

Description

1. Field of the Invention

[0001] The present invention relates to a tool positioning pad, and more particularly to the tool positioning pad for positioning tool bits and handles.

2. Description of Related Art

[0002] The conventional tool positioning pad is disposed in the tool box and includes a plurality of position holes. Each position hole includes a position arm and a plurality of surfaces. A protrusion is formed at the end of the position arm for locking the tool bit. The plurality of surfaces fastens the tool bit stably. Therefore, the tool bit is vertically and stably positioned in the position hole, and the tool bit is locked by the protrusion for preventing the tool bit from dropping out from the tool box.

[0003] However, there is no position hole for positioning the handle in the tool box. When the users need to use two or more handles, the users often take a bag for receiving the handles. It is very inconvenient. Thus, the conventional tool positioning pad still needs to be improved.

[0004] The main objective of the present invention is to provide an improved tool positioning pad.

[0005] To achieve the objective, a tool positioning pad comprises a pad having a plurality of position holes disposed thereon, at least one block unit further comprising a base, a block part and a post, the block part formed at one side of the base and one end of the post formed at another side of the base, the post being inserted into the position hole, a lock plate being polygonal and formed at another end of the post, at least one first groove formed at the inside wall of the position hole and a lock ring corresponding to the first groove formed around the lateral surface of the post, at least one second groove formed on the bottom of the pad around the position hole and at least one protrusion corresponding to the second groove formed on the lock plate, the distance between the opposite of inside walls of the position hole decreasing gradually toward the bottom of the pad, the position hole and the lock plate both being rectangular, the protrusion formed on the corners of the lock plate, the second groove formed on the sides of the position hole under the pad;

wherein the post is inserted into the position hole and the base resists against the surface of the pad, thereafter the lock plate is engaged with the bottom of the pad under the position hole by rotating the block unit so as to position the block unit on the pad, therefore the position hole not only positions the tool bits but also positions the handle via the block unit.

[0006] Further benefits and advantages of the present invention will become apparent after a careful reading of the detailed description with appropriate reference to the accompanying drawings.

[0007] In the drawings:

Fig. 1 is an exploded view of a tool positioning pad of the present invention;

Fig. 2 is an upward exploded view of the tool positioning pad of the present invention;

Fig. 3 is an assembled view for showing the handle positioned on the tool positioning pad by the present invention;

Fig. 4-5 are the cross-sectional views of the tool positioning pad along a line AA shown in Fig. 1 for showing a block unit being locked on the tool positioning pad of the present invention;

Fig. 6-7 are the cross-sectional views of the tool positioning pad along a line BB shown in Fig. 1 for showing the block unit being locked on the tool positioning pad of the present invention;

Fig. 8 is a perspective view for showing the embodiment for the tool box of the present invention;

Fig. 9 is a perspective view for showing the embodiment for the tool positioning hanger of the present invention; and

Fig. 10 is a perspective view for showing the embodiment for the tool cart of the present invention.

[0008] Referring to the drawings to Figs. 1-2, a tool positioning pad in accordance with the present invention comprises a pad 1 and at least one block unit 2. A plurality of position holes 11 is disposed on the pad 1. The block unit 2 comprises a base 21, a block part 22 and a post 23. The block part 22 is formed at one side of the base 21. One end of the post 23 is formed at another side of the base 21. The post 23 passes through the position hole 11. A lock plate 231 is polygonal and is formed at another end of the post 23. The position hole 11 and the lock plate 231 are both rectangular in the embodiment (as shown in Fig. 1-2) and the tool bit is positioned at the position hole 11. At least one first groove 111 is defined at the inside wall of the position hole 11. A lock ring 232 is corresponding to the first groove 111 and is formed around the lateral surface of the post 23. Two first grooves 111 are respectively formed at the two opposite of inside walls of the position hole 11 (as shown in Fig. 1-2). The first groove 111 has one end for resisting against the lock ring 232 so that the block unit 2 is positioned at the site relative to the position hole 11. At least one second groove 12 is formed on the bottom of the pad 1 around the position hole 11. At least one protrusion 233 is corresponding to the second groove 12 and is formed on corners of the lock plate 231 (as shown in Fig. 1-2). The distance between the opposite of inside walls of the position hole 11 decreases gradually toward the bottom of the pad 1 so as to clamp the tool bit or the block unit 2 firmly.

[0009] Referring to the drawings to Figs. 3-7, the lock plate 231 of the block unit 2 passes through the position hole 11 and the post 23 is inserted into the position hole 11, so that the lock ring 232 resists against the end of

the first groove 111 and the base 21 resists against the surface of the pad 1. Thereafter, the protrusion 233 is engaged with the second groove 12 by rotating the block unit 2 so as to position the block unit 2 stably in the position hole 11. Therefore, the handle is positioned on the pad 1 via the block part 22 so as to be carried conveniently.

[0010] Referring to the drawings to Figs. 8-10, the tool positioning pad is used for other embodiments, such as tool box, tool positioning hanger or tool cart.

[0011] Although the invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention as hereinafter claimed.

Claims

1. A tool positioning pad comprising:
 - a pad (1) having a plurality of position holes (11) disposed thereon; and
 - at least one block unit (2) further comprising a base (21), a block part (22) and a post (23), the block part (22) formed at one side of the base (21) and one end of the post (23) formed at another side of the base (21), the post (23) being inserted into the position hole (11), a lock plate (231) being polygonal and formed at another end of the post (23);
 - wherein the post (23) is inserted into the position hole (11) and the base (21) resists against the surface of the pad (1), thereafter the lock plate (231) is engaged with the bottom of the of the pad (1) under the position hole (11) by rotating the block unit (2) so as to position the block unit (2) on the pad (1), therefore the position hole (11) not only positions the tool bits but also positions the handle via the block unit (2).
2. The tool positioning pad as claimed in claim 1, wherein at least one first groove (111) is formed at the inside wall of the position hole (11) and a lock ring (232) corresponding to the first groove (111) is formed around the lateral surface of the post (23).
3. The tool positioning pad as claimed in claim 1, wherein at least one second groove (12) is formed on the bottom of the pad (1) around the position hole (11) and at least one protrusion (233) corresponding to the second groove (12) is formed on the lock plate (231).
4. The tool positioning pad as claimed in claim 2, wherein at least one second groove (12) is formed on the bottom of the pad (1) around the position hole (11) and at least one protrusion (233) corresponding to

the second groove (12) is formed on the lock plate (231).

5. The tool positioning pad as claimed in claim 1, wherein the distance between the opposite of inside walls of the position hole (11) decreases gradually toward the bottom of the pad (1).
6. The tool positioning pad as claimed in claim 3, wherein the position hole (11) and the lock plate (231) are both rectangular; the protrusion (233) is formed on the corners of the lock plate (231); the second groove (12) is formed on the sides of the position hole (11) under the pad (1).

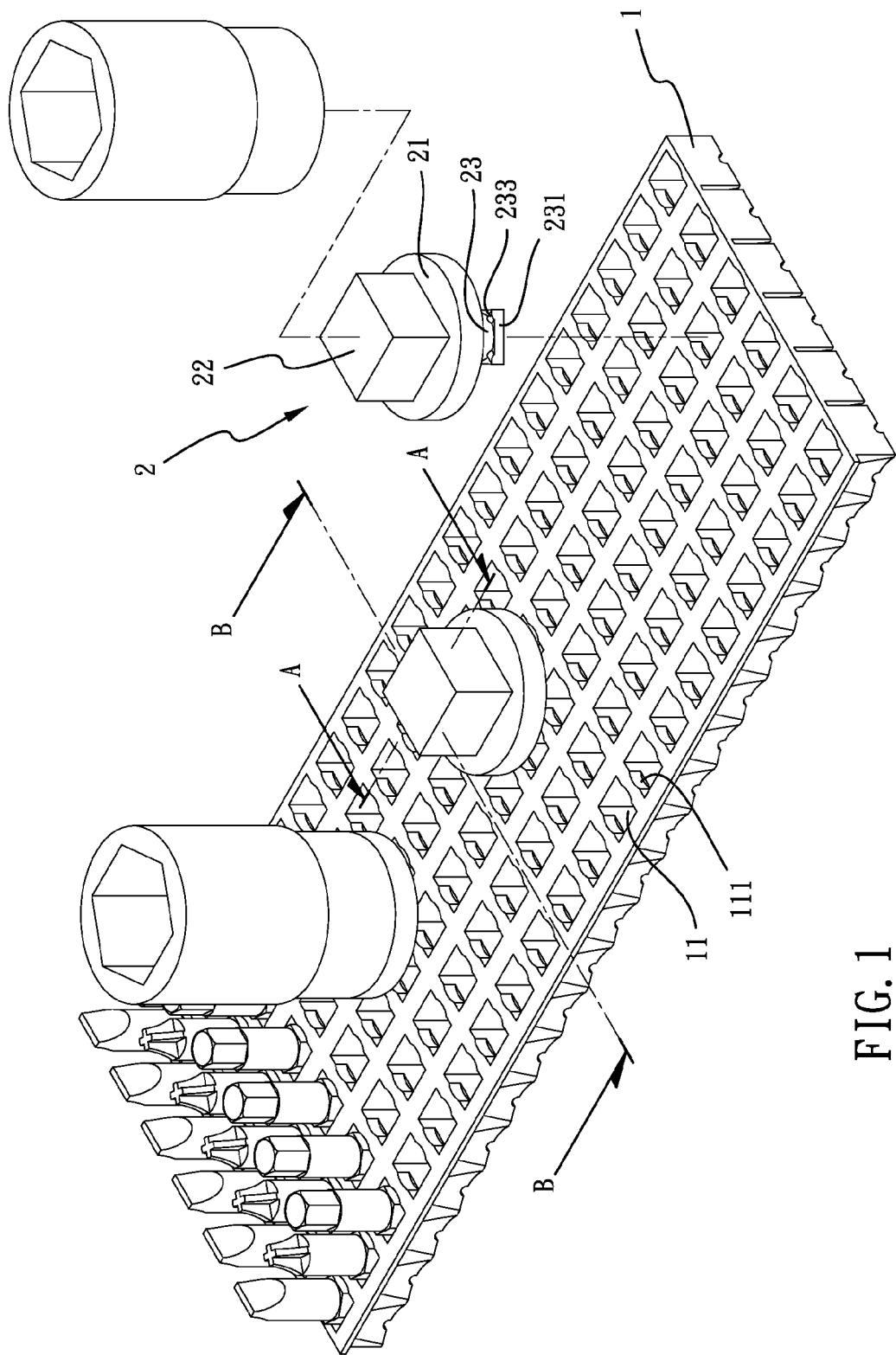


FIG. 1

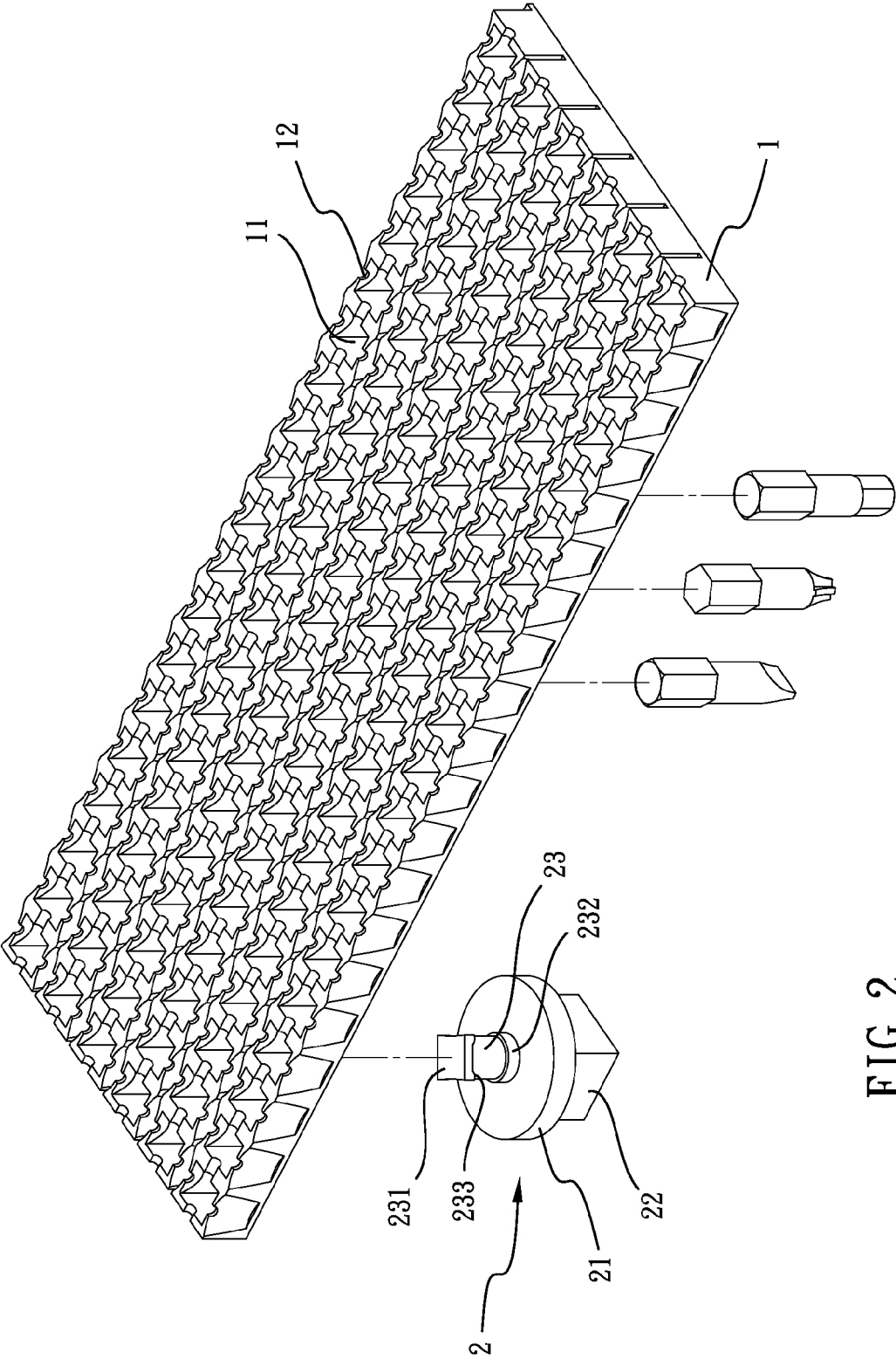


FIG. 2

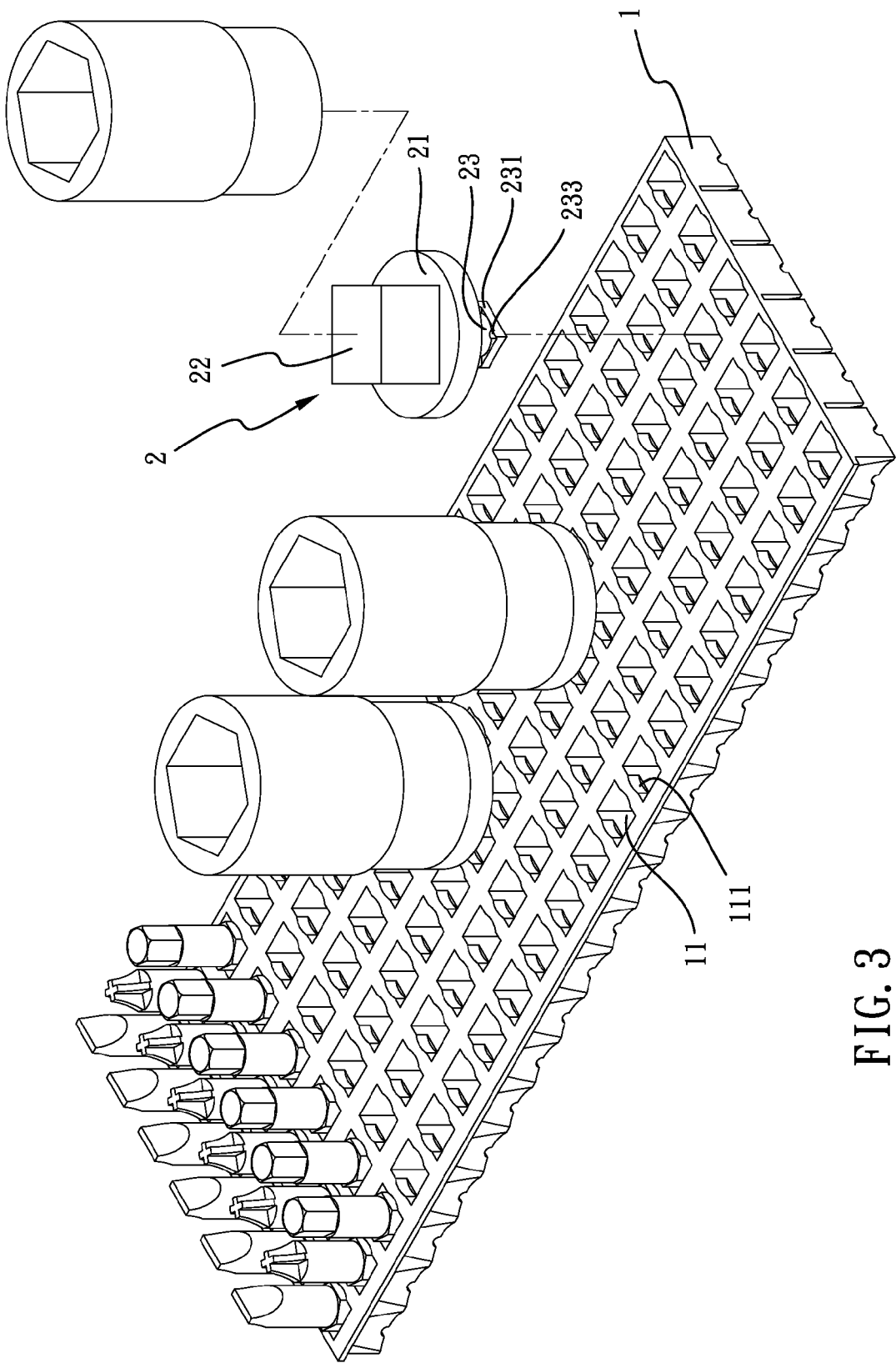


FIG. 3

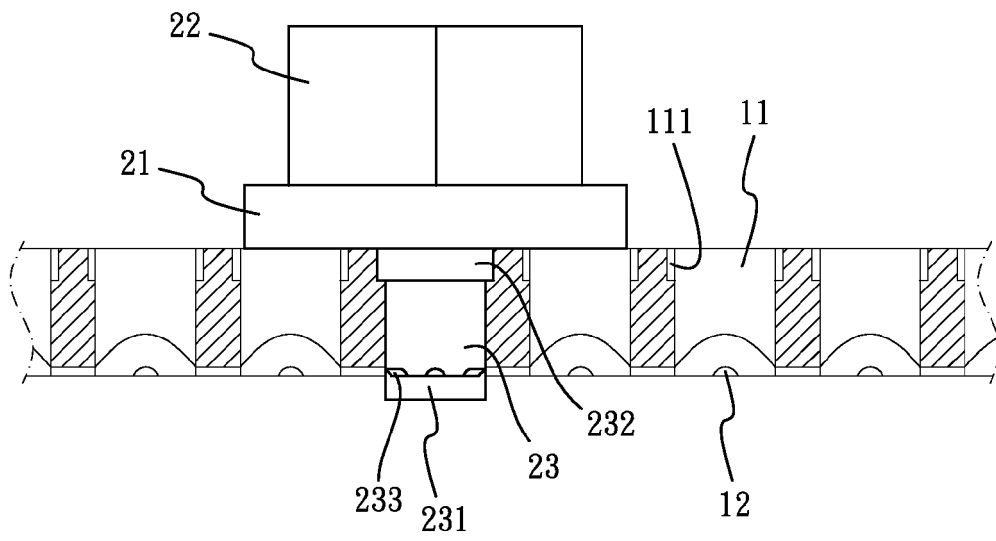


FIG. 4

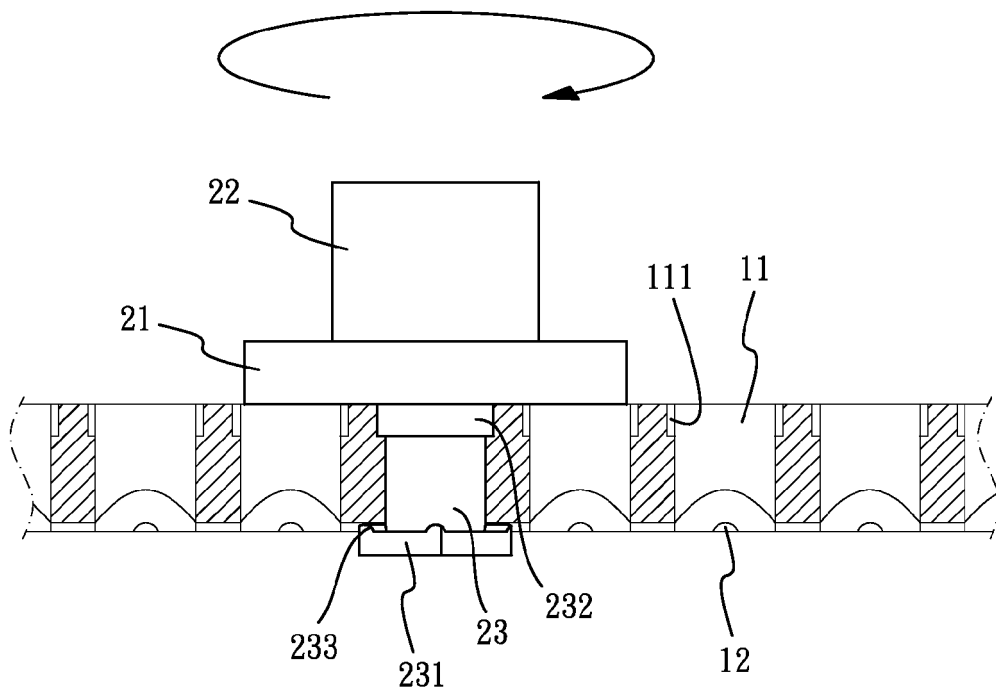


FIG. 5

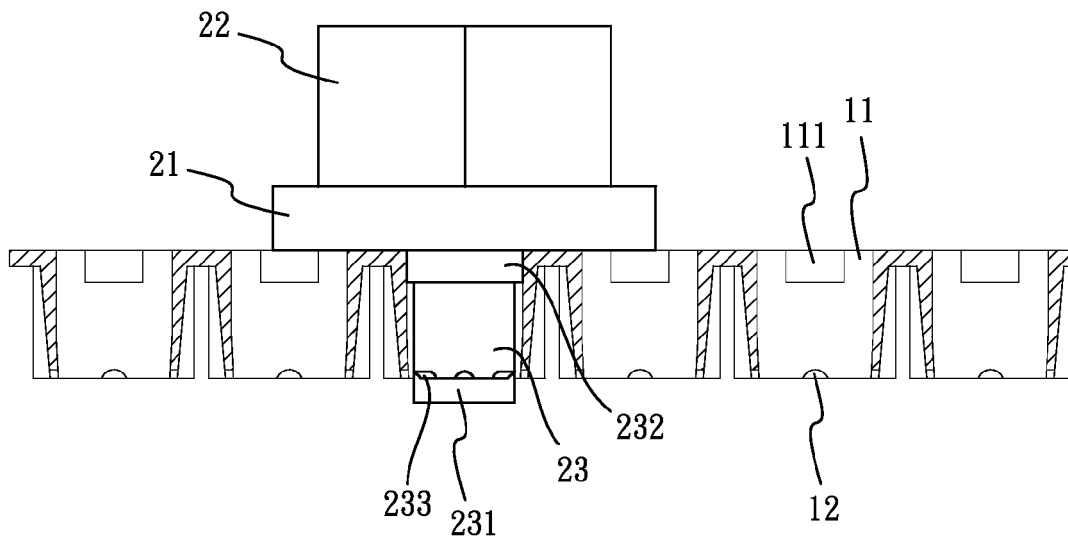


FIG. 6

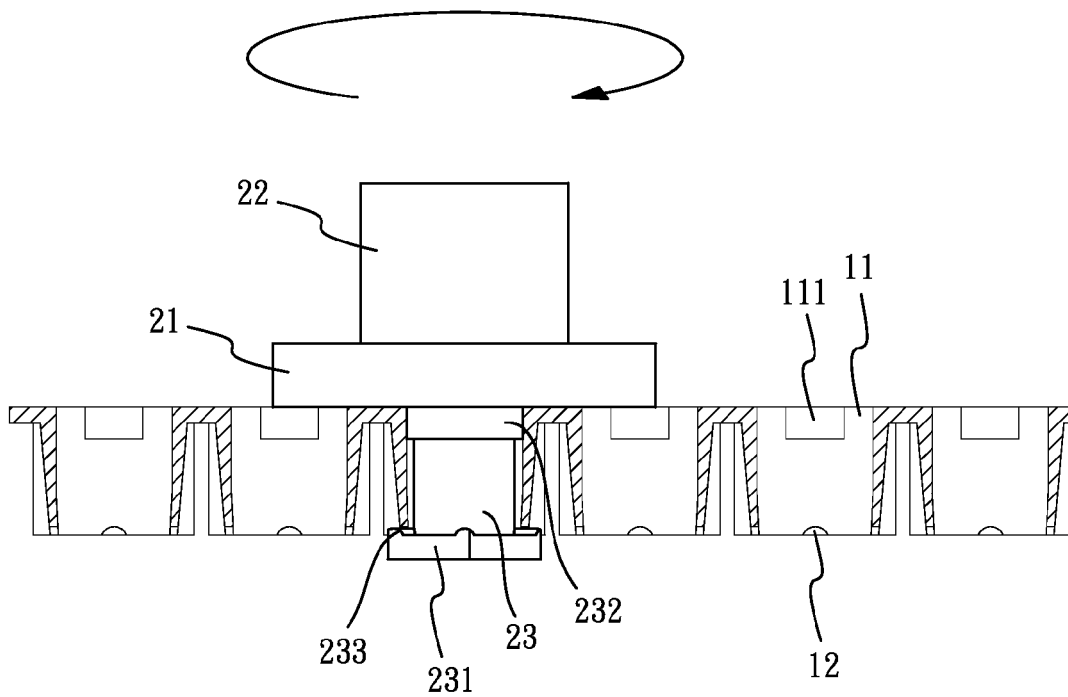


FIG. 7

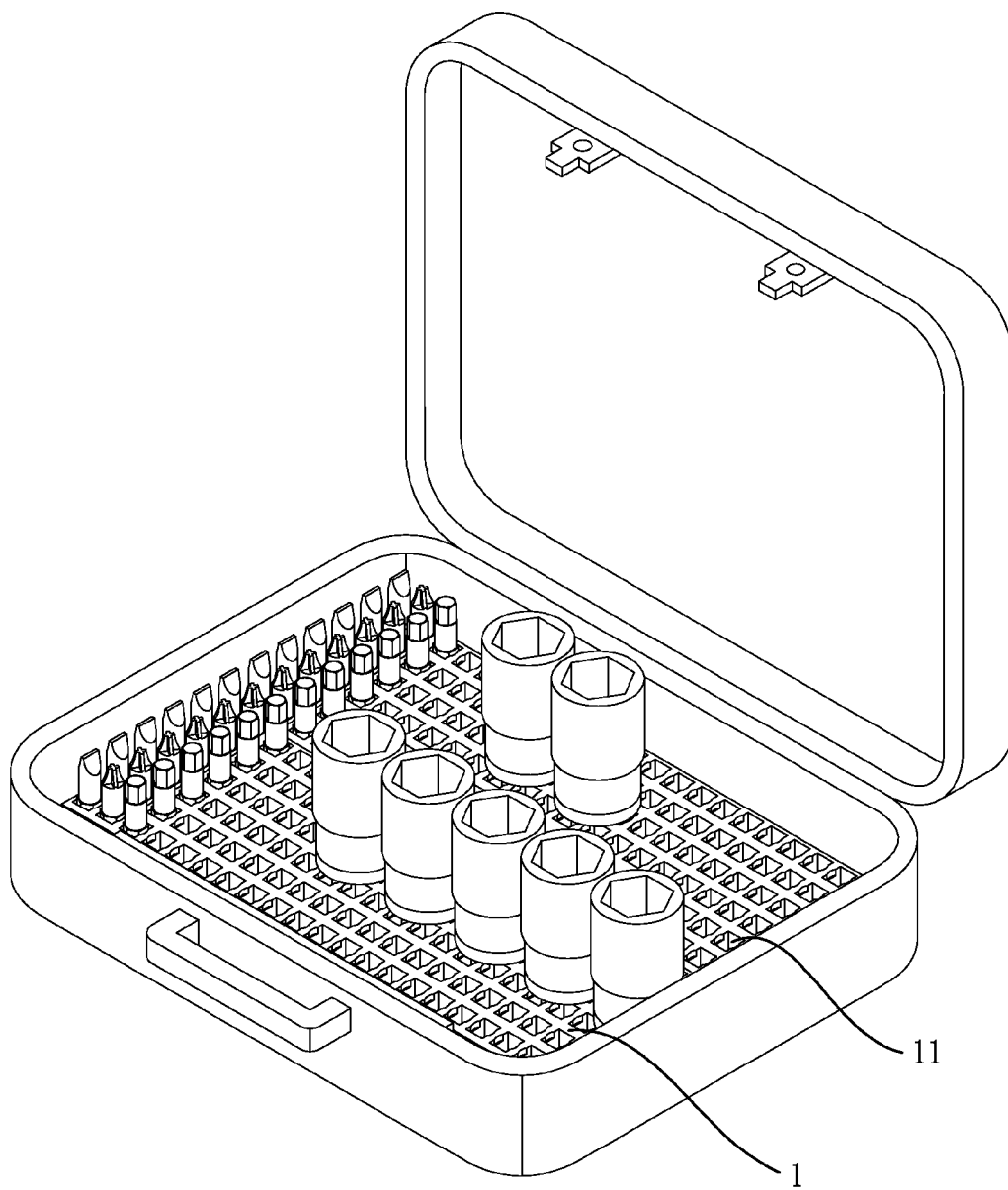


FIG. 8

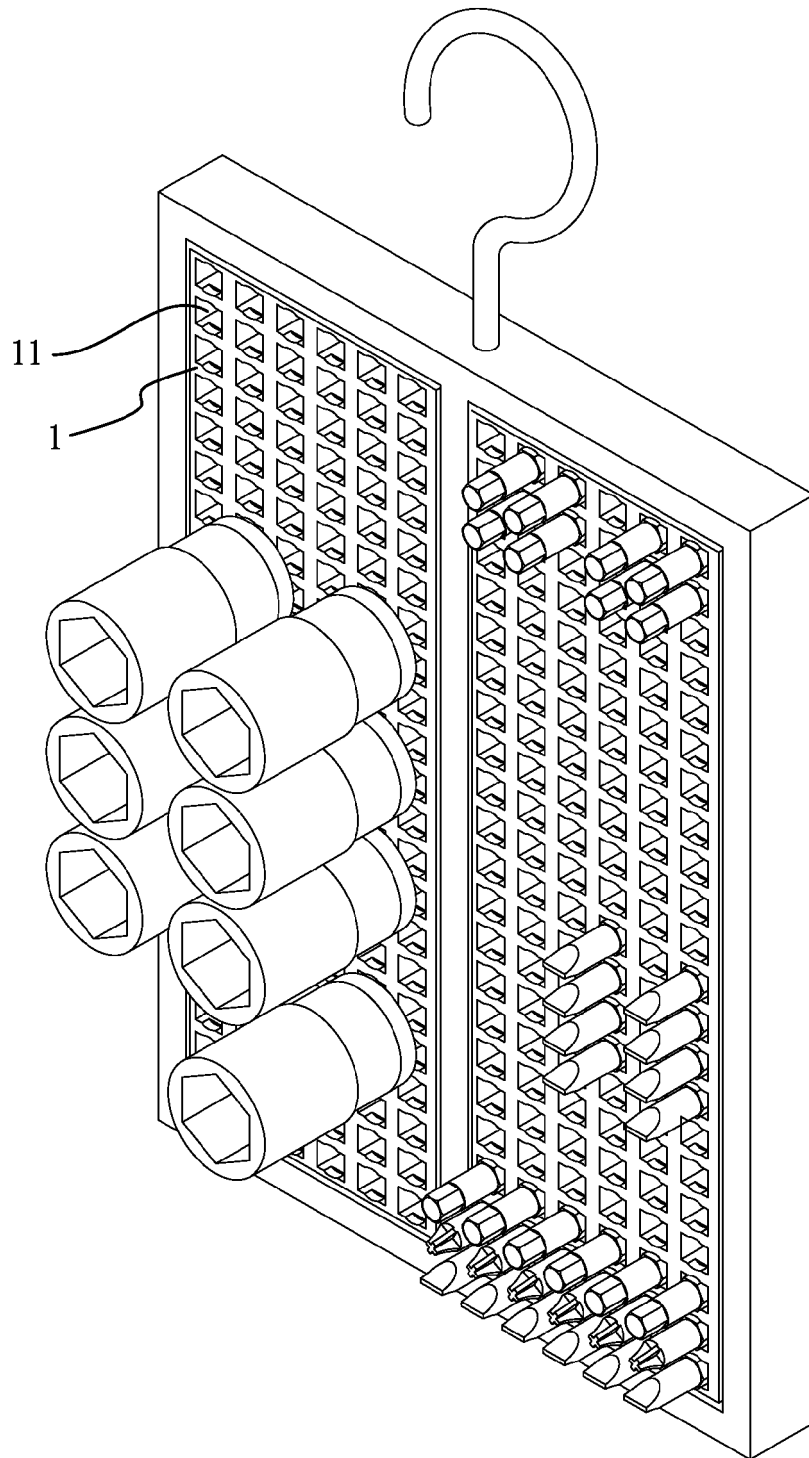


FIG. 9

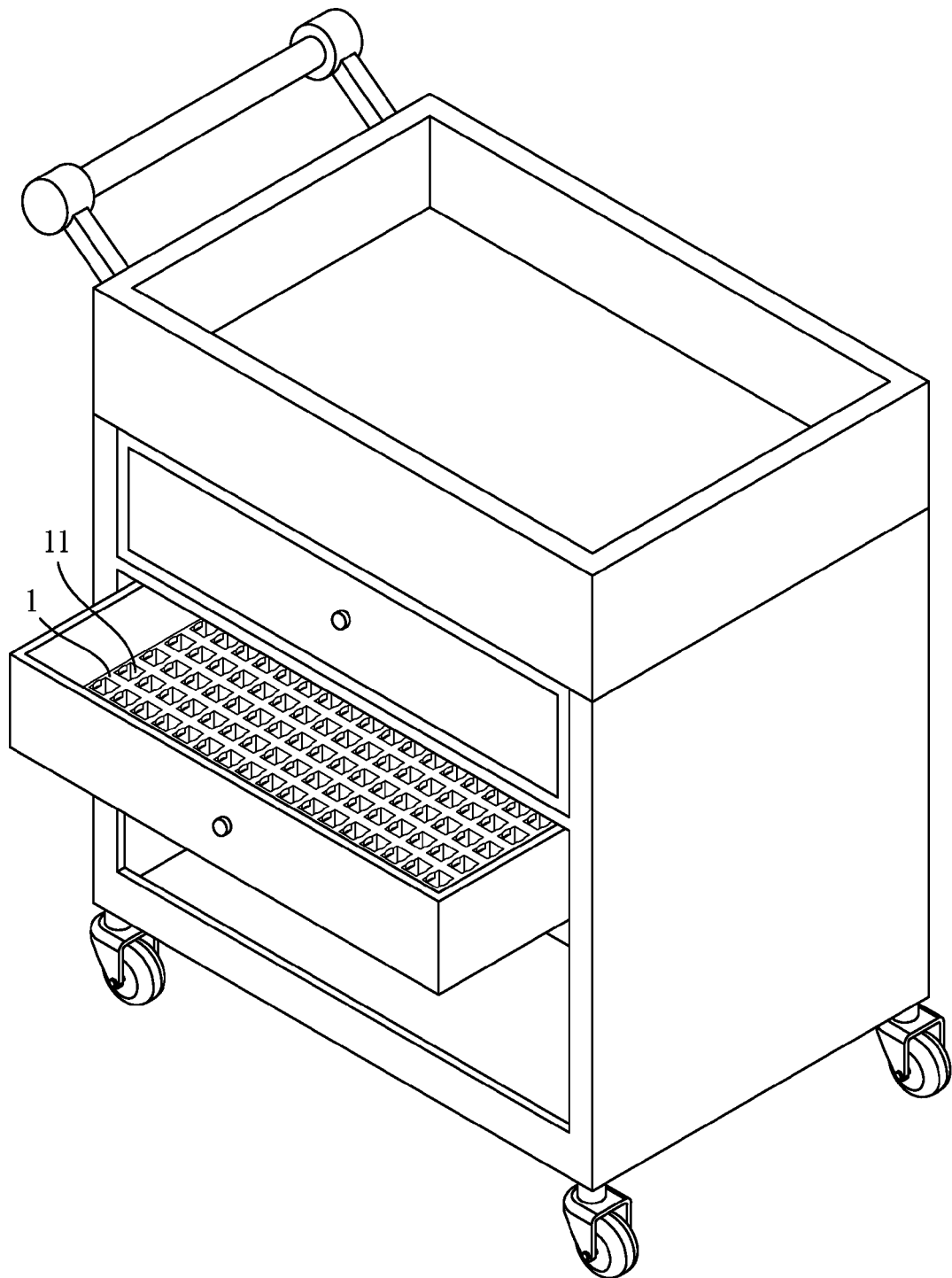


FIG. 10