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(54) **STRUCTURE OF SLEEVE SEAT**

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(57) **ABSTRACT**

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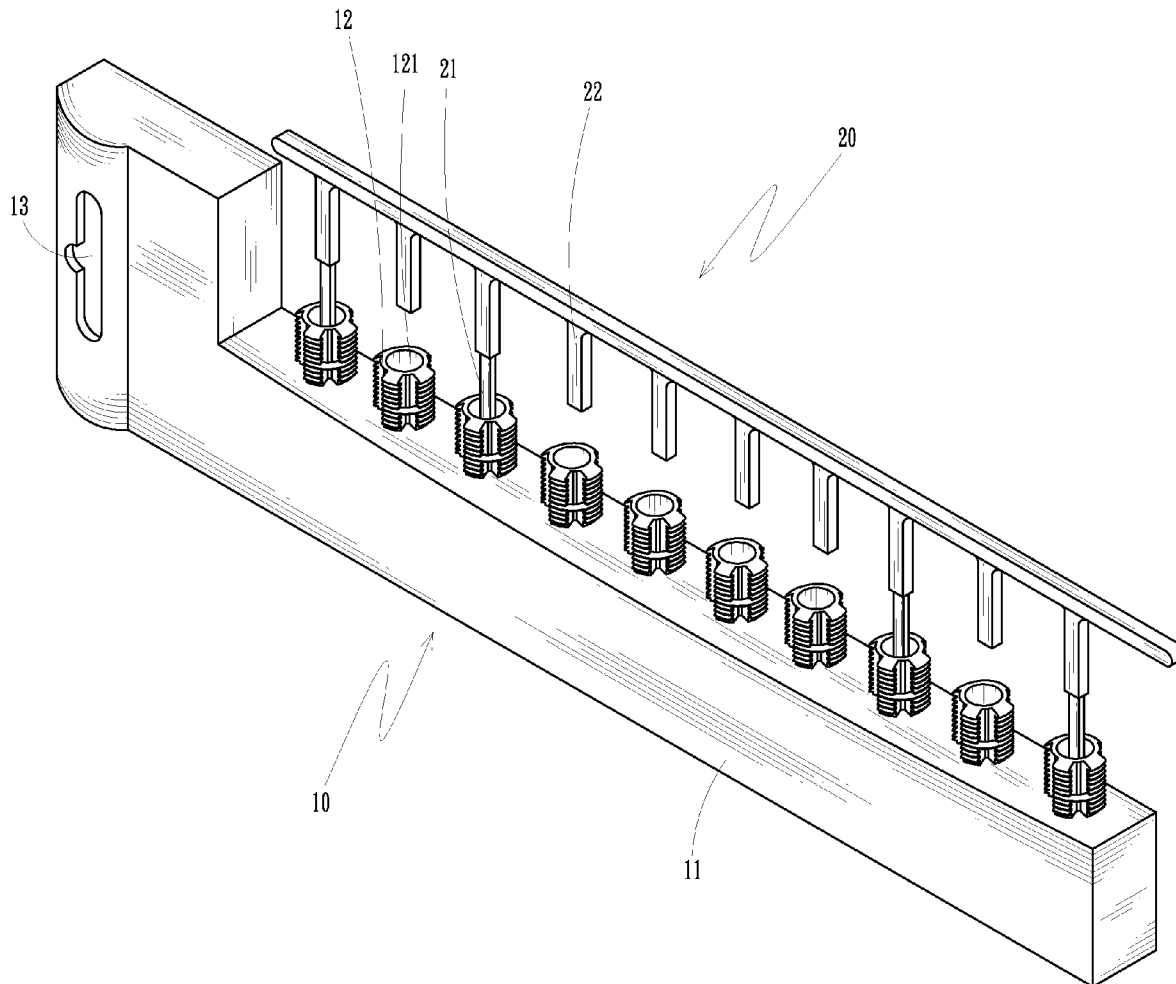
A sleeve seat, comprising a sleeve connector having a perforated hole and a penetrating piece having multiple penetrating poles and fixing poles; wherein the penetrating pole is used for penetrating into the perforated hole of the sleeve connector and fixed in the hole, and the fixing pole is used for engaging with the top of the sleeve connector. In the light of above, when the sleeve is sheathed onto the sleeve connectors of the main seat, the penetrating poles of the penetrating piece is able to pass through the sleeve and penetrate into the perforated hole to fix still, also the fixing pole is able to pass through the sleeve and engage with the top of the sleeve connector, so that the sleeve can be stably and tightly assembled to the main seat to prevent from the steal, meanwhile, the goals of the stability of assembly and the multiple purposes of use are achieved as well.

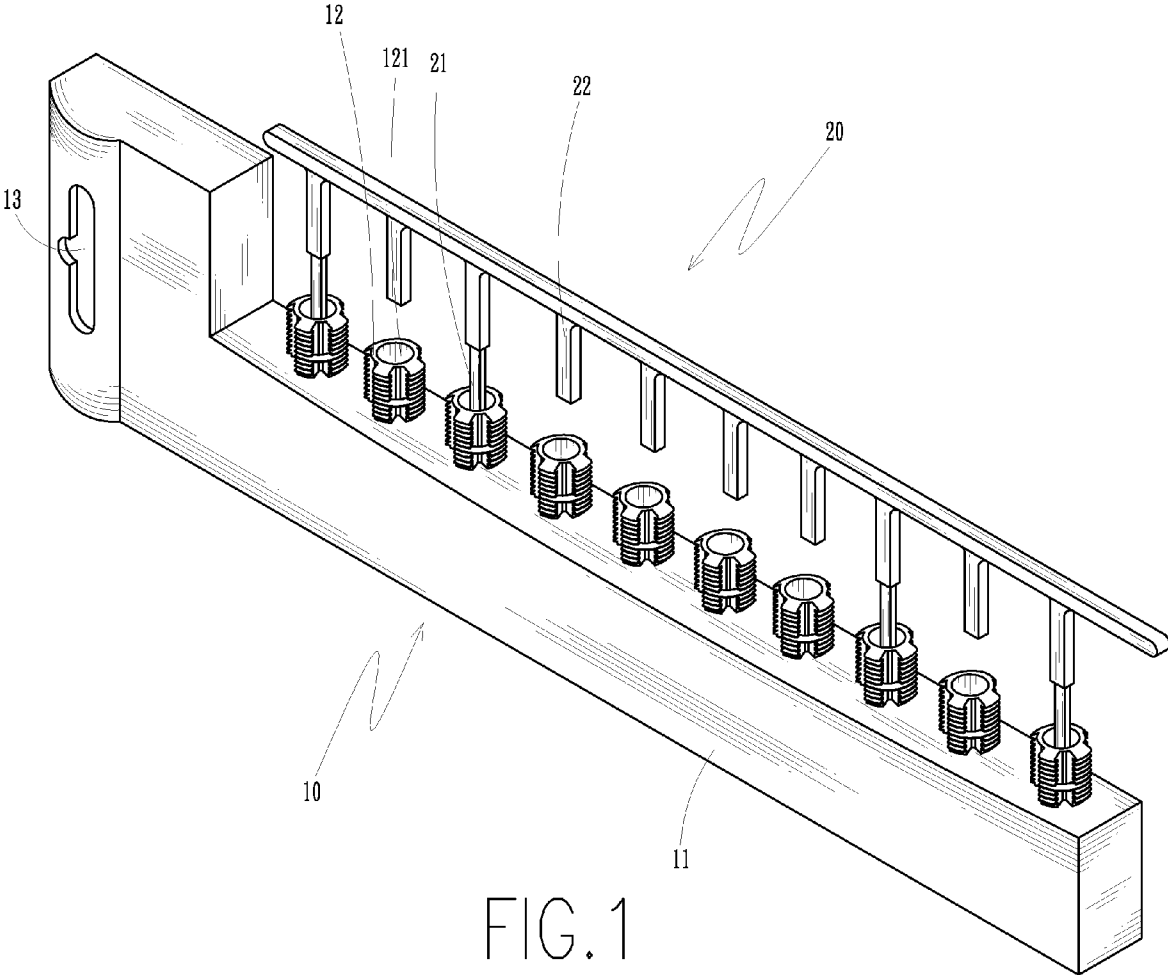
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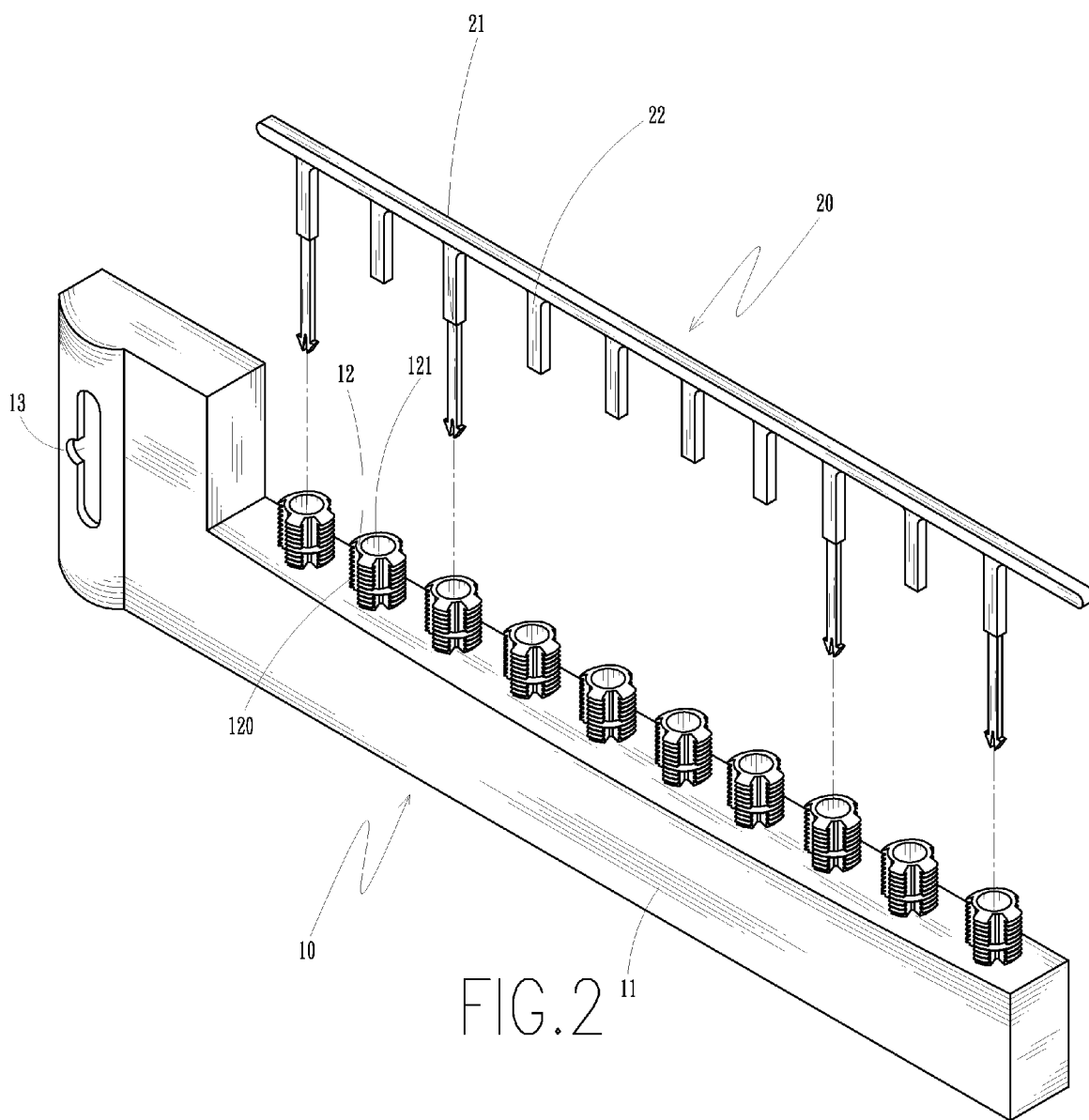
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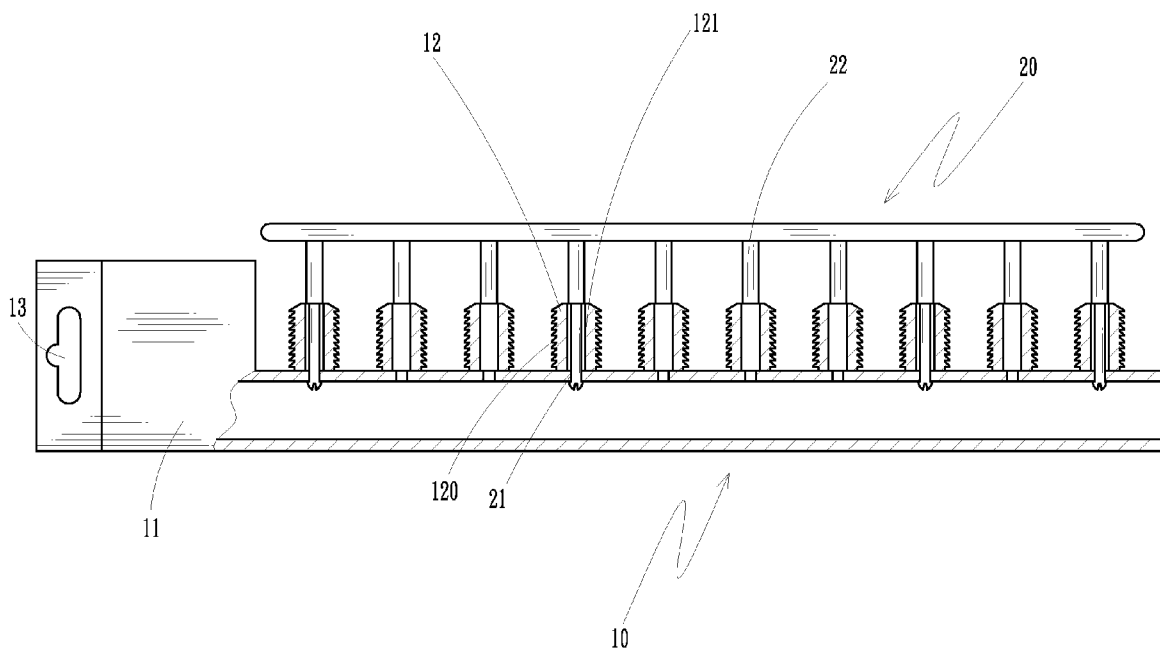


FIG. 3

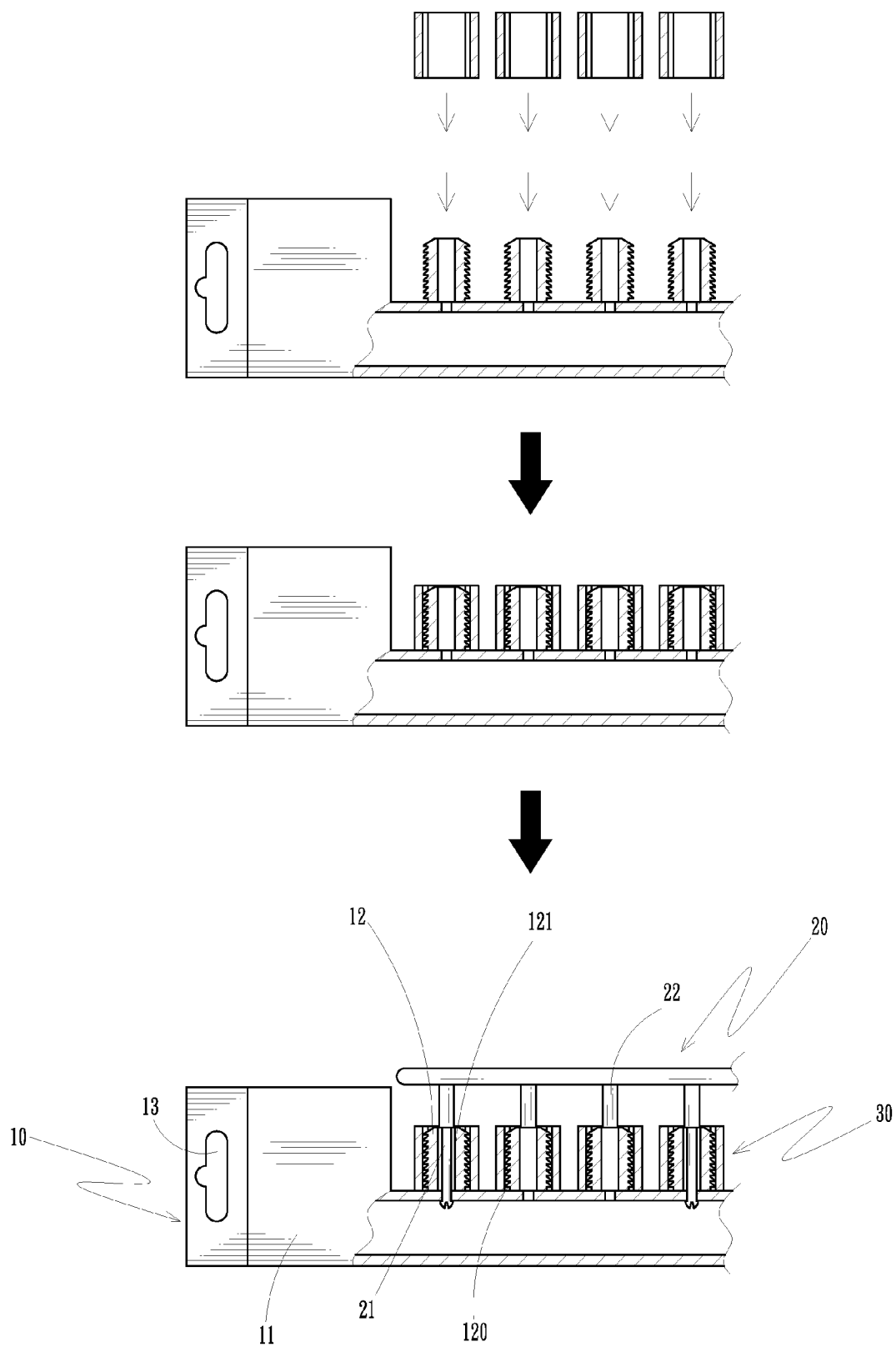


FIG. 4

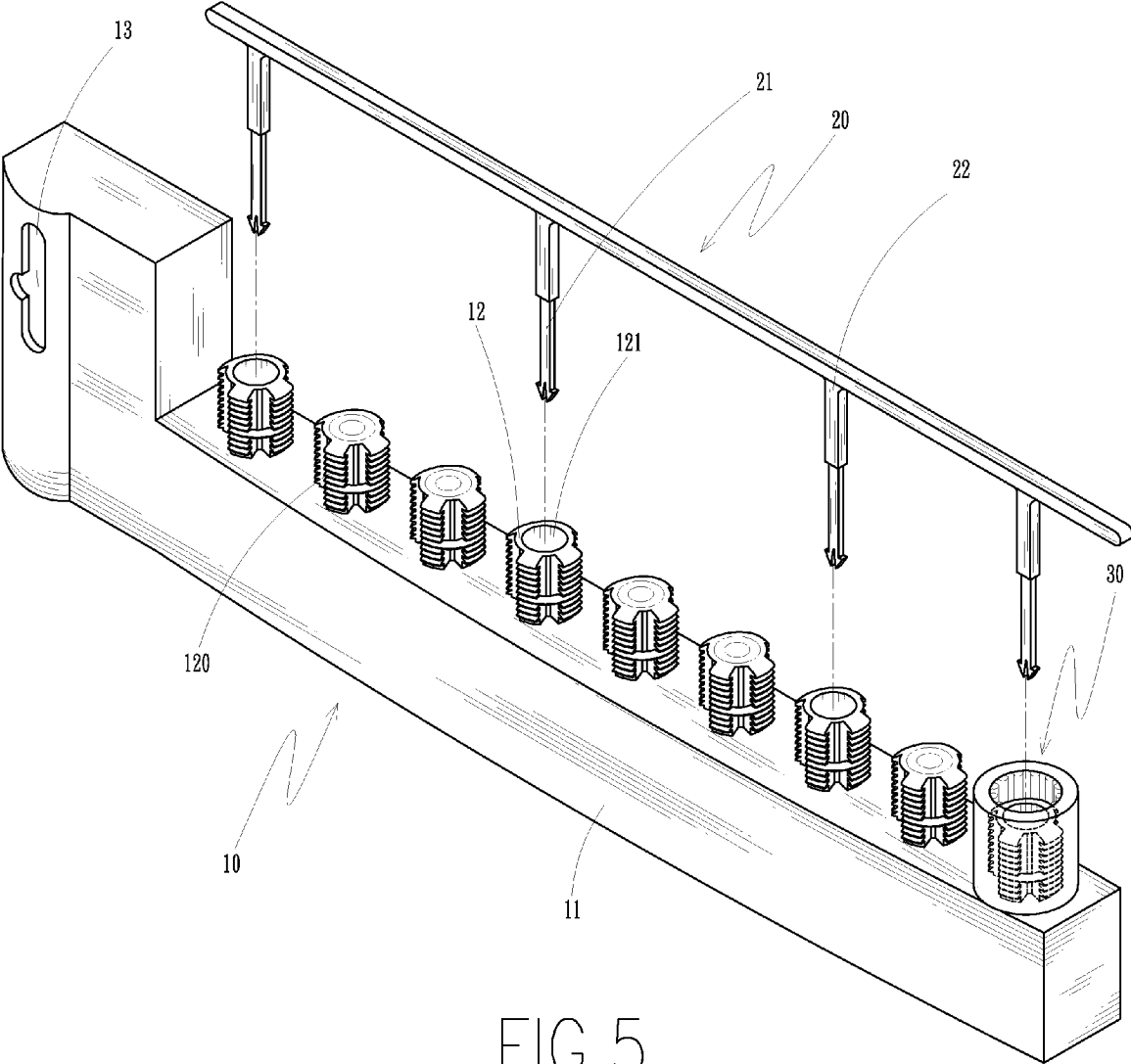


FIG. 5

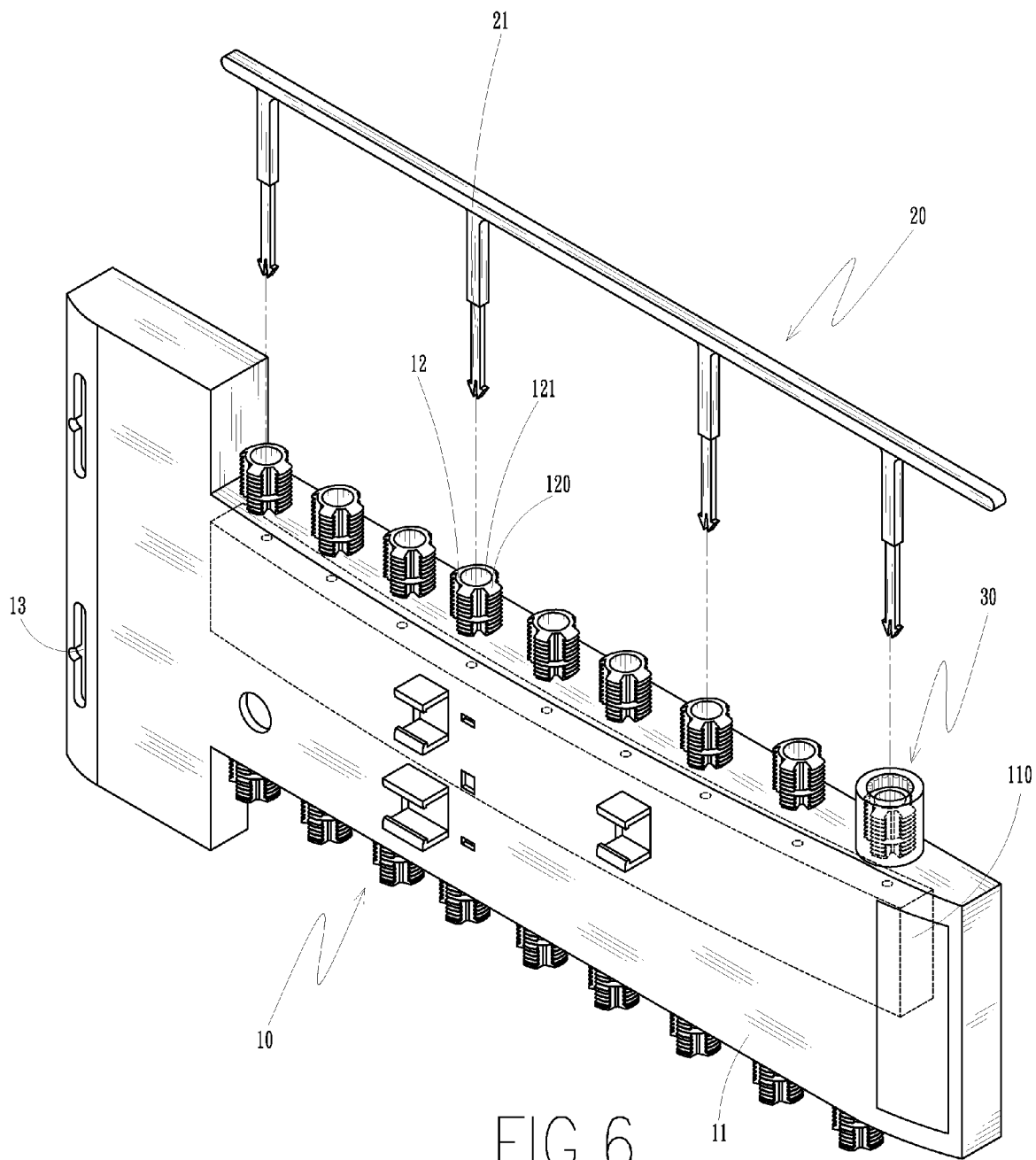


FIG. 6

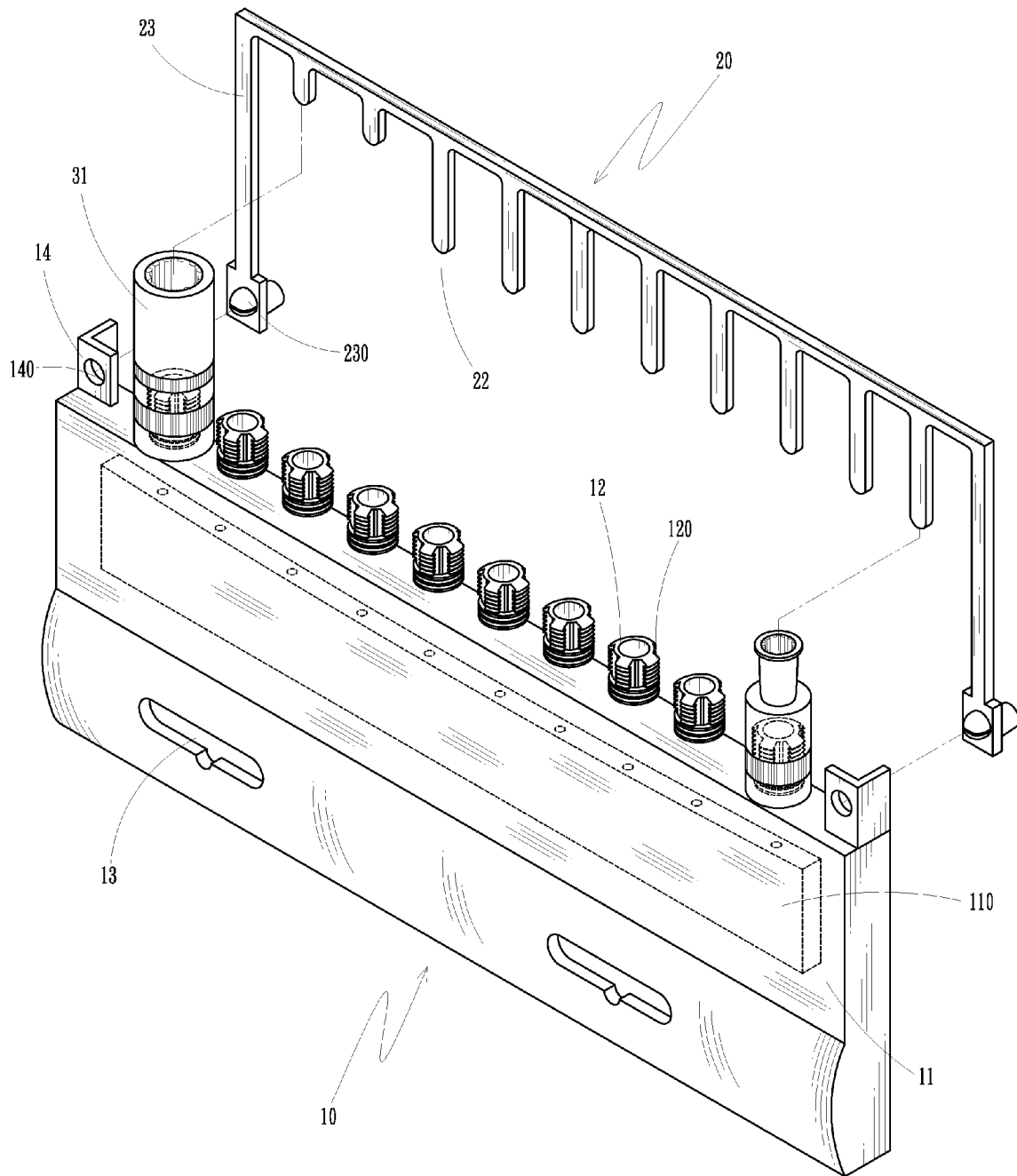


FIG. 7



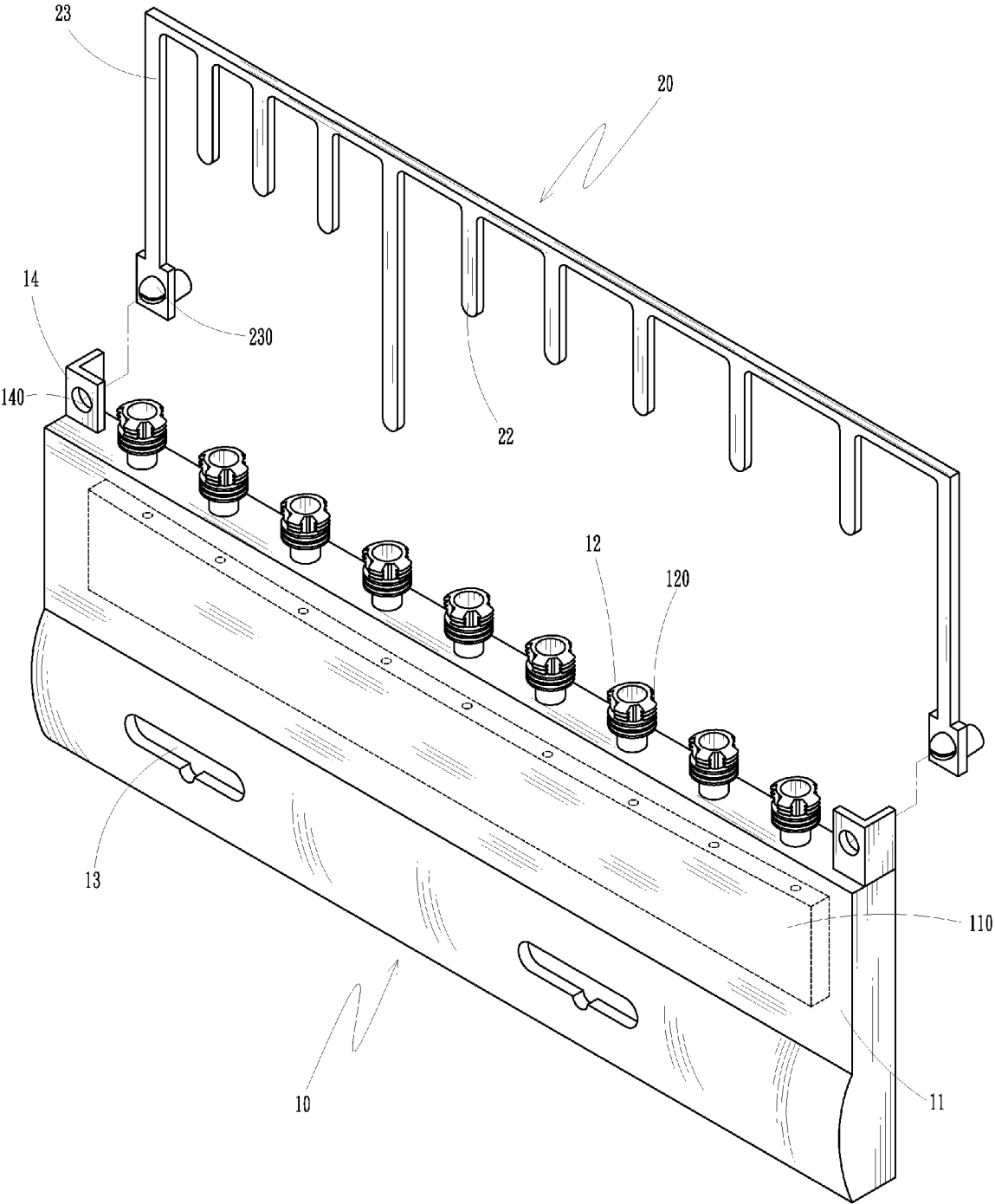


FIG.8

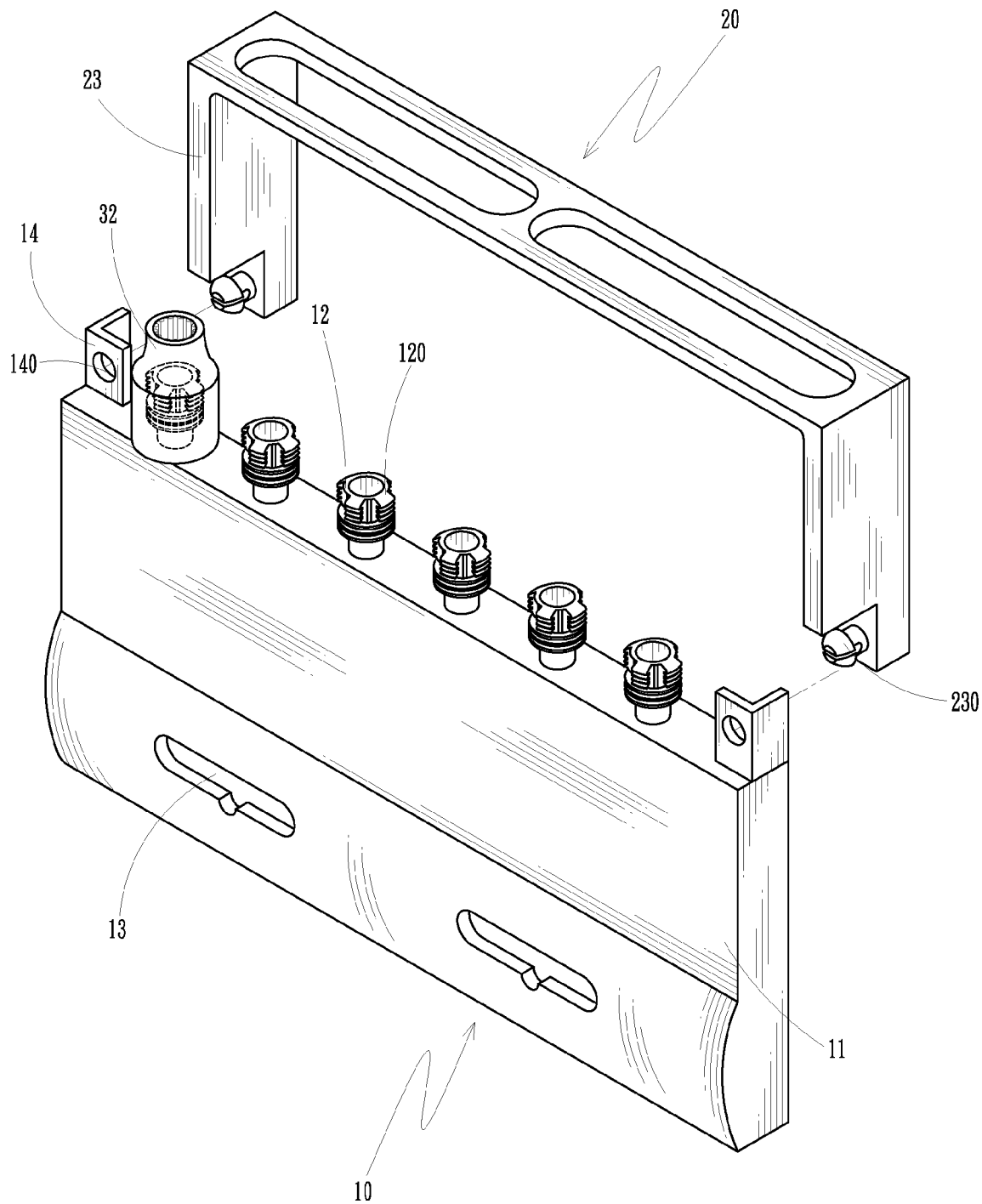


FIG. 9

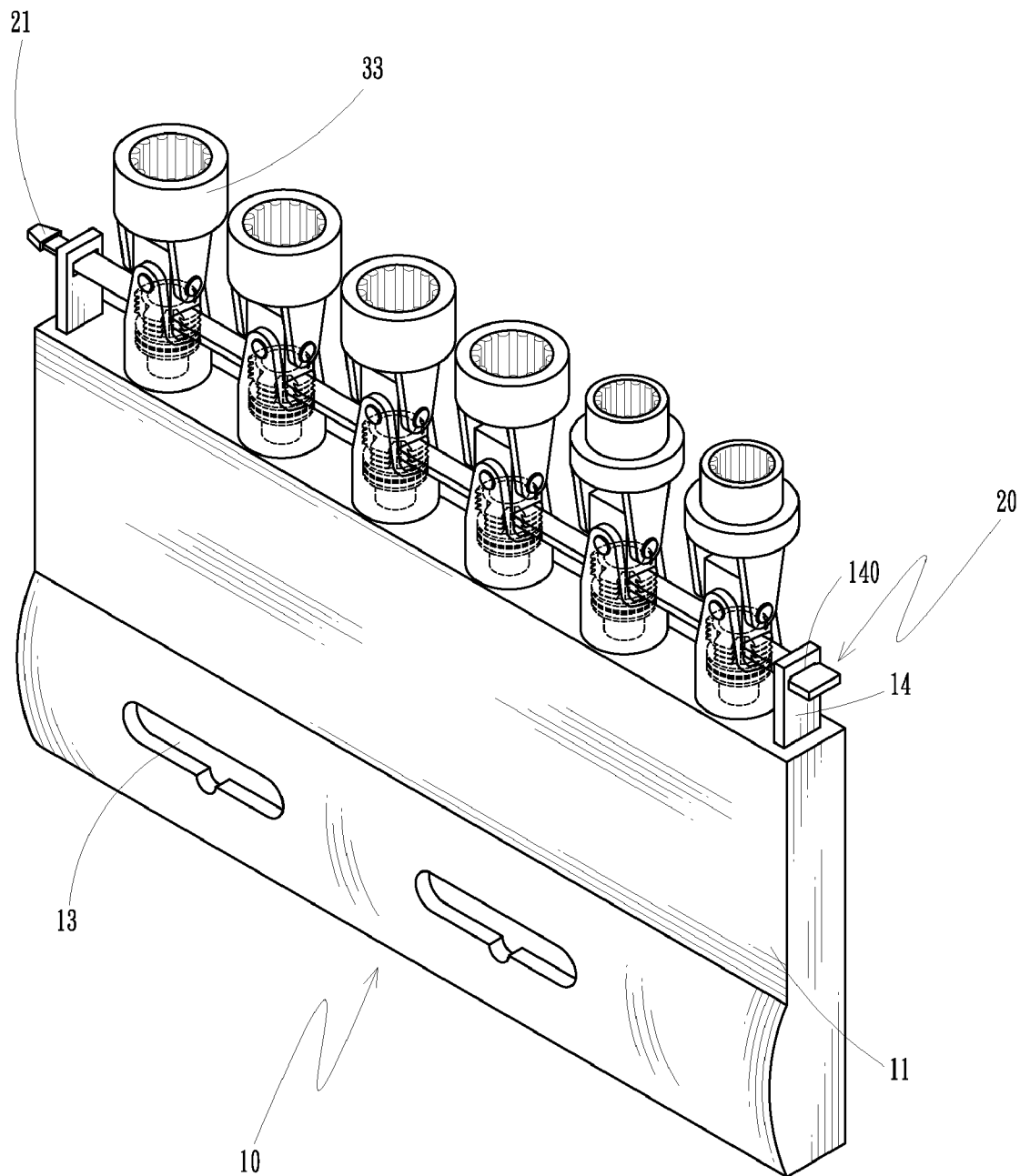


FIG. 10



## STRUCTURE OF SLEEVE SEAT

### BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a sleeve seat. More particularly, the present invention relates to a seat for installing a sleeve for the purpose of exhibiting hand tool and its accessories.

[0003] 2. Description of Related Art

[0004] A conventional sleeve seat as shown in FIG. 11 comprises an assembling seat 40 having an inserting rod 41 and a mounting clip 42, wherein the inserting rod 41 further comprises the elastic pieces 410 installed on the two sides of the inserting rod 41, and two bosses 411 are suited at the outer surface of said elastic pieces 410 respectively. A shelf 50 comprises a pair of sliding chutes 51 which are provided for assembling the mounting clips 42 of the assembling seat 40, so as the assembling seat 40 is able to be moved along the shelf 50 glidingly. A sleeve 30, it is used for assembling with the assembling seat 40. When assembling, the bosses 411 on the elastic pieces 410 will be touched the edge of inner wall of the sleeve 30 and then force the elastic pieces 410 to retract into the inserting rod 41, to allow the inserting rod 41 inserting into the sleeve 30, until the bosses 411 have been moved and wedged in the recesses 300 which are located inside of the sleeve 30, then the sleeve 30 and the inserting rod 41 are assembled.

[0005] However, the conventional sleeve seat has contained some improvable defects, such as:

[0006] 1. Poor stability: The assembly is relied on the bosses 411 on the elastic pieces 410 to wedge in the recesses 300 of the sleeve 30. However, the assembly is easy to loose when the pulling force or the vibration force applied to the sleeve 30, so the assembly of the conventional sleeve seat is unstable.

[0007] 2. Limited scope of use: The assembly is only designed for a displaying device which comprises the shelf 50 and the sliding chutes 51, and can not be used for displaying device of other kinds, such as a displaying tag. So the utilizing scope of the conventional sleeve seat is limited.

[0008] The present invention is intended to improve the above mentioned drawbacks of the conventional sleeve seat. The present invention provides improved solutions to the problems of poor stability and limited scope of use.

### SUMMARY OF THE INVENTION

[0009] The primary purpose for the present invention is to provide a sleeve seat, comprising: a main seat and a penetrating piece, wherein, the main seat further comprises a body, multiple sleeve connectors and a hanging unit; wherein, each sleeve connector contains a perforated hole. The penetrating piece further comprises a plurality of penetrating poles and fixing poles, wherein the penetrating pole is used for penetrating into the perforated hole of the sleeve connector and fixed in the hole, and the fixing pole is used for engaging with the top of the sleeve connector. In the light of above, when the sleeve is sheathed onto the sleeve connector of the main seat, so that the penetrating pole of the penetrating piece is able to pass through the combination and penetrate into the perforated holes to fix in the hole, also the fixing pole is able to pass through the sleeve and engage with the top of the sleeve connectors, so that the sleeve can be stably and tightly assembled to the main seat to prevent from the steal by others,

meanwhile, the goals of the stability of assembly and the multiple purposes of use are achieved as well.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a perspective view schematically showing the sleeve seat of the present invention;

[0011] FIG. 2 is a segmented view schematically showing the sleeve seat of the present invention;

[0012] FIG. 3 is a cross-sectional view schematically showing the sleeve seat of the present invention;

[0013] FIG. 4 is a partial cross-sectional view schematically showing the practical use of the present invention;

[0014] FIG. 5 is a perspective view schematically showing the first embodiment of the present invention;

[0015] FIG. 6 is a perspective view schematically showing the second embodiment of the present invention;

[0016] FIG. 7 is a perspective view schematically showing the third embodiment of the present invention;

[0017] FIG. 8 is a perspective view schematically showing the fourth embodiment of the present invention;

[0018] FIG. 9 is a perspective view schematically showing the fifth embodiment of the present invention;

[0019] FIG. 10 is a perspective view schematically showing the sixth embodiment of the present invention; and

[0020] FIG. 11 is a perspective view of the conventional sleeve seat.

### DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0021] While this invention is capable of embodiment in many different forms, what is shown in the drawings and described in detail herein is the preferred embodiment of the invention. The preferred embodiment is disclosed with the understanding that the present description is but one example of the principles of the invention and is not intended to limit the broad aspects of the invention to the single embodiment illustrated.

[0022] FIGS. 1 to 3 are perspective, segmented and cross-sectional views schematically showing a preferable embodiment of the present invention.

[0023] The sleeve seat comprises:

[0024] A main seat 10 having a body 11, multiple sleeve connectors 12 and a hanging unit 13; wherein, multiple flanges 120 are installed on the sleeve connector 12 peripherally, in the form of polygon or cross; a perforated hole 121 is situated on the top of the sleeve connector 12 and is penetrated through the connector 12. When a sleeve 30 of the tool accessory is sheathed onto the sleeve connector 12, the inner portion of the sleeve 30 will be locked with the flange 120 of sleeve connector 12 (as shown in FIG. 4); and

[0025] A penetrating piece 20 is assembled to the main seat 10 comprising multiple penetrating poles 21 and fixing poles 22; wherein, the penetrating pole 21 is used for penetrating into the perforated hole 121 of the sleeve connector 12, and the fixing pole 22 is used for engaging with the top of the sleeve connector 12.

[0026] In light of the structural description stated above, the present invention fulfills a stable sleeve seat assembly thereof.

[0027] FIGS. 3 and 4 are cross-sectional and partial cross-sectional views schematically showing the present invention. Wherein, due to each sleeve connector 12 of the main seat 10 comprises a perforated hole 12, and the penetrating piece 20

comprises the penetrating pole 21 and the fixing pole 22, when the sleeve 30 is sheathed onto the sleeve connector 12, the inner portion of the sleeve 30 will be locked with the flange 120 of sleeve connector 12; then the penetrating pole 21 of the penetrating piece 20 is able to pass through the sleeve 30 and penetrate into the perforated hole 121 of the sleeve connector 12 to fix still, meanwhile, the fixing pole 22 is able to engage with the top of the sleeve connector 12, so as the sleeve 30 can be assembled to the main seat 10 tightly, to prevent from the steal, further to enhance the stability of assembly and the usage of multiple purposes.

**[0028]** FIG. 5 is a perspective view schematically showing the first embodiment of the present invention. The structure of the first embodiment is similar to the structure described in FIGS. 1 to 4, the difference is that only a few sleeve connectors 12 having the perforated hole 121; likewise, when the sleeve 30 is sheathed onto the sleeve connector 12, the inner portion of the sleeve 30 will be locked with the flange 120 of sleeve connector 12; then the penetrating pole 21 of the penetrating piece 20 is able to pass through the sleeve 30 and penetrate into the perforated hole 121 of the sleeve connector 12 to fix still, so as the sleeve 30 can be tightly assembled to the main seat 10.

**[0029]** FIG. 6 is a perspective view schematically showing the second embodiment of the present invention. The structure of the second embodiment is similar to the structure described in FIGS. 1 to 4, the difference is that the both of upper and lower sides of the body 11 of the main seat 10 have installed the sleeve connectors 12 thereon; in addition, a hollow box 110 is installed inside of the body 11, and all the perforated holes 121 of the sleeve connectors 12 are extended to said hollow box 110; likewise, when the sleeve 30 is sheathed onto the sleeve connector 12, the inner portion of the sleeve 30 will be locked with the flange 120 of sleeve connector 12; further, the penetrating pole 21 of the penetrating piece 20 is able to pass through the sleeve 30 and penetrate into the perforated hole 121 of the sleeve connector 12 to fix still, so as the sleeve 30 can be assembled to the main seat 10 tightly.

**[0030]** FIGS. 7 to 9 are perspective views schematically showing the third to fifth embodiments of the present invention. The structures of the third to fifth embodiments are similar to the structure described in FIGS. 1 to 4, the difference is that the hollow box 110 is installed inside of the body 11 and all the perforated holes 121 of the sleeve connectors 12 are extended to said hollow box 110; in addition, two fixing plates 14 are installed on the two sides of the sleeve connectors 12 respectively and having a fixation hole 140 within each fixing plate 14. Correspondingly, two fixing bars 23 are provided at the two ends of the penetrating piece 20 downwardly, which contain a fixing boss 230 at its lower end of each fixing bar 23. Firstly, when a long sleeve 31 is sheathed onto the sleeve connector 12 of the main seat 10, the fixing boss 230 of the fixing bar 23 is able to assemble to the fixation hole 140 of the fixing plate 14, meanwhile, the fixing poles 22 of the penetrating piece 20 is able to lodge into the long sleeves 31 or engaged with the top of the sleeve connector 12 where without the long sleeve 31 (not shown). Secondly, when a short sleeve 32 is sheathed onto the sleeve connector 12 of the main seat 10, then the inner top of the penetrating piece 20 is able to engage with said short sleeve 32. In the light of above, no matter there is a long sleeve 31 or a short sleeve

32, all of them are able to assemble with the main seat 10 tightly which provides a new purpose of use of the present invention.

**[0031]** FIG. 10 is a perspective view schematically showing the sixth embodiment of the present invention. The structures of the sixth embodiment is similar to the structure described in FIGS. 1 to 4, the difference is that the penetrating piece 20 is arranged in transverse direction. Moreover, two fixing plates 14 are installed on the two sides of the sleeve connectors 12 respectively and having a fixation hole 140 within each fixing plate 14. When a movable sleeve 33 is sheathed onto the sleeve connector 12 of the main seat 10, then the penetrating piece 20 is able to extend across the fixation hole 140 of each fixing plate 14 as well as the gap of each movable sleeve 33, so as the movable sleeve 33 can be assembled to the main seat 10 tightly which provides another new purpose of use of the present invention.

**[0032]** In the light of the above, the advantages of the present invention include:

**[0033]** 1. High stability: When the sleeve is sheathed onto the sleeve connector of the main seat, the inner portion of the sleeve will be locked with the flange of sleeve connector, so the assembly of the sleeve and the connector can be fixed in transverse direction. Moreover, when the penetrating pole is passed through the sleeve and penetrated into the perforated hole of the sleeve connector to fix in the hole, and the fixing pole is engaged with the top of the sleeve connector, so the assembly of the sleeve can be fixed in longitudinal direction. Therefore, the assembly of the sleeves and the main seat will be assembled tightly and stably by way of the fixation of said two directions.

**[0034]** 2. Multiple purposes of use: The structure of the main seat and the penetrating piece described in the present invention which can be used in various sleeves with different kinds or sizes, so the present invention is posses with multiple purposes of use.

**[0035]** Although numerous characteristics and advantages of the present invention have been described in detail in the foregoing description, together with the structure and function of the invention, this disclosure is only one of the examples, and changes may be made with regard to specific details, particularly to shape, size, and arrangement of parts within the invention to the full extent indicated by the general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A sleeve seat, comprising:

A main seat having a body and multiple sleeve connectors; wherein, multiple flanges are installed on the sleeve connector peripherally, a perforated hole is situated on the top of the sleeve connector and is penetrated through the connector; a sleeve is sheathed onto the sleeve connector, and the inner portion of the sleeve is locked with the flange of sleeve connector; and

A penetrating piece is assembled to the main seat comprising multiple penetrating poles, wherein, the penetrating pole is used for passing through the sleeve and penetrating into the perforated hole of the sleeve connector.

2. A sleeve seat as claimed in claim 1, wherein the main seat further comprising a hanging unit.

3. A sleeve seat as claimed in claim 1, wherein the penetrating piece further comprising multiple fixing poles which are used for engaging with the top of the sleeve connector.

4. A sleeve seat, comprising:

A main seat having a body **11** and multiple sleeve connectors; wherein, multiple flanges are installed on the sleeve connector peripherally, a perforated hole is situated on the top of the sleeve connector and is penetrated through the connector; in addition, two fixing plates are installed on the two sides of the main seat respectively; a sleeve is sheathed onto the sleeve connector, and the inner portion of the sleeve is locked with the flange of sleeve connector; and

A penetrating piece comprises two fixing bars provided at the two ends of the penetrating piece downwardly, which are used for assembling to the fixing plate, so that the penetrating piece is assembled to the main seat; meanwhile, the inner top of the penetrating piece is engaged with said sleeve.

5. A sleeve seat as claimed in claim 4, wherein a fixation hole is provided on each fixing plate, and a fixing boss is provided on each fixing bar, the fixing boss is able to assemble

to the fixation hole of the fixing plate, so that the assembly of the main seat and the penetrating piece is achieved.

6. A sleeve seat as claimed in claim 4, wherein the main seat further comprising a hanging unit.

7. A sleeve seat as claimed in claim 4, wherein the penetrating piece further comprising multiple fixing poles which are used for engaging with the top of the sleeve connector.

8. A sleeve seat as claimed in claim 4, wherein the penetrating piece further comprising multiple penetrating poles, wherein, the penetrating pole is used for passing through the sleeve and penetrating into the perforated hole of the sleeve connector.

9. A sleeve seat as claimed in claim 4, wherein the penetrating piece is arranged in transverse direction; when the sleeve is sheathed onto the sleeve connector of the main seat, the penetrating piece is able to extend across a fixation hole provided on each fixing plate as well as the gap provided on each sleeve.

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