes.

Optionally, the padlock is a top-opened padlock comprising a lock body provided with two lock beam holes arranged at intervals thereon; a lock beam being U-shaped, of which one end is rotatably connected with one lock beam hole and the other end is used for inserting into another lock beam hole.

Description of drawings

FIG. 1 shows a perspective view of a padlock according to an embodiment of the present invention;

5 FIG. 2 shows a perspective view of a bracket according to an embodiment of the present invention;

FIG. 3 is a perspective view 1 of the padlock fixed to an iron bar door according to an embodiment of the present invention;

10 FIG. 4 is a perspective view 2 of the padlock fixed to the iron bar door according to an embodiment of the present invention;

FIG. 5 shows a perspective view 3 of the padlock fixed to the iron bar door according to an embodiment of the present invention;

FIG. 6 shows a perspective view 4 of the padlock fixed to the iron bar door according to an embodiment of the present invention;

15 FIG. 7 shows a perspective view 5 of the padlock fixed to the iron bar door according to an embodiment of the present invention;

FIG. 8 shows a perspective view of the padlock fixed to a door according to another embodiment of the present invention;

20 FIG. 9 shows a perspective view 1 of the padlock according to another embodiment of the present invention;

FIG. 10 shows a perspective view 2 of the padlock according to another embodiment of the present invention;

FIG. 11 shows a perspective view of a transversely-opened padlock according to another embodiment of the present invention;

25 FIG. 12 shows a perspective view of a hollow flange nut according to another embodiment of the present invention;

FIG. 13 shows a perspective view of a gasket according to another embodiment of the present invention;

30 FIG. 14 shows a front view of a U-shaped padlock according to another embodiment of the present invention;

FIG. 15 shows a side view of the U-shaped padlock according to another embodiment of the present invention;

FIG. 16 shows a front view of a top-opened padlock according to another embodiment of the present invention;

FIG. 17 shows a side view of the top-open padlock according to another embodiment of the present invention.

In above drawings, the part names corresponding to the reference marks are as follows:

1- transversely-opened padlock, 11-lock body, 110-lock beam hole, 1110-internal thread,
5 111-key hole, 112-threaded hole of lock body, 12- lock beam, 13- fixing assembly, 131-chain, 132-
bracket, 1320-U-shaped opening, 1321-front plate of bracket, 1322-threaded hole of front plate of
bracket, 1323-right side plate of bracket, 1324-threaded hole of right side plate of bracket, 1325-
left side plate of bracket, 1326-threaded hole of left side plate of bracket, 1327-rear plate, 1328-
connecting plate, 133-nut, 14-gasket, 141-clamping portion, 142-gasket through hole, 15- groove,
10 16-fastener, 160-fixing body, 1601-passage, 1602-external thread, 161-flange, 2- door, 20-iron bar
door, 21- lock nose, 211-plate-shaped lock nose, 2110-through hole of plate-shaped lock nose,
212-rod-shaped lock nose, 17- fixing tool, 3-U-shaped padlock, 32- lock beam, 31- lock body,
310-lock beam hole, 4- top-opened padlock, 41- lock body, 410-lock beam hole, 411-lock beam
hole, 42- lock beam, I- lock beam inserting direction, L-first direction.

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Specific embodiments

The embodiments of the present invention are described below by specific embodiments, and other advantages and functions of the present invention can be readily understood by those skilled in the art from the content disclosed in the present specification. Although the description of the
20 present invention will be described in combination with the preferred embodiment, this does not mean that the features of the present invention are limited to this embodiment. On the contrary, the purpose of introducing the invention in combination with the embodiments is to cover other options or modifications that may be extended based on the claims of the present invention. In order to provide an in-depth understanding of the present invention, the following description will
25 include many specific details. The present invention may also be implemented without using these details. Furthermore, in order to avoid confusion or obscuring the focus of the present invention, some specific details will be omitted from the description. It should be noted that the embodiments of the present invention and the features in the embodiments may be combined with each other without conflict.

30 It should be noted that, in this specification, similar marks and letters denote similar items in the following drawings, and therefore, once an item is defined in one drawing, it need not be further defined and explained in the following drawings.

In the description of this embodiment, it should be noted that the orientation or position relationship indicated by the terms "up," "down," "inside," "bottom" and the like is based on the

orientation or position relationship shown in the accompanying drawings, or the orientation or position relationship conventionally placed when the invention product is used is only convenient to describe the invention and simplify description, rather than indicating or implying that the device or element must have a specific orientation, and be constructed and operated in a specific orientation, and therefore it cannot be understood as a limitation of the present invention.

The terms "first," "second," etc., are used only for distinguishing descriptions and cannot be understood as indicating or implying relative importance.

In the description of this embodiment, it should also be noted that, unless otherwise specified and defined, the terms "setting," "connected" and "connection" shall be understood in a broad sense, for example, may be a fixed connection, may be a detachable connection, or may be integrally connected; May be mechanically or electrically connected; May be directly connected, may be indirectly connected by an intermediate medium, or may be in communication within two elements. For those of ordinary skill in the art, the specific meaning of the above terms in this embodiment may be understood according to specific conditions.

In order to make the purpose, technical solution and advantages of the present invention clearer, the embodiments of the present invention will be further described in detail below in combination with the accompanying drawings.

Referring to FIGS. 1 to 3, in one embodiment of the present invention, a transversely-opened padlock 1 is fixed to an iron bar door 20 by a fixing assembly 13. The iron bar door 20 is a door in which a plurality of iron bars are arranged at intervals and connected together by welding.

Referring to FIG. 1, in this embodiment, the padlock is a transversely-opened padlock 1 comprising a lock beam 12 and a lock body 11. The locking beam 12 is linear. The lock body 11 is provided with two lock beam holes 110 which are arranged at intervals along an inserting direction (I direction as shown in FIG. 1) of the lock beam. A groove 15 is provided between two lock beam holes 110 for accommodating the plate-shaped lock nose 211 (as shown in FIGS. 3, 4). When locking the door, the plate-shaped lock nose 211 is accommodated in the groove 15, and the lock beam 12 is inserted by one of the lock beam holes 110 (for example, the right lock beam hole 110 as shown in FIG. 4) and passes through a through hole 2110 of the plate-shaped lock nose 211 and then is inserted into the other lock beam hole 110 (for example, the left lock beam hole 110 as shown in FIG. 4) to realize the door locking. One side of the lock body 11 is provided with a key hole 111 for inserting a key to unlock the padlock.

Referring to FIG. 1, two thread holes 112 are further provided on the lock body 11, which is capable of coinciding with the two thread holes 1322 on a front plate 1321 of the bracket 132 (as shown in FIG. 2), and a nut 133 (as shown in FIG. 2) is used to successively pass through the

thread hole 1322 on the front plate and the thread hole 112 on the lock body, so that the bracket 132 and the transversely-opened padlock 1 are in threaded connection, and the bracket 132 and the transversely-opened padlock 1 can be fixed together by two nuts 133.

Referring to FIGS. 1 and 2, in this embodiment, a fixing assembly 13 comprises a chain 131, a bracket 132 and a nut 133 disposed on one side of the transversely-opened padlock 1. Referring to FIG. 2, the bracket 132 is a "U"-shaped iron plate, and a "U"-shaped opening 1320 on the bracket 132 is used to accommodate the lock body 11 (as shown in FIG. 1).

The bracket 132 is provided with a front plate 1321 provided with two thread holes 1322 thereon. As described above, the front plate 1321 is in threaded connection with the transversely-opened padlock 1 by two nuts 133, so that the bracket 132 is fixed to the transversely-opened padlock 1.

Referring to FIGS. 2 and 3, a rear plate 1327 is provided on the bracket 132 opposite to the front plate 1321, the front plate 1321 and the rear plate 1327 are connected to each other by a connecting plate 1328, and the front plate 1321 and the rear plate 1327 are perpendicular to the connecting plate 1328, respectively, which together form a U-shaped opening of the bracket 132. Two right side plates 1323 and two left side plates 1325 are provided on both sides of the rear plate 1327, respectively, which are perpendicular to the rear plate 1327. The intervals of two side plates match the size of the single iron bar, so that the bracket 132 can clamp the single iron bar on the iron bar door 20. The right side plate 1323 is provided with two thread holes 1324 thereon, and the left side plate 1325 is provided with two thread holes 1326. Accordingly, the left and right sides of the iron bar door 20 are respectively provided with two thread holes at corresponding positions, and the right side plate 1323 and the left side plate 1325 of the bracket 132 can be respectively in threaded connection with the iron bar door 20 so that the bracket 132 is fixed to the iron bar door 20, thereby realizing that the transversely-opened padlock 1 is fixed to the iron bar door 20.

FIGS. 3 to 7 show the mounting process in which the user fixes the transversely-opened padlock 1 to the iron bar door 20 by the fixing assembly 13. FIG. 3 shows that the user mounts the bracket 132 in the corresponding position of the iron bar door 20. FIG. 4 shows that the user adjusts the fixing position of the bracket 132 and the transversely-opened padlock 1 on the iron bar door 20. FIG. 5 shows that the user fixes the bracket 132 and the transversely-opened padlock 1 together through the nut 133 by using a fixing tool 17. FIG. 6 shows that the user fixes the right side plate 1323 of the bracket 132 and one side of the iron bar door 20 (the right side of the iron bar door 20 as shown in FIG. 5 and FIG. 6) together through the nut 133 by using the fixing tool 17. FIG. 7 shows that the user fixes the left side plate 1325 of the bracket 132 and one side of the iron bar door 20 (the left side of the iron bar door 20 as shown in FIGS. 5 and 7) together through the nut

133 by using the fixing tool 17.

Referring to FIG. 3, the user clamps the bracket 132 on a single iron bar provided with a plate-shaped lock nose 211 by the right side plate 1323 (not shown in FIGs) and the left side plate 1325 of the bracket 132, so that the bracket 132 is fixedly mounted relatively at a corresponding position of the iron bar door 20.

Referring to FIG. 4, the user places the transversely-opened padlock 1 on the bracket 132 and uses both hands to move both up and down on the iron bar door 20. When the lock beam 12 can smoothly pass through the plate-shaped lock nose 211 and the through hole 2110 of the plate-shaped lock nose 211, the position of the bracket 132 and the transversely-opened padlock 1 on the iron bar door 20 is the target fixing position.

Referring to FIG. 5, after the user aligns the thread hole 112 of the transversely-opened padlock 1 and the thread hole 1322 of the bracket front plate 1321, the user holds the transversely-opened padlock 1 and the bracket 132 with a left hand and fixes the bracket 132 and the transversely-opened padlock 1 with two nuts 133 with a right hand by using the fixing tool 17.

Referring to FIG. 6, the user continues to hold the transversely-opened padlock 1 and the bracket 132 with the left hand and screws the nut 133 with the right hand by using the fixing tool 17 to pass through the thread hole 1324 on the right side plate 1323 of the bracket 132 and the thread hole (not shown in FIGs) of the corresponding position on the iron bar door 20 to fix the right side plate 1323 and the right side of the iron bar door 20 together.

Referring to FIG. 7, the user continues to hold the transversely-opened padlock 1 and the bracket 132 with the left hand and screws the nut 133 with the right hand by using the fixing tool 17 to pass through the thread hole 1326 on the left side plate 1325 of the bracket 132 and the thread hole (not shown in FIGs) of the corresponding position on the iron bar door 20 to fix the left side plate 1325 and the left side of the iron bar door 132 together.

Referring to FIG. 1, one side of the lock body 11 is also provided with a chain 131. After the user fixes the transversely-opened padlock 1 on the iron bar door 20 through the bracket 132, the lock body 11 can be further fixed by passing the chain 131 through the iron bar door 20 to prevent the transversely-opened padlock 1 from being lost or dropped.

In this embodiment, that use of above fixing assembly 13 to fix the padlock on the iron bar door 20 is not high in applicability and poor in compatibility, and is embodied in that the fixing of the transversely-opened padlock 1 on the door by the bracket 132 is only applicable to the iron bar door 20. If the size of a single iron bar does not match the interval between the right side plate 1323 and the left side plate 1325 of the bracket 132 or the door itself is made of a whole piece of iron sheet, the bracket 132 cannot be fixed on the door. In order to fix the transversely-opened

padlock 1 to the iron bar door 20 by above fixing assembly 13, at least six nuts 133 (as shown in FIGS. 2 and 7, two thread holes 1322 are provided on the front plate 1321 of the bracket, two thread holes 1324 are provided on the right plate 1323, and two thread holes 1326 are provided on the left plate 1325) need to be used, thus, the mounting is more complicated. Use of a nut 533 with
5 a diameter of 2-3 mm to fix a padlock weighing up to 1 kg is not firm and the padlock is easy to fall off and may damage the human body. The padlock price is about 300 RMB, which is a high price to meet the daily needs of users.

For this purpose, referring to FIGS. 8 to 10, in another possible embodiment of the present application, the padlock and the lock nose 21 on the door 2 are fixed together by a fastener 16. The
10 padlock is realized to be fixed on the door 2 by one fastener 16, which simplifies the structure and facilitates the mounting. And it saves the parts and reduces the cost.

FIG. 8 shows one of the use cases of the transverse padlock 1, which is fixed to the locking nose 21 of the door 2. The padlock of the present application is applicable to each type of door having a locking nose 21. FIG. 9 is an enlarged schematic view of position A in FIG. 8, in which
15 the transversely-opened padlock 1 is fixedly connected to the plate-shaped lock nose 211 by the fastener 16. FIG. 10 is an enlarged schematic view of position B in FIG. 8, in which the transversely-opened padlock 1 is fixedly connected to the rod-shaped lock nose 212 by the fastener 16.

Referring to FIGS. 9 to 11, in the present embodiment, the padlock is a transversely-opened
20 padlock 1. The transversely-opened padlock 1 comprises a lock beam 12 and a lock body 11. The lock beam 12 is linear. The lock body 11 is provided with two lock beam holes 110 which are arranged at intervals along the inserting direction of the lock beam (I direction as shown in FIGS. 9 to 11). A groove 15 is provided between two lock beam holes 110 for accommodating the lock nose 21 (as shown in FIGS. 9 and 10). When locking the door, the lock nose 21 is accommodated
25 in the groove 15, the lock beam 12 is inserted by one of the lock beam holes 110 (for example, the right lock beam hole 110 as shown in FIGS 9 and 10), passes through the lock nose 21, and then inserts into the other lock beam hole 110 (for example, the left lock beam hole 110 as shown in FIGS 9 and 10), to realize locking of the door.

In the present embodiment, the fastener 16 can pass through the lock nose 21 (as shown in
30 FIGS 9 and 10) on the door 2 (as shown in FIG. 8) and inserts into one lock beam hole 110 (FIGS 9 and 10 shows that the fastener 16 passes through the lock nose 21 and inserts into the left lock beam hole 110), so that the lock beam hole 110 is connected to the lock nose 21, the transversely-opened padlock 1 can be fixed on the door 2 by the fastener 16 to prevent from being lost or dropped and is convenient for users to use. Above fastener 16 is provided with a through passage

1601 (as shown in FIG. 12) for the lock beam 12 to pass through, so that the lock beam 12 can pass through the passage 1601 (without affecting the insertion of the lock beam 12 into the lock beam hole 110) after the transversely-opened padlock 1 is fixedly connected to the lock nose 21 by the fastener 16 to realize locking of the door.

5 In some possible embodiments, the fastener 16 is a hollow nut. Referring to FIG. 11, in the present embodiment, the lock beam hole 110 is provided with an internal thread 1100. Referring to FIG. 12, the fastener 16 comprises a fixing body 160 provided with an external thread 1602, the fixing body 160 can pass through the lock nose 21 (as shown in FIGS. 9 and 10) to be threadedly connected to the lock beam hole 110 so that the transversely-opened padlock 1 is fixed to the lock
10 nose 21 by the fastener 16.

After realizing the fixing connection of the fastener 16 and the lock body 11 by thread connection between the fixing body 160 of the fastener 16 and the lock beam hole 110, the fixing body 160 of the fastener 16 is concealed in the lock body 11, it has no impact on the appearance of the transversely-opened padlock 1, and the appearance is beautiful.

15 Exemplarily, the diameter of the fastener 16 of a light weight transversely-opened padlock 1 is 10 mm or more. Compared with fixing the bracket 132 and the transversely-opened padlock 1 weighing up to 1 kg by using the nut 133 with a diameter of 2-3 mm (as shown in Fig.2), using the fastener 16 with a large diameter (i.e., more than 10 mm) to fix the transversely-opened padlock 1 with light weight has a better fixing effect, and the transversely-opened padlock 1 is more difficult
20 to drop off from the door, which is convenient for the user to use and reduces the risk of being lost or dropped of the padlock, and the safety is high.

In some possible embodiments, each of two lock beam holes 110 of the transversely-opened padlock 1 is provided with an internal thread 1100, and the user may select either of the lock beam holes 110 to threadedly connect with the fastener 16 according to a personal usage habit to fix the
25 transversely-opened padlock 1 to the door 2 (as shown in FIG. 8), which improves the operation convenience of the user.

With continued reference to FIG. 12, the fastener 16 further comprises a flange 161 provided at one end of the fixing body 160, and the flange 161 abuts against the lock nose 21 (as shown in FIGS. 9 and 10) along the inserting direction I of the lock beam, so that the lock nose 21 is clamped
30 by the flange 161 of the fastener 16 and the lock body 11, and the fastening force between the transversely-opened padlock 1 and lock nose 21 on the door 2 is improved, so that the transversely-opened padlock 1 is fixed to the door 2 (as shown in FIG. 8).

Referring to FIG. 9, the lock nose 21 on the door 2 (as shown in FIG. 8) is a plate-shaped lock nose 211, that is, the lock nose 21 is a plate provided with a through hole 2110, and the plate-

shaped lock nose 211 is fixedly connected with the door 2. The fixing body 160 passes the through hole 2110 and is threadedly connected with the lock beam hole 110 so that the flange 161 of the fastener 16 is fitted with the plate-shaped lock nose 211 along the inserting direction I of the lock beam. The transversely-opened padlock 1 is fixed to the door 2 by the clamping action of the flange 161 and the lock body 11 on the plate-shaped lock nose 211.

Referring to FIG. 10, the lock nose 21 on the door 2 (as shown in FIG. 8) is a rod-shaped lock nose 212, that is, the lock nose 21 is a C-shaped rod, and both ends of the rod are fixedly connected with the door 2. Referring to FIGS. 10 and 13, the transversely-opened padlock 1 further comprises a gasket 14 provided with a through hole 142, the fixing body 160 can successively pass through the through hole 142 and the rod-shaped lock nose 212 and insert into one lock beam hole 110 so that the gasket 14 abuts against the rod-shaped lock nose 212 along the inserting direction I of the lock beam and it fitted with the rod-shaped lock nose 212. Above flange 161 abuts against the gasket 14 along the inserting direction of the lock beam. The transversely-opened padlock 1 is fixed to the door 2 under the common clamping action of the flange 161, the gasket 14 and the lock body 11 on the rod-shaped lock nose 212.

Referring to FIG. 13, in the present embodiment, the gasket 14 further comprises a clamping portion 141 provided at both ends in the extending direction of the gasket 14 for clamping the rod-shaped lock nose 212. As shown in FIG. 10, the distance between the clamping portion 141 at both ends of the gasket 14 matches the distance between the two ends of the rod-shaped lock nose 212, so that the opposite inner side of the clamping portion 141 can clamp the rod-shaped lock nose 212, that is, the gasket 14 clamps the rod-shaped lock nose 212 along the first direction (the L direction as shown in FIG. 10), so that the gasket 14 is fixed with respect to the rod-shaped lock nose 212. As described above, the gasket 14 is fitted with the rod-shaped lock nose 212 along the insertion direction I of the lock beam, and the flange 161 abuts against the gasket 14 along the inserting direction I of the lock beam by the fastener 16. That is, the clamping portion 141 clamps the rod-shaped lock nose 212 in the first direction L, and the flange 161, the gasket 14 and the lock body 11 clamp the rod-shaped lock nose 212 along the inserting direction I of the lock beam so that the transversely-opened padlock 1 is fixed to the door 2.

Referring to FIGS. 12 and 13, the flange 161 of the fastener 16 and gasket 14 of the present application may be customized according to actual requirements to meet the individual needs of different users. For example, the size of the gasket 14 is adapted to the rod-shaped lock nose 212 so that the gasket 14 is sufficient to tightly clamp the rod-shaped lock nose 212. As another example, for a better appearance, a recess corresponding to the flange 161 may be provided on the gasket 14 so that the assembled flange 131 and gasket 14 are in the same plane.

The type of padlock described in above embodiments is the transversely-opened padlock 1, but the padlock type of the present application is not limited thereto, and the fastener 16 may be matched with various types of common padlocks, such as a U-shaped padlock and a top-opened padlock.

Exemplarily, referring to FIGS. 14 and 15, in some other embodiments of the present invention, the padlock is a U-shaped padlock 3. The U-shaped padlock 3 comprises a lock body 31 and a lock beam 32. Two lock beam holes 310 are arranged at intervals on the lock body 31. The lock beam 32 is U-shaped, and the U-shaped lock beam 32 is used for inserting two lock beam holes 310.

In the present embodiment, the fastener 16 can also pass through the lock nose 21 (as shown in FIG. 9) on the door 2 (as shown in FIG. 8) and insert into one lock beam hole 310 of the U-shaped padlock 3, so that the lock beam hole 310 is connected to the lock nose 21. The fastener 16 is provided with a through passage 1601 (as shown in FIG. 12) for the U-shaped lock beam 32 to pass therethrough, so that the U-shaped padlock 3 can be fixed to the door 2 by the fastener 16, thereby preventing the padlock from being lost or dropped, and facilitating the use of users.

Exemplarily, referring to FIGS. 16 and 17, in some other embodiments of the present invention, the padlock is a top-opened padlock 4. The top-opened padlock 4 comprises a lock body 41 and a lock beam 42. The lock body 41 is provided with a lock beam hole 410 and a lock beam hole 411 at intervals thereon. The lock beam 42 is U-shaped, the lock beam 42 at one end of the U-shaped opening is rotatably connected to the lock beam hole 411, and the lock beam 42 at the other end of the U-shaped opening is used for inserting the lock beam hole 410.

In the present embodiment, the fastener 16 can also pass through the lock nose 21 (as shown in FIGS. 9 and 10) on the door 2 (as shown in FIG. 8) and insert into the lock beam hole 410, so that the lock beam 410 is connected to the lock nose 21. The fastener 16 is provided with a through passage 1601 (as shown in FIG. 12) for the U-shaped lock beam 42 to pass therethrough, so that the top-opened padlock 4 can be fixed to the door 2 by the fastener 16, thereby preventing the padlock from being lost or dropped, and facilitating the use of users.

Referring to FIGS. 16 and 17, in the top-opened padlock 4, the lock beam 42 is rotatably connected to the lock beam hole 411, the lock beam hole 410 is provided with an internal thread (not shown in FIGS), and the user passes the fastener 16 through the lock nose 21 to threadedly connect the lock beam hole 410, so that the top-opened padlock 4 is fixed to the door 2.

Although the present invention has been illustrated and described with reference to some preferred embodiments of the present invention, it should be understood by those of ordinary skill in the art that above contents is a further detailed description of the present invention in

combination with specific embodiments, and it cannot be assumed that the specific embodiments of the present invention is limited to these descriptions. Those skilled in the art may make various changes thereto in form and detail, including making a number of simple deductions or replacements without departing from the spirit and scope of the present invention.

Claims

1. A padlock comprising:

a lock body provided with a lock beam hole;

a lock beam for inserting into the lock beam hole;

5 a fastener capable of passing through a lock nose on the door into one lock beam hole to connect the lock beam hole with the lock nose, the fastener being provided with a through passage for the lock beam to pass through.

2. The padlock according to claim 1, wherein

the lock beam hole is provided with an internal thread,

10 the fastener comprises a fixing body provided with an external thread, and the fixing body is capable of passing through the lock nose to connect with the beam hole thread.

3. The padlock according to claim 2, wherein the fastener further comprises a flange provided at one end of the fixing body, and the flange abuts against the lock nose along the inserting direction of the lock beam.

15 4. The padlock according to claim 3, wherein the flange is fitted with the lock nose along an inserting direction of the lock beam.

5. The padlock according to claim 3, wherein the padlock further comprises a gasket provided with a through hole, the fixing body is capable of passing through the through hole and the lock nose successively and protruding into one lock beam hole, so that the gasket is fitted with the lock
20 nose along the inserting direction of the lock beam, and the flange abuts against the gasket along the inserting direction of the lock beam.

6. The padlock according to claim 5, wherein the gasket further comprises a clamping portion respectively arranged at both ends of an extending direction of the gasket for clamping the lock nose.

25 7. The padlock according to any one of claims 1 to 4, wherein the lock nose is a plate provided with a through hole, and the plate is fixedly connected with the door.

8. The padlock according to claim 5 or 6, wherein the lock nose is a C-shaped rod, and both ends of the rod are fixedly connected with the door.

9. The padlock according to any one of claims 1 to 6, wherein the padlock is a transversely-
30 opened padlock comprising:

a lock beam being linear;

a lock body provided with two lock beam holes arranged at intervals along an inserting direction of the lock beam, and a groove is provided between the two lock beam holes for accommodating the lock nose.

5 10. The padlock according to any one of claims 1 to 6, wherein the padlock is a U-shaped padlock comprising:

a lock body provided with two lock beam holes arranged at intervals thereon;

a lock beam having a U-shape for inserting into the two lock beam holes.

10 11. The padlock according to any one of claims 1 to 6, wherein the padlock is a top-opened padlock comprising:

a lock body provided with two lock beam holes arranged at intervals thereon;

a locking beam having a U-shape, of which one end is rotatably connected to one lock beam holes and the other end is for inserting into another lock beam hole.