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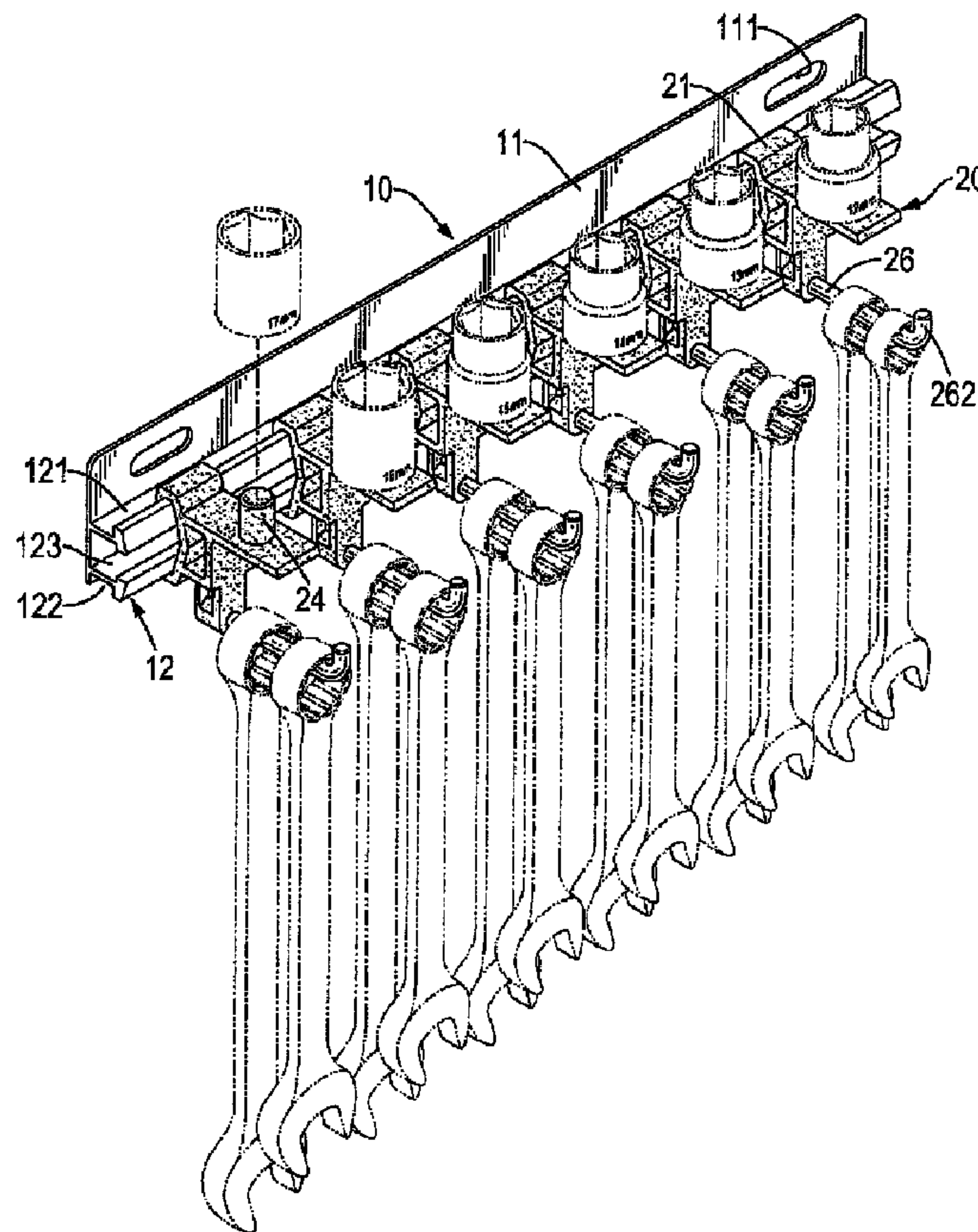
(72) Inventeur/Inventor:
KAO, JUI-CHIEN, TW

(73) Propriétaire/Owner:
KAO, JUI-CHIEN, TW

(74) Agent: ADE & COMPANY INC.

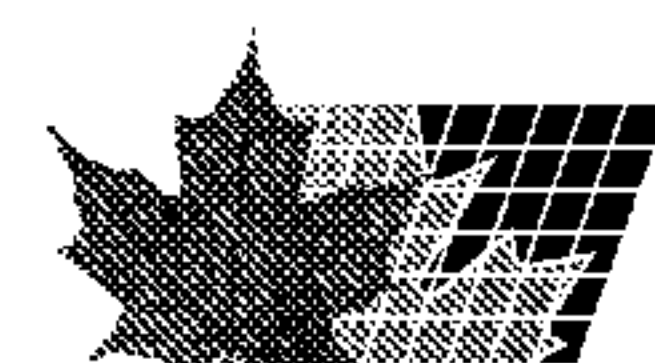
(54) Titre : PORTE OUTIL A MAIN

(54) Title: HAND TOOL HOLDER



(57) Abrégé/Abstract:

A hand tool holder has a base (10) and multiple holding elements (20). The base (10) has a hanging seat (11) and a track (12). The track (12) protrudes from the hanging seat (11). Each holding element (20) has a sliding block (21), a protrusion (22), an



(57) **Abrégé(suite)/Abstract(continued):**

extending board (23), a mounting stub (24), a shaft mount (25) and a hanging shaft (26). The sliding block (21) is mounted on the track (12). The protrusion (22) protrudes from the sliding block (21). The extending board (23) protrudes from the protrusion (22). The mounting stub (24) protrudes from the extending board (23). The shaft mount (25) protrudes from the protrusion (22) opposite to the mounting stub (24) and has an inserted block (253) located on a bottom of the shaft mount (25). The hanging shaft (26) is metal, is wrapped in the inserted block (253) by injection molding.

1 **ABSTRACT**

2 **HAND TOOL HOLDER**

3 A hand tool holder has a base (10) and multiple holding elements (20).
4 The base (10) has a hanging seat (11) and a track (12). The track (12) protrudes
5 from the hanging seat (11). Each holding element (20) has a sliding block (21), a
6 protrusion (22), an extending board (23), a mounting stub (24), a shaft mount (25)
7 and a hanging shaft (26). The sliding block (21) is mounted on the track (12).
8 The protrusion (22) protrudes from the sliding block (21). The extending board
9 (23) protrudes from the protrusion (22). The mounting stub (24) protrudes from
10 the extending board (23). The shaft mount (25) protrudes from the protrusion (22)
11 opposite to the mounting stub (24) and has an inserted block (253) located on a
12 bottom of the shaft mount (25). The hanging shaft (26) is metal, is wrapped in
13 the inserted block (253) by injection molding.

HAND TOOL HOLDER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a holder, and more particularly to a hand tool holder.

2. Description of Related Art

A hand tool holder can be mounted on a wall with fasteners and has multiple hanging hooks on which multiple wrenches are hanged.

However, a conventional hand tool cannot hold a sleeve. Furthermore, in order to hang a heavily hand tool on the conventional hand tool holder, sizes of the hanging hooks have to be increasing according to weights of the wrenches so causing waste of material.

To overcome the shortcomings, the present invention tends to provide a hand tool holder to mitigate or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

A hand tool holder has a base and multiple holding elements. The base has a hanging seat and a track. The track protrudes from the hanging seat. Each holding element has a sliding block, a protrusion, an extending board, a mounting stub, a shaft mount and a hanging shaft. The sliding block is mounted on the track. The protrusion protrudes from the sliding block. The extending board protrudes from the protrusion. The mounting stub protrudes from the extending board. The shaft mount protrudes from the protrusion, is opposite to the mounting stub and has an inserted block located on a bottom of the shaft mount. The hanging shaft is metal, is wrapped in the inserted block by injection

1 molding. Therefore, the holding elements is durable in structure to load and
2 support a heavily hand tool.

3 Other objects, advantages and novel features of the invention will
4 become more apparent from the following detailed description when taken in
5 conjunction with the accompanying drawings.

6 BRIEF DESCRIPTION OF THE DRAWINGS

7 Fig. 1 is a partially exploded perspective view of a hand tool holder in
8 accordance with the present invention with tools;

9 Fig. 2 is an enlarged perspective view of a holding element of the hand
10 tool holder in Fig. 1;

11 Fig. 3 is an enlarged side view in partial section of the hand tool holder
12 in Fig. 1;

13 Fig. 4 is an operational and partially exploded perspective view of the
14 hand tool holder in Fig. 1 with tools being mounted on a ped board;

15 Fig. 5 is an operational enlarge side view in partial section of the hand
16 tool holder in Fig. 1; and

17 Fig. 6 is an exploded operational perspective view of the hand tool
18 holder in Fig. 1.

19 DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

20 With reference to Figs. 1 to 3, a hand tool holder in accordance with the
21 present invention comprises a base 10 and multiple holding elements 20. The
22 base 10 has a hanging seat 11 and a track 12. The hanging seat 11 is rectangular
23 and has two hanging holes 111. The two hanging holes 111 are defined through
24 the hanging seat 11 and the hand tool holder may be mounted on a wall with two

1 fasteners mounted through the hanging holes 111. The track 12 protrudes from
2 along the hanging seat 11 and has a top surface, a bottom surface, an abutting
3 surface, a top channel 121, a bottom channel 122 and a ditch 123. The abutting
4 surface is perpendicularly the top surface and the bottom surface. The top
5 channel 121 is defined in along the top surface of the track 12. The bottom
6 channel 122 is defined in along the bottom surface of the track 12. The ditch 123
7 is defined in along the abutting surface of the track 12 between the top surface
8 and the bottom surface to provide a space, so that the top surface of the track 12
9 and the bottom surface of the track 12 is allowed to be curved.

10 The holding elements 20 are manufactured by injection molding and
11 each holding element 20 has a sliding block 21, a protrusion 22, an extending
12 board 23, a mounting stub 24, a shaft mount 25 and a hanging shaft 26. The
13 sliding block 21 is slidably mounted on the track 12 and has a top arm 211 and a
14 bottom arm 212. The top arm 211 slidably hooks in the top channel 121. The
15 bottom arm 212 slidably hooks in the bottom channel 122. The protrusion 22
16 protrudes from the sliding block 21, is hollow and opposite to the track 12 and
17 has an extending surface and a through hole 221. The through hole 221 is defined
18 through the protrusion 22. The extending board 23 is a rectangular board and is
19 formed on and protrudes from the protrusion 22. The mounting stub 24 is a
20 cylinder and perpendicularly protrudes from the extending board 23. The shaft
21 mount 25 perpendicularly protrudes from the extending surface of the protrusion
22 22 and is opposite to the mounting stub 24. The extending stub 25 has two sides,
23 a bottom, two recesses 251, four ribs 252 and an inserted block 253. The recesses
24 251 are respectively defined in the two sides of the shaft mount 25 to form the

1 four ribs 252 respectively at the sides of the shaft mount 25. The inserted block
2 253 has a round cross section and is formed on the bottom of the shaft mount 25
3 below the four ribs 252 and the recesses 251. The hanging shaft 26 is metal, is
4 wrapped in the inserted block 253 by injection molding and has an inserted end,
5 a hanging end, a flange 261 and a hook 262. The inserted end of the hanging
6 shaft 26 is inserted the inserted block 253. The hanging end of the hanging shaft
7 26 is opposite to the inserted end of the hanging shaft 26, protrudes from the
8 inserted block 253 and having an extension length from the inserted block 253
9 longer than that of the extending board 23 from the protrusion 22. The flange 261 is
10 square in cross section, protrusions from the inserted end of the hanging shaft 26
11 and is wrapped in the inserted block 253, so the hanging shaft 26 is engaged the
12 inserted block 253 by the flange 261. The hook 262 protrudes upwardly from the
13 hanging end.

14 With reference to Figs. 4 to 6, the hand tool holder may be mounted on a
15 peg board 40 with two locking elements 30. Wrenches 51 are respectively
16 hanged on the hanging shafts 26 and sleeves 50 are respectively mounted on the
17 mounting stubs 24. Because the hanging shaft 26 is metal and is wrapped in the
18 inserted block 253 by injection molding, structural strength of the hanging shaft
19 26 is increased. Furthermore, the four ribs 252 make the shaft mount 25 having
20 an "H" cross- section, such that the structural strength of the shaft mount 25 is
21 improved to avoid the shaft mount 25 from being deformed or bent. Therefore,
22 the holding elements 20 is durable in structure to load and support a heavily hand
23 tool.

24 Even though numerous characteristics and advantages of the present

1 invention have been set forth in the foregoing description, together with details
2 of the structure and function of the invention, the disclosure is illustrative only,
3 and changes may be made in detail, especially in matters of shape, size, and
4 arrangement of parts within the principles of the invention to the full extent
5 indicated by the broad general meaning of the terms in which the appended
6 claims are expressed.

1 **WHAT IS CLAIMED IS:**

2 1. A hand tool holder comprising:

3 a base having

4 a hanging seat;

5 a track protruding from the hanging seat and having

6 a top surface;

7 a bottom surface;

8 a top channel defined in the top surface of the track;

9 a bottom channel defined in the bottom surface of the

10 track; and

11 multiple holding elements and each having

12 a sliding block slidably mounted on the track and having

13 a top arm slidably hooked on the top channel;

14 a bottom arm slidably hooked on the bottom channel;

15 a protrusion protruding from the sliding block, being opposite to

16 the track and having an extending surface;

17 an extending board protruding from the protrusion;

18 a mounting stub protruding from the extending board;

19 a shaft mount perpendicularly protruding from the extending

20 surface of the protrusion, being opposite to the mounting stub and having

21 a bottom;

22 two sides;

23 four ribs;

24 two recesses respectively defined in the two sides of the

1 shaft mount to form the four ribs respectively at the sides of the shaft mount;
2 an inserted block having a round cross section, formed
3 on the bottom of the shaft mount below the four ribs and the recesses; and
4 a hanging shaft being metal, wrapped in the inserted block by
5 injection molding and having
6 an inserted end wrapped in the inserted block;
7 a hanging end opposite to the inserted end of the
8 hanging shaft and protruding from the inserted block;
9 a flange protruding from the inserted end of the hanging
10 shaft and wrapped in the inserted block; and
11 a hook protruded upwardly from the hanging end.

12 2. The hand tool holder as claimed in claim 1, wherein each protrusion
13 has a through hole defined through the protrusion.

14 3. The hand tool holder as claimed in claim 1 or 2, wherein
15 each extending board is a rectangular board; and
16 the hanging end of each hanging shaft has an extension length from a
17 corresponding inserted block longer than that of a corresponding extending board
18 from a corresponding protrusion.

19 4. The hand tool holder as claimed in claim 3, wherein the hanging seat
20 is rectangular and has two hanging holes defined through the hanging seat.

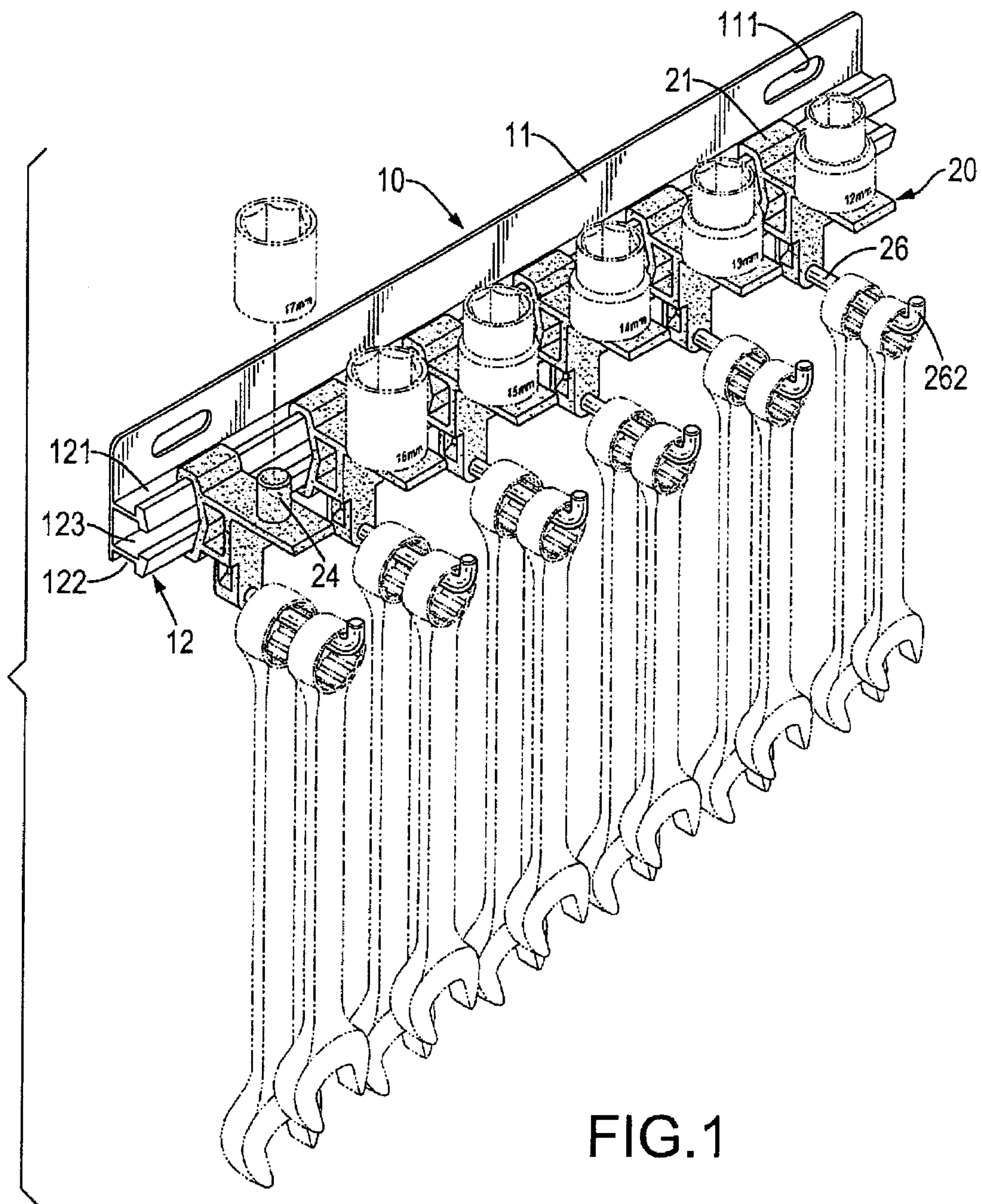
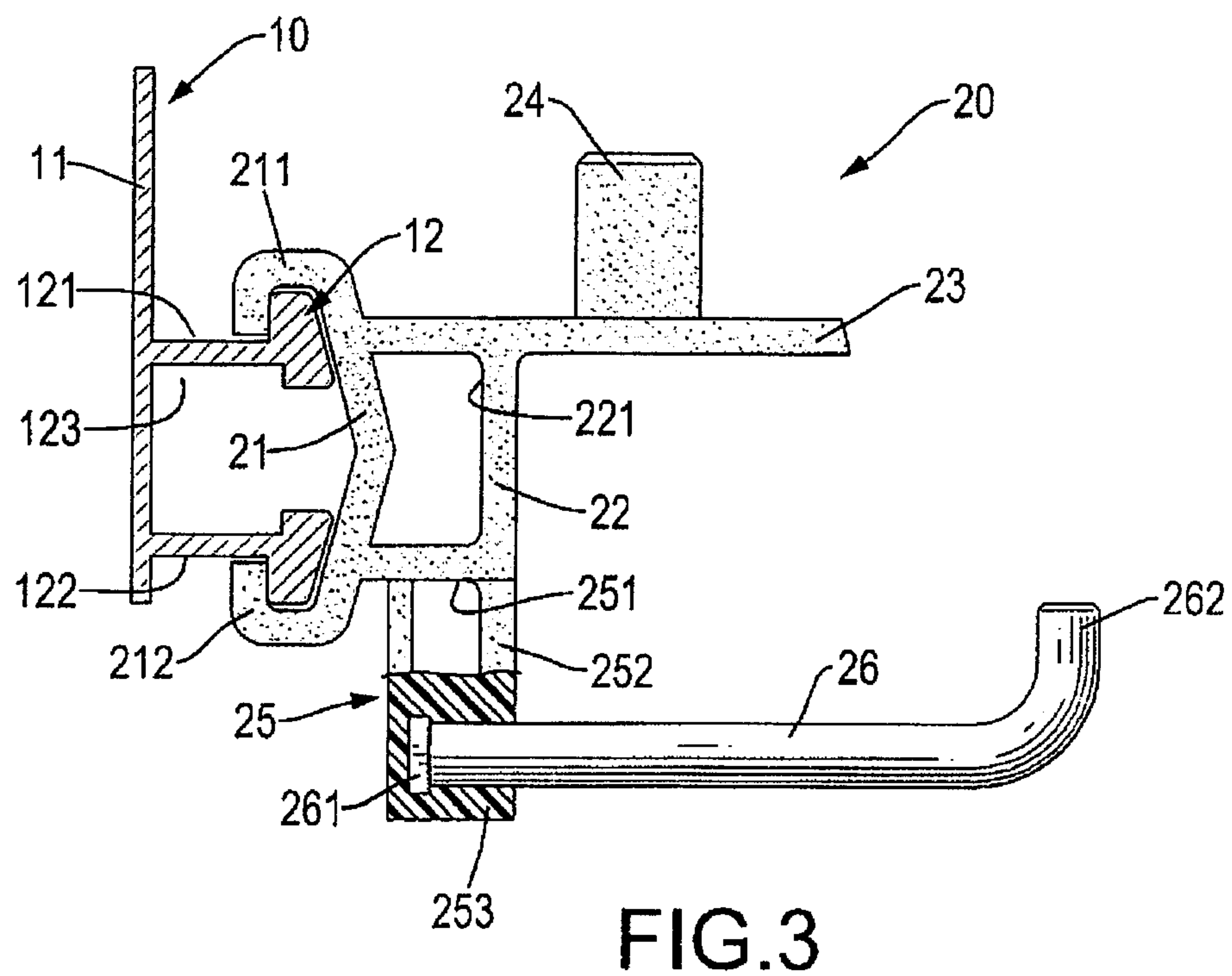
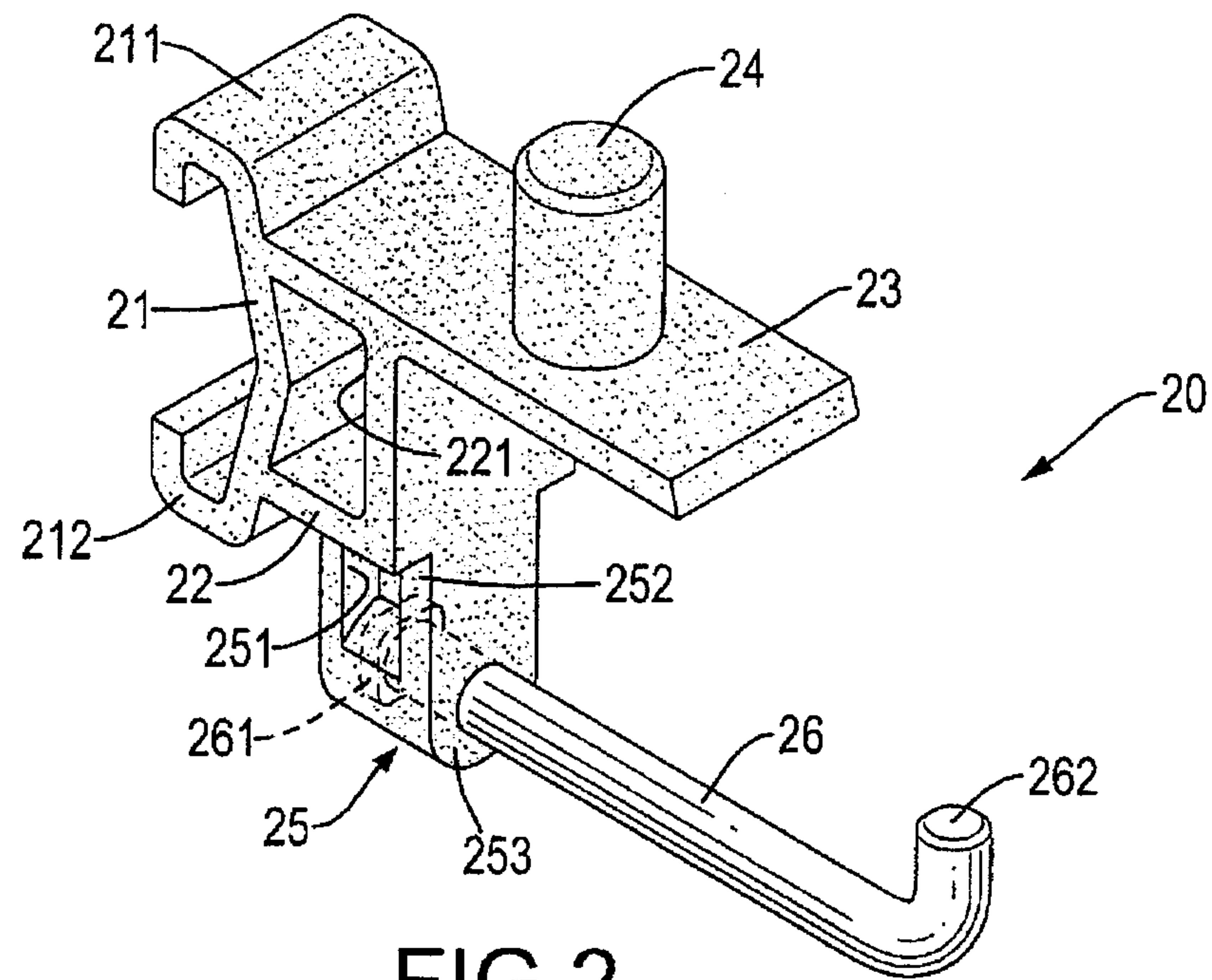
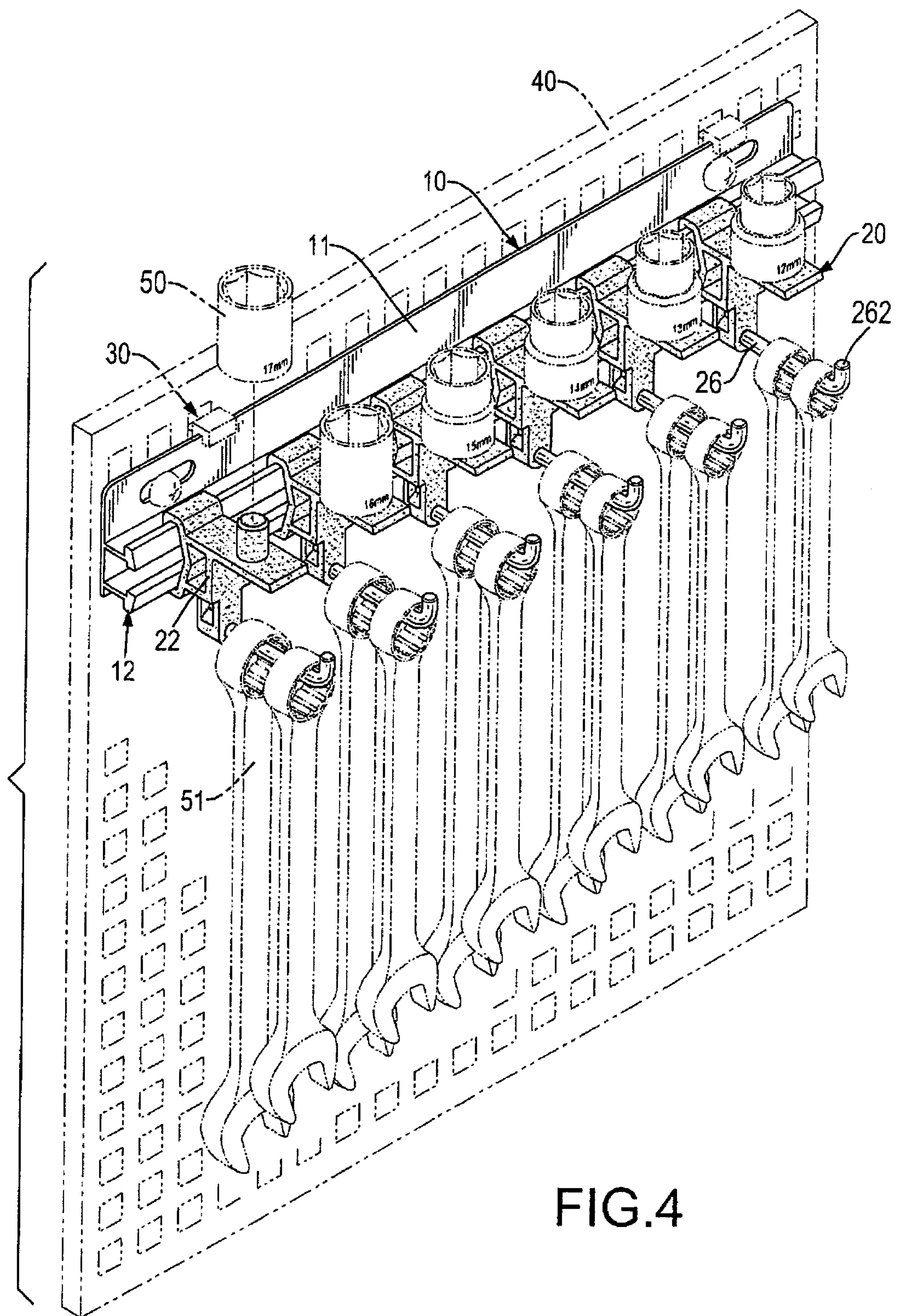


FIG.1





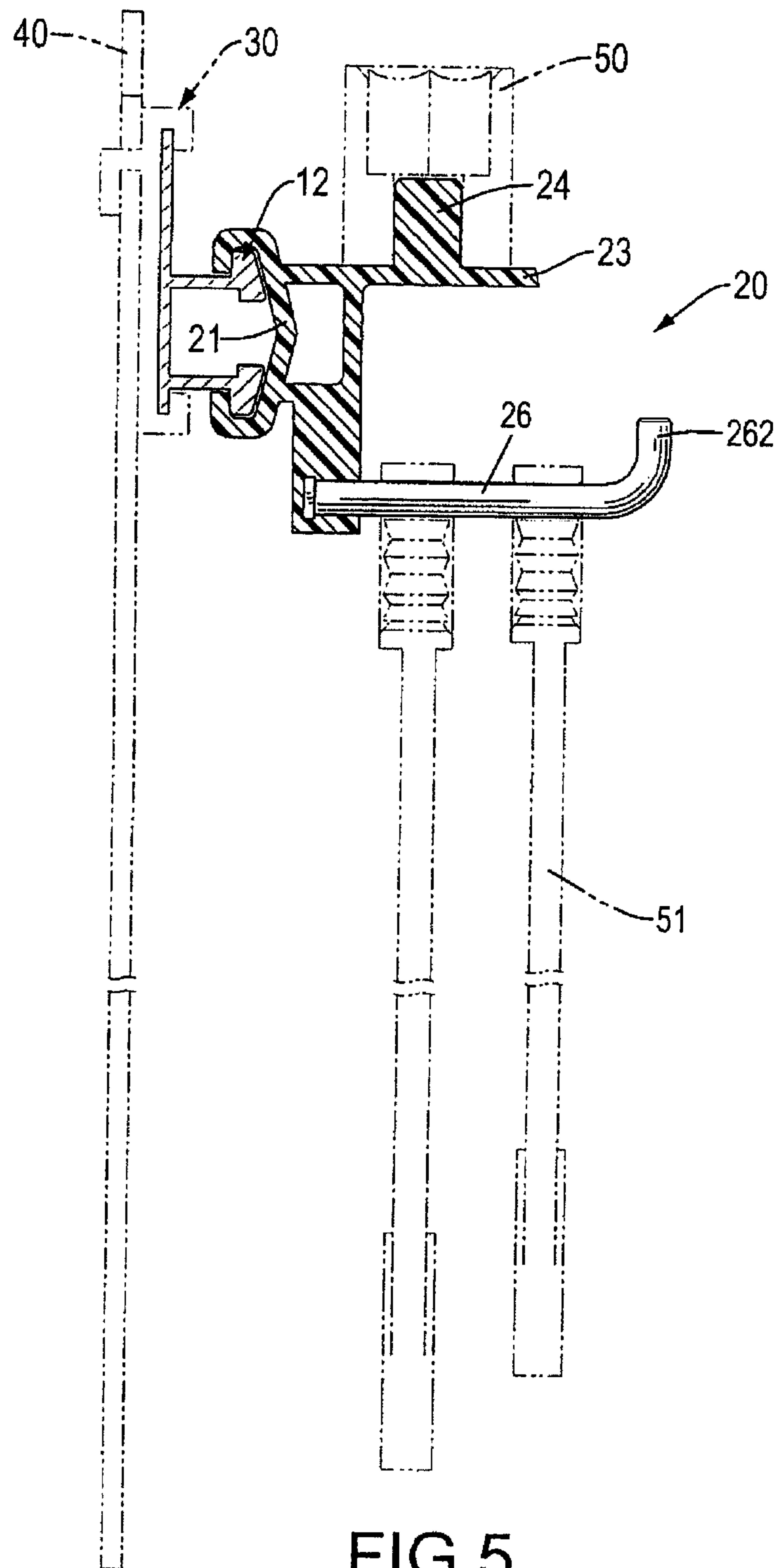


FIG.5

