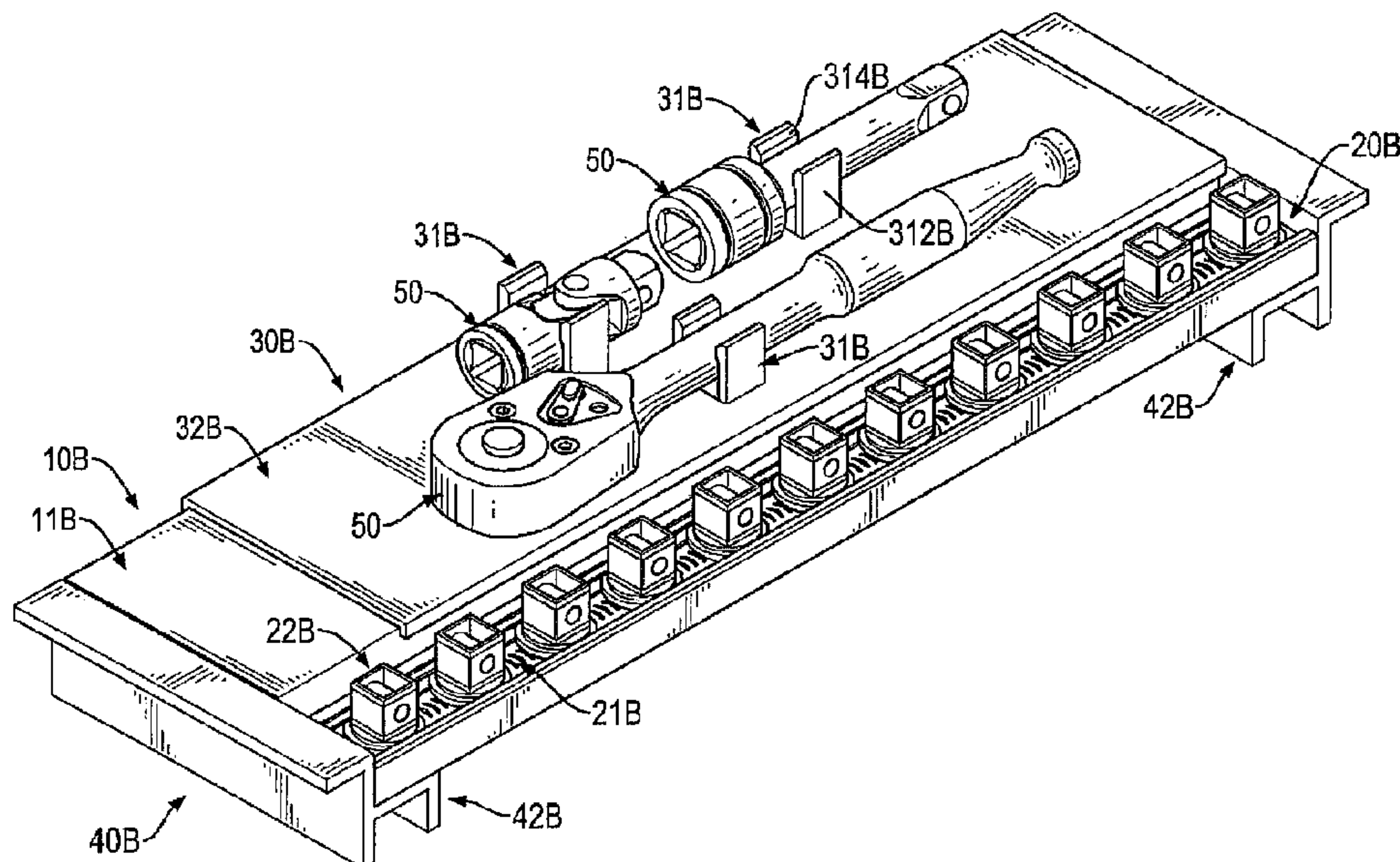




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(54) Titre : SUPPORT POUR OUTIL EN COMPOSITE
(54) Title: COMPOSITE TOOL HOLDER



(57) Abrégé/Abstract:

A composite tool holder has a base (10B), a hand-tool set (30B), and a bracket set (40B). The base (10B) has a substrate (11B) and a first-track (12B). The substrate (11B) has two elongated sides and a length. The first-track (12B) is detachably connected to one of the elongated sides of the substrate (11B) by a hooking structure between the substrate (11B) and the first-track (12B), and has a length being equal to the length of the substrate (11B). The hand-tool set (30B) is detachably connected to the base (10B) and has at least one holding-component (31B) deposited on the substrate (11B). The bracket set (40B) is detachably connected to the base (10B) and has two supporting-bases (42B) respectively connected to two sides of the base (10B) to enclose the first-track (12B).

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COMPOSITE TOOL HOLDER

ABSTRACT

A composite tool holder has a base (10B), a hand-tool set (30B), and a bracket set (40B). The base (10B) has a substrate (11B) and a first-track (12B). The substrate (11B) has two elongated sides and a length. The first-track (12B) is detachably connected to one of the elongated sides of the substrate (11B) by a hooking structure between the substrate (11B) and the first-track (12B), and has a length being equal to the length of the substrate (11B). The hand-tool set (30B) is detachably connected to the base (10B) and has at least one holding-component (31B) deposited on the substrate (11B). The bracket set (40B) is detachably connected to the base (10B) and has two supporting-bases (42B) respectively connected to two sides of the base (10B) to enclose the first-track (12B).

1 **COMPOSITE TOOL HOLDER**

2 The present invention is a divisional application of application No. 2,929,841
3 filed on May 13, 2016.

4 **BACKGROUND OF THE INVENTION**

5 1. Field of the Invention

6 The present invention relates to a holder, specifically to a composite tool
7 holder capable of storing both hand tools and sleeves.

8 2. Description of the Related Art

9 A conventional tool holder mainly has a base and multiple
10 positioning-blocks movably mounted in the base. A sliding track is formed on a
11 top surface of the base, and each one of the positioning-blocks has a sliding base
12 formed on a bottom of the positioning-block for engaging with the sliding track.
13 An inserting-portion is formed upward on a top surface of the sliding base of the
14 positioning-block, and the inserting-portion can be a socket or a hanging rod.
15 When the inserting-portion of each one of the positioning-blocks is the socket,
16 the socket can be used for storing a sleeve. Furthermore, when the
17 inserting-portion of each one of the positioning-blocks is the hanging rod, a hand
18 tool such as a socket wrench can be hung on the hanging rod to store the hand
19 tools.

20 However, a user mostly needs to use the sleeve and the hand tool at the
21 same time to fasten or unfasten a fastener, such as a bolt or a nut, but the
22 conventional tool holder cannot hold the sleeve and the hand tool at the same
23 time. Oftentimes the user may forget to bring the sleeve or the hand tool,
24 resulting in inconvenience. Moreover, when the user needs to use the sleeve and

1 the hand tool at the same time, the conventional tool holder may cause
2 inconvenience in carrying or storing the sleeve and the hand tool. Therefore, the
3 conventional tool holder needs to be improved.

4 SUMMARY OF THE INVENTION

5 The main objective of the present invention is to provide a composite
6 tool holder that may store both hand tools and sleeves.

7 Other objectives, advantages and novel features of the invention will
8 become more apparent from the following detailed description when taken in
9 conjunction with the accompanying drawings.

10 BRIEF DESCRIPTION OF THE DRAWINGS

11 Fig. 1 is a perspective view of a first embodiment of a composite tool
12 holder in accordance with the present invention;

13 Fig. 2 is an exploded perspective view of the composite tool holder in
14 Fig. 1;

15 Fig. 3 is a further exploded view of the composite tool holder in Fig. 2;

16 Fig. 4 is another exploded view of the composite tool holder in Fig. 2;

17 Fig. 5 is a top side view of the composite tool holder in Fig. 1;

18 Fig. 6 is a side view in partial section of the composite tool holder in Fig.
19 5 along line 6-6;

20 Fig. 7 is an enlarged side view in partial section of the composite tool
21 holder in Fig. 5 along line 7-7;

22 Fig. 8 is another enlarged side view in partial section of the composite
23 tool holder in Fig. 1;

24 Figs. 8A and 8B are enlarged and cross sectional side views of the

1 composite tool holder in Fig. 8;

2 Fig. 9 is a perspective view of a second embodiment of a composite tool
3 holder in accordance with the present invention;

4 Fig. 10 is an exploded perspective view of the composite tool holder in
5 Fig. 9;

6 Fig. 11 is a further exploded view of the composite tool holder in Fig.
7 10;

8 Fig. 12 is a top side view of the composite tool holder in Fig. 9;

9 Fig. 13 is an enlarged side view in partial section of the composite tool
10 holder in Fig. 12 along line 13-13;

11 Fig. 14 is an enlarged and operational perspective view of the composite
12 tool holder in Fig. 9; and

13 Fig. 15 is a perspective view of a third embodiment of a composite tool
14 holder in accordance with the present invention.

15 DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

16 With reference to Figs. 1 to 4, a first embodiment of a composite tool holder
17 in accordance with the present invention has a base 10B, a socket set 20B, a
18 hand-tool set 30B, and a bracket set 40B.

19 The base 10B is an extruded aluminum structure and comprises a substrate
20 11B, a first-track 12B, a second-track 13B, and two enclosed-tracks 14B. The
21 substrate 11B is a rectangular plate extending transversally and has a top surface,
22 a bottom surface, two elongated sides, a length, at least one receiving-hole 112B,
23 and multiple assembling-holes 113B. The receiving-hole 112B is formed
24 through the top surface and the bottom surface of the substrate 11B. The

1 assembling-holes 113B are formed through the top surface and the bottom
2 surface of the substrate 11B at spaced intervals.

3 With reference to Figs. 2 and 4, the first-track 12B is detachably connected
4 to one of the elongated sides of the substrate 11B by a hooking structure between
5 the substrate 11B and the first-track 12B, and has a length, a top surface, a
6 bottom surface, an upper-opening, and a sliding-slot 122B. The length of the
7 first-track 12B is equal to the length of the substrate 11B. Additionally, a height
8 is formed between the first-track 12B and the substrate 11B. The upper-opening
9 is formed through the top surface of the first-track 12B. The sliding-slot 122B is
10 formed in the first-track 12B and communicates with the upper-opening.
11 Furthermore, the sliding-slot 122B has a width wider than a width of the
12 upper-opening.

13 The second-track 13B is formed on the bottom surface of the first-track 12B,
14 and has a top-opening and an engaging-slot. The top-opening is formed through
15 the bottom surface of the first-track 12B and communicates with the sliding-slot
16 122B. The engaging-slot is formed in the second-track 13B and communicates
17 with the top-opening. Additionally, the top-opening has a width narrower than
18 the width of the sliding-slot 122B, and the engaging-slot has a width wider than
19 the width of the top-opening.

20 With reference to Figs. 2, 4, and 7, one of the enclosed-tracks 14B is formed
21 downwardly on the bottom surface of the substrate 11B along one of the two
22 elongated sides that is opposite to the first-track 12B, and communicates with
23 some of the assembling-holes 113B. The other one of the enclosed-tracks 14B is
24 formed downwardly on the bottom surface of the first-track 12B around the

1 second-track 13B. The enclosed-tracks 14B have lengths equal to the lengths of
2 the substrate 11B and the first-track 12B. Each one of the enclosed-tracks 14B
3 has a bottom surface, a lower-opening, and an enclosed-slot. The lower-opening
4 is formed through the bottom surface of the enclosed-track 14B. The
5 enclosed-slot is formed in the enclosed-track 14B and communicates with the
6 lower-opening. Furthermore, the lower-opening has a width narrower than a
7 width of the enclosed-slot.

8 With reference to Figs. 2, 4, 7, and 8, the socket set 20B is connected to
9 the base 10B and has a positioning-plate 21B and multiple positioning-blocks
10 22B. The positioning-plate 21B is a strip-shaped plate with resilience, is
11 disposed in the engaging-slot of the second-track 13B, and has two long opposite
12 sides, a middle, an abutting-portion 211B, and multiple engaging recesses 212B.
13 The abutting-portion 211B is arc-shaped and is bent upwardly from the long
14 opposite sides to the middle of the positioning-plate 21B and has a top surface
15 extending into the sliding-slot 122B of the first-track 12B. The engaging
16 recesses 212B are curved and are formed in the top surface of the
17 abutting-portion 211B at spaced intervals.

18 Each one of the positioning-blocks 22B is rotatably and slidably
19 mounted in the sliding-slot 122B of the first-track 12B, abuts the
20 positioning-plate 21B, and has an engaging-portion 221B, an inserting-portion,
21 and an engaging element 224B. The engaging-portion 221B of the
22 positioning-block 22B is mounted in the sliding-slot 122B of the first-track 12B,
23 abuts the abutting-portion 211B of the positioning-plate 21B, and has a bottom
24 surface and a top surface. Furthermore, the engaging-portion 221B of the

1 positioning-block 22B may be a disk of a flattened structure or a stepped
2 structure and may be rotated relative to the first-track 12B.

3 The inserting-portion is formed on and protrudes from the top surface of
4 the engaging-portion 221B and extends out of the first-track 12B via the
5 upper-opening. The inserting-portion has an outer surface and a
6 constraining-protrusion. The constraining-protrusion is deposited on the outer
7 surface of the inserting-portion, so that a sleeve may firmly engage with the
8 inserting-portion of the positioning-block 22B.

9 With reference to Fig. 4, the engaging element 224B is formed on and
10 protrudes downwardly from the bottom surface of the engaging-portion 221B
11 and selectively engages with one of the engaging recesses 212B of the
12 positioning-plate 21B to hold the positioning-block 22B securely on the
13 positioning-plate 21B without sliding relative to the first-track 12B. Additionally,
14 the engaging element 224B is an engaging ring.

15 With reference to Figs. 8, 8A, and 8B, when each one of the
16 positioning-blocks 22B is mounted on the positioning-plate 21B, a part of the
17 engaging ring engages in one of the engaging recesses 212B and the remaining
18 part of the engaging ring presses against the top surface of the abutting-portion
19 211B. Then, the abutment relationship between the engaging ring and the
20 positioning-plate 21B may allow the part of the engaging ring to engage more
21 securely in the corresponding engaging recess 212B, and the positioning-block
22 22B may be securely positioned on the base 10B by the positioning-plate 21B.

23 With reference to Figs. 2, 3, 5, and 6, the hand-tool set 30B is detachably
24 connected to the base 10B and has at least one holding-component 31B

1 deposited on the substrate 11B. Furthermore, the hand-tool set 30B has a
2 mounting-cover 32B detachably mounted on the substrate 11B, and the
3 mounting-cover 32B may be U-shaped and has a top surface, a bottom surface, at
4 least one mounting-hole 321B, and multiple inserting-tubes 322B. The at least
5 one mounting-hole 321B is formed through the top surface and the bottom
6 surface of the mounting-cover 32B and aligns with the at least one
7 receiving-hole 112B of the substrate 11B. The inserting-tubes 322B are formed
8 on and protrude downwardly from the bottom surface of the mounting-cover
9 32B at spaced intervals, and are respectively mounted into the assembling-holes
10 113B of the substrate 11B when the bottom surface of the mounting-cover 32B
11 abuts the top surface of the substrate 11B. Additionally, the mounting-cover 32B
12 has multiple washers 323B respectively mounted around the inserting-tubes
13 322B that extend through the substrate 11B, and multiple fasteners 324B are
14 respectively connected to the inserting-tubes 322B and are pressed against the
15 washers 323B. Then, the mounting-cover 32B is securely mounted on the
16 substrate 11B.

17 Furthermore, each one of the at least one holding-component 31B is
18 formed on the top surface of the mounting-cover 32B and has a
19 combining-portion 311B and a holding-portion 312B. The combining-portion
20 311B is formed on the top surface of the mounting-cover 32B and has a top
21 surface. The holding-portion 312B is U-shaped, is integrally formed on the top
22 surface of the combining-portion 311B, and is disposed above the
23 mounting-cover 32B. Additionally, the holding-portion 312B of the
24 holding-component 31B has two holding-protrusions formed on an inner surface

1 of the holding-portion 312B respectively near two free ends of the
2 holding-portion 312B. Then, the hand tool 50 may be securely mounted on the
3 mounting-cover 32B over the substrate 11B by the holding-portion 312B of the
4 at least one holding-component 31B. With reference to Figs. 3 and 6, the
5 protrusion-head 51 of the hand tool 50 may extend through the substrate 11B via
6 the at least one mounting-hole 321B and the at least one receiving-hole 112B,
7 such that the hand tool 50 may be positioned firmly on the mounting-cover 32B
8 over the substrate 11B by the at least one holding-component 31B, the at least
9 one mounting-hole 321B, and the at least one receiving-hole 112B.

10 With reference to Figs. 2, 6, and 7, the bracket set 40B is detachably
11 connected to the base 10B beside the socket set 20B, and has multiple
12 fixing-plates 41B and two supporting-bases 42B. Each one of the fixing-plates
13 41B is a rectangular plate and is disposed in one of the enclosed-tracks 14B and
14 near an end of the substrate 11B or an end of the first-track 12B, and has a
15 fixing-hole formed through the fixing-plate 41B and communicating with the
16 lower-opening of a corresponding enclosed-track 14B, so that a
17 fixing-component 60 can be connected to the fixing-plate 41B via the
18 lower-opening of the corresponding enclosed-track 14B.

19 Each one of the supporting-bases 42B is an extruded aluminum structure
20 and is connected to one of the two sides of the base 10B, so as to enclose the
21 first-track 12B, the second-track 13B, and the enclosed-tracks 14B. Each one of
22 the supporting-bases 42B has an enclosed-plate and an extending-plate. The
23 enclosed-plate is disposed longitudinally and abuts one of the sides of the base
24 10B, so as to enclose the first-track 12B, the second-track 13B, and the

1 enclosed-tracks 14B. Furthermore, each supporting-base 42B has a
2 supporting-plate transversally formed on a top of the enclosed-plate and aligning
3 to the substrate 11B. Therefore, a user can lift the composite tool holder by
4 holding the two supporting-plates of the supporting-bases 42B.

5 The extending-plate is transversally formed on and protrudes from the
6 enclosed-plate under the base 10B, is opposite to the supporting-plate, and has
7 two through-holes formed through the extending-plate at a spaced interval, so
8 that two fixing-components may be respectively mounted through the
9 through-holes and respectively connected to the fixing-holes of the fixing-plates
10 that are mounted at a same side of the base 10B. Then, the supporting-base 42B
11 can be disposed on the side of the base 10B by the engagement of the two
12 fixing-components 60 and the two corresponding fixing-plates 41B.

13 With reference to Figs. 1, 7, and 8, when the first embodiment of the
14 invention is in use, the user can mount a sleeve on one of the positioning-blocks
15 22B of the socket set 20B, and the user can apply a force to the sleeve to drive the
16 positioning-block 22B to rotate relative to the positioning-plate 21B, so that a
17 size mark on an outer surface of the sleeve is rotated to face the user for ease of
18 retrieving and identifying the sleeve. In addition, the engaging-portion 221B of
19 each one of the positioning-blocks 22B abuts the abutting-portion 211B of the
20 positioning-plate 21B, and the engaging element 224B of each one of the
21 positioning-blocks 22B engages with one of the engaging recesses 212B of the
22 positioning-plate 21B to hold the positioning-block 22B securely on the
23 positioning-plate 21B without sliding relative to the first-track 12B. After the
24 user rotates or slides the sleeve, the positioning-block 22B and the

1 positioning-plate 21B abut each other and are firmly disposed in the first-track
2 12B by the engagement between the engaging element 224B and a
3 corresponding engaging recess 212B. Therefore, the sleeve on the
4 positioning-block 22B does not rotate or slide relative to the first-track 12B. That
5 is, the sleeve can be firmly disposed on the base 10B.

6 With reference to Figs. 1, 3, 5, and 6, the user can position the hand tool
7 50 on the mounting-cover 32B over the substrate 11B by the at least one
8 holding-component 31B of the hand-tool set 30B, and the hand tool 50 can
9 cooperate with the sleeve mounted on the positioning-block 22B. The hand tool
10 50 has a protrusion-head 51B extending to the bottom surface of the substrate
11 11B via the at least one mounting-hole 321B of the mounting-cover 32B and the
12 at least one receiving-hole 112B of the substrate 11B. In addition, the hand tool
13 50 can be positioned on the mounting-cover 32B over the substrate 11B by the at
14 least one holding-component 31B, the at least one mounting-hole 321B, and the
15 at least one receiving-hole 112B. Furthermore, after the sleeve and the hand tool
16 50 are positioned on the base 10B by the socket set 20B and the hand-tool set
17 30B, the sleeve and the hand tool 50 disposed on the base 10B can be stored at
18 the same time to facilitate convenience in use and prevent the user from
19 forgetting to bring the sleeve or the hand tool 50.

20 With reference to Figs. 9 to 13, a second embodiment of a composite
21 tool holder in accordance with the present invention is substantially the same as
22 the first embodiment except for the following features. The composite tool
23 holder further has an auxiliary first-track 12C, an auxiliary second-track 13C,
24 and an auxiliary socket set 20C. The auxiliary first-track 12C is detachably

1 connected to one of the elongated sides of the substrate 11B by a hooking
2 structure between the substrate 11B and the auxiliary first-track 12C, and is
3 opposite to the first-track 12B. That is, the first-track 12B and the auxiliary
4 first-track 12C are respectively connected to the two elongated sides of the
5 substrate 11B. The auxiliary second-track 13C is formed on the auxiliary
6 first-track 12C. In addition, the structures of the auxiliary first-track 12C and the
7 auxiliary second-track 13C are substantially the same as the first-track 12B and
8 the second-track 13B. Furthermore, the two enclosed-tracks 14B are respectively
9 formed downwardly on the first-track 12B and the auxiliary first-track 12C
10 respectively around the second-track 13B and the auxiliary second-track 13C.

11 The auxiliary socket set 20C is connected to the auxiliary first-track 12C
12 and the auxiliary second-track 13C, and has a positioning-plate 21C and multiple
13 positioning-blocks 22C. The positioning-plate 21C of the auxiliary socket set
14 20C is mounted in the auxiliary second-track 13C, and each one of the engaging
15 recesses 212C is elongated and is formed in the top surface of the
16 abutting-portion 211C at spaced intervals.

17 The positioning-blocks 22C are un-rotatably and slidably mounted in the
18 auxiliary first-track 12C and abut the positioning-plate 21C, and each one of the
19 positioning-blocks 22C has an engaging-portion 221C and an inserting-portion
20 222C. The engaging-portion 221C is rectangular, is mounted in the auxiliary
21 first-track 12C, and abuts the abutting-portion 211C of the positioning-plate 21C.
22 The engaging element 224C of the engaging-portion 221C is an elongated
23 engaging rib, and selectively engages with one of the engaging recesses 212C of
24 the positioning-plate 21C to hold the positioning-block 22C securely on the

1 positioning-plate 21C without sliding relative to the auxiliary first-track 12C.

2 Furthermore, the length of each one of the supporting-bases 42C is long
3 enough to enclose the first-track 12B, the auxiliary first-track 12C, the
4 second-track 13B, the auxiliary second-track 13C, and the enclosed-tracks 14B.

5 With reference to Figs. 13 and 14, when the composite tool holder of the
6 second embodiment in the present invention is in use, sleeves 80 may be
7 mounted on the positioning-blocks 22B, 22C of the socket set 20B and the
8 auxiliary socket set 20C, since the engaging-portions 221B of the socket set 20B
9 are circular plates, and the sleeves 80 that are mounted around the
10 positioning-blocks 22B of the socket set 20B may be rotated and slid relative to
11 the first-track 12B. Furthermore, since the engaging-portions 221C of the
12 auxiliary socket set 20C are rectangular, the sleeves 80 that are mounted around
13 the positioning-blocks 22C of the auxiliary socket set 20C can only slide relative
14 to the auxiliary first-track 12C without rotating.

15 With reference to Fig. 15, a third embodiment of a composite tool
16 holder in accordance with the present invention is substantially the same as the
17 second embodiment except for the following features. The composite tool holder
18 further has an extending first-track 12D, an extending second-track 13D, and an
19 additional socket set 20D. The extending first-track 12D is connected to and
20 parallel with the first-track 12B by an extending panel 15D, the extending
21 second-track 13D is formed on the extending first-track 12D, and the additional
22 socket set 20D is connected to the extending first-track 12D and the extending
23 second-track 13D. Furthermore, the structures of the extending first-track 12D,
24 the extending second-track 13D, and the additional socket set 20D are

1 respectively and substantially the same as the first-track 12B, the second-track
2 13B, and the socket set 20B. With the increasing structures of the extending
3 first-track base 12D, the extending second-track 13D, and the additional socket
4 set 20D, the composite tool holder may store more sleeves 80 on the composite
5 tool holder.

6 By the above technical features, the composite tool holder of the
7 invention allows the user to fix and store the sleeves 80 and the hand tools 50 on
8 the base 10B at the same time by disposing the socket set 20B and the hand-tool
9 set 30B. Therefore, it allows the user to use or store the sleeves 80 and the hand
10 tools 50 at the same time and prevents the user from forgetting to bring the
11 sleeves 80 or the hand tools 50. In addition, the structural strength can be
12 enhanced by the bracket sets 40B disposed on two sides of the base 10B, and the
13 user can carry the composite tool holder by holding the two supporting-plates of
14 the supporting-bases 42B. The invention provides the composite tool holder to
15 store the sleeves 80 and the hand tool 50 at the same time, and this is convenient
16 in use. Furthermore, the socket set 20B, the auxiliary socket set 20C, the
17 additional socket set 20D, and the hand-tool set 30B are deposited on the base
18 10B, and the user can store the sleeves 80 and the hand tools 50 on the base 10B
19 at the same time, and this is convenient in use.

20

1 **WHAT IS CLAIMED IS:**

2 1. A composite tool holder comprising:

3 a base having

4 a substrate having

5 two elongated sides; and

6 a length; and

7 a first-track detachably connected to one of the elongated sides

8 of the substrate by a hooking structure between the substrate and the first-track,

9 and having a length being equal to the length of the substrate;

10 a hand-tool set detachably connected to the base and having at least one

11 holding-component deposited on the substrate; and

12 a bracket set detachably connected to the base and having two

13 supporting-bases respectively connected to two sides of the base to enclose the

14 first-track.

15 2. The composite tool holder as claimed in claim 1, wherein

16 the first-track has

17 a top surface;

18 a bottom surface;

19 an upper-opening formed through the top surface of the

20 first-track; and

21 a sliding-slot formed in the first-track and communicating with

22 the upper-opening; and

23 the base has a second-track formed on the bottom surface of the

24 first-track and having

1 a top-opening formed through the bottom surface of the
2 first-track and communicating with the sliding-slot; and
3 an engaging-slot formed in the second-track and
4 communicating with the top-opening; and
5 the composite tool holder has a socket set connected to the base and
6 having
7 a positioning-plate disposed in the engaging-slot of the
8 second-track and having
9 two long opposite sides;
10 a middle;
11 an abutting-portion bent upwardly from the long
12 opposite sides to the middle of the positioning-plate and having a top surface;
13 and
14 multiple engaging recesses formed in the top surface
15 of the abutting-portion at spaced intervals; and
16 multiple positioning-blocks slidably mounted in the first-track
17 and abutting the positioning-plate, and each one of the positioning-blocks having
18 an engaging-portion mounted in the sliding-slot of
19 the first-track, abutting the abutting-portion of the positioning-plate, and having
20 a bottom surface;
21 a top surface; and
22 an engaging element formed on and
23 protruding downwardly from the bottom surface of the engaging-portion and
24 selectively engaging with one of the engaging recesses of the positioning-plate

1 to hold the positioning-block securely on the positioning-plate; and
2 an inserting-portion formed on and protruding from
3 the top surface of the engaging-portion and extending out of the first-track via
4 the upper-opening.

5 3. The composite tool holder as claimed in claim 2, wherein

6 the substrate has

7 a top surface;

8 a bottom surface;

9 at least one receiving-hole formed through the top surface and
10 the bottom surface of the substrate; and

11 multiple assembling-holes formed through the top surface and
12 the bottom surface of the substrate at spaced intervals; and

13 the hand-tool set has a mounting-cover detachably mounted on the
14 substrate, and the mounting-cover has

15 a top surface;

16 a bottom surface; and

17 at least one mounting-hole formed through the top surface and
18 the bottom surface of the mounting-cover and aligning with the at least one
19 receiving-hole of the substrate to receive a protrusion-head of a hand tool;

20 multiple inserting-tubes formed on and protruding
21 downwardly from the bottom surface of the mounting-cover at spaced intervals,
22 and respectively mounted into the assembling-holes of the substrate when the
23 bottom surface of the mounting-cover abuts the top surface of the substrate;

24 multiple washers respectively mounted around the

1 inserting-tubes that extend through the substrate; and
2 multiple fasteners respectively connected to the
3 inserting-tubes and pressed against the washers to mount the mounting-cover
4 securely on the substrate.

5 4. The composite tool holder as claimed in claim 3, wherein
6 each one of the at least one holding-component is formed on the top
7 surface of the mounting-cover and has

8 a combining-portion formed on the top surface of the
9 mounting-cover and having a top surface; and

10 a holding-portion being U-shaped, integrally formed on the top
11 surface of the combining-portion and disposed above the mounting-cover, and
12 having

13 two free ends; and

14 two holding-protrusions respectively formed on the
15 free ends of the holding-portion;

16 the base has two enclosed-tracks, one of the enclosed-tracks is formed
17 downwardly on the bottom surface of the substrate along one of the elongated
18 sides that is opposite to the first-track and communicates with some of the
19 assembling-holes, and the other one of the enclosed-tracks is formed
20 downwardly on the bottom surface of the first-track around the second-track;

21 each one of the enclosed-tracks has

22 a bottom surface;

23 a lower-opening formed through the bottom surface of the
24 enclosed-track; and

1 an enclosed-slot formed in the enclosed-track and
2 communicating with the lower-opening;

3 the bracket set has multiple fixing-plates, and each one of the
4 fixing-plates is disposed in one of the enclosed-tracks and near an end of the
5 substrate or an end of the first-track and has a fixing-hole formed through the
6 fixing-plate and communicating with the lower-opening of a corresponding
7 enclosed-track; and

8 each one of the supporting-bases has

9 an enclosed-plate disposed longitudinally and abutting one of
10 the two sides of the base to enclose the first-track, the second-track, and the
11 enclosed-tracks;

12 an extending-plate transversally formed on and protruding
13 from the enclosed-plate and abutting the enclosed-tracks under the base, and
14 having two through-holes formed through the extending-plate at a spaced
15 interval; and

16 two fixing-components respectively mounted through the
17 through-holes and respectively connected to the fixing-holes of the fixing-plates
18 that are mounted at a same side of the base.

19 5. The composite tool holder as claimed in claim 3, wherein

20 each one of the supporting-bases has a supporting-plate transversally
21 formed on a top of the enclosed-plate and aligning to the substrate;

22 each one of the engaging recesses of the positioning-plate is curved;

23 the engaging element of the engaging-portion of each one of the
24 positioning-blocks is an engaging ring, and a part of the engaging ring engages in

1 one of the engaging recesses and the remaining part of the engaging ring presses
2 against the top surface of the abutting-portion;
3 the engaging-portion of each one of the positioning-blocks is a circular
4 plate rotatable relative to the first-track;
5 the inserting-portion of each one of the positioning-blocks has
6 an outer surface; and
7 a constraining-protrusion deposited on the outer surface of the
8 inserting-portion; and
9 the composite tool holder further has
10 an auxiliary first-track detachably connected to one of the
11 elongated sides of the substrate by a hooking structure between the substrate and
12 the auxiliary first-track, and being opposite to the first-track;
13 an auxiliary second-track formed on the auxiliary first-track;
14 and
15 an auxiliary socket set connected to the auxiliary first-track
16 and the auxiliary second-track, and having
17 a positioning-plate mounted in the auxiliary
18 second-track, and having
19 an abutting-portion having a top surface;
20 and
21 multiple engaging recesses being elongated
22 and formed in the top surface of the abutting-portion at spaced intervals; and
23 multiple positioning-blocks un-rotatably and
24 slidably mounted in the auxiliary first-track and abutting the positioning-plate,

1 and each one of the positioning-blocks having

2 an engaging-portion being rectangular,
3 mounted in the auxiliary first-track, and abutting the abutting-portion of the
4 positioning-plate; and

5 an inserting-portion being an elongated
6 engaging rib, and selectively engaging with one of the engaging recesses of the
7 positioning-plate to hold the positioning-block securely on the positioning-plate;

8 wherein the first-track and the auxiliary first-track are respectively
9 connected to the two elongated sides of the substrate;

10 the base has two enclosed-tracks respectively formed downwardly on
11 the first-track and the auxiliary first-track respectively around the second-track
12 and the auxiliary second-track; and

13 a length of each one of the supporting-bases is long enough to enclose
14 the first-track, the auxiliary first-track, the second-track, the auxiliary
15 second-track, and the enclosed-tracks.

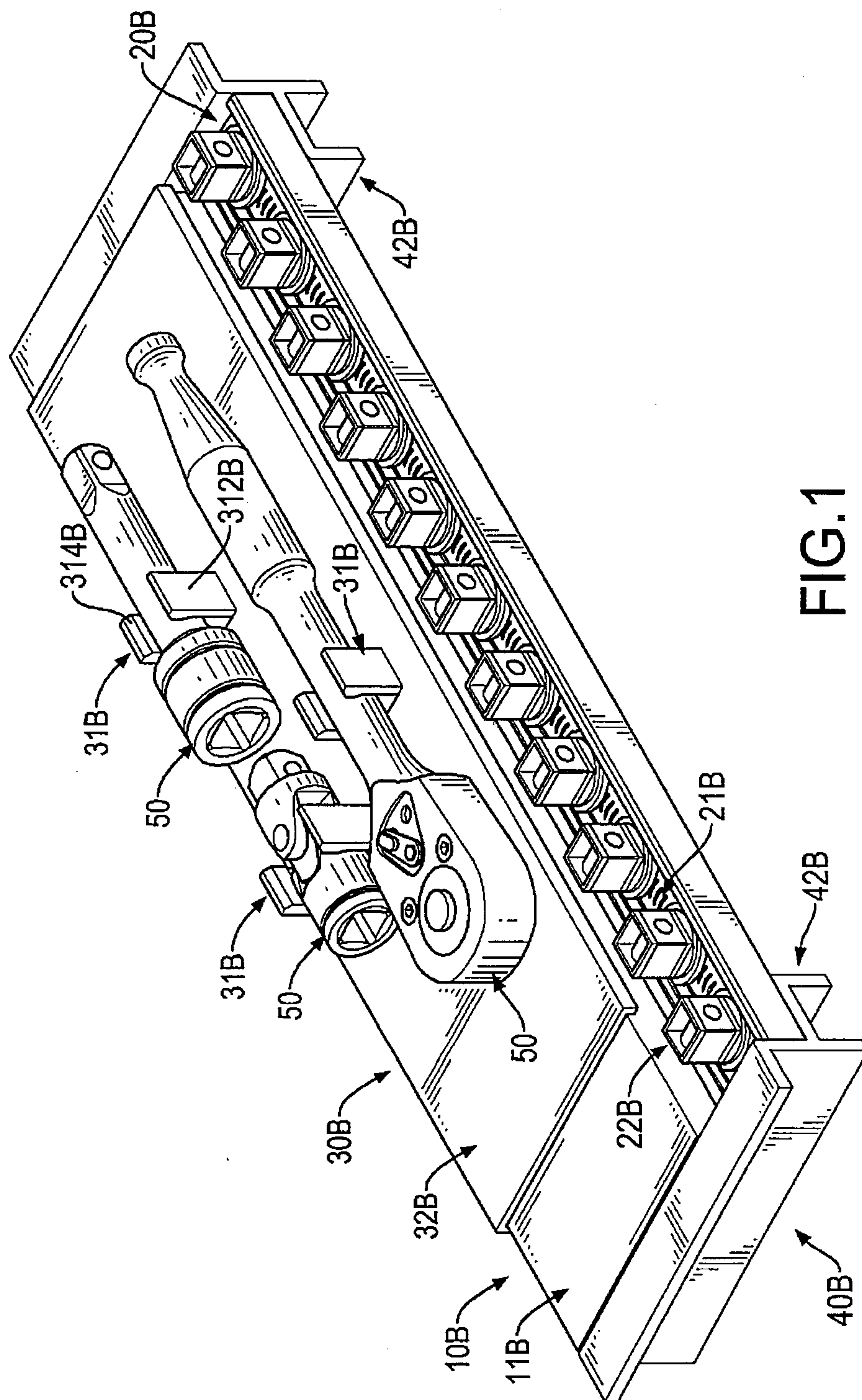


FIG.1

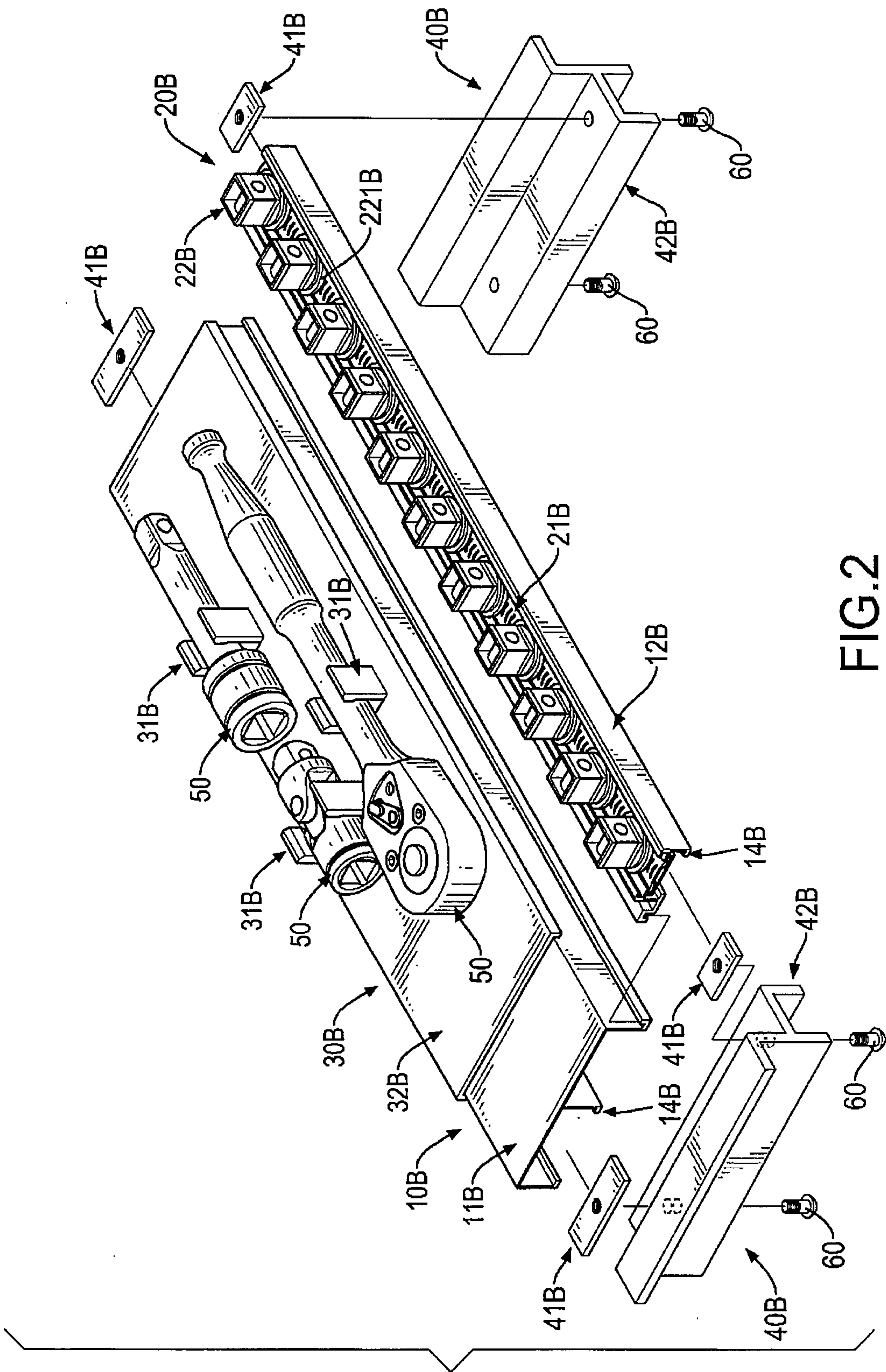


FIG.2

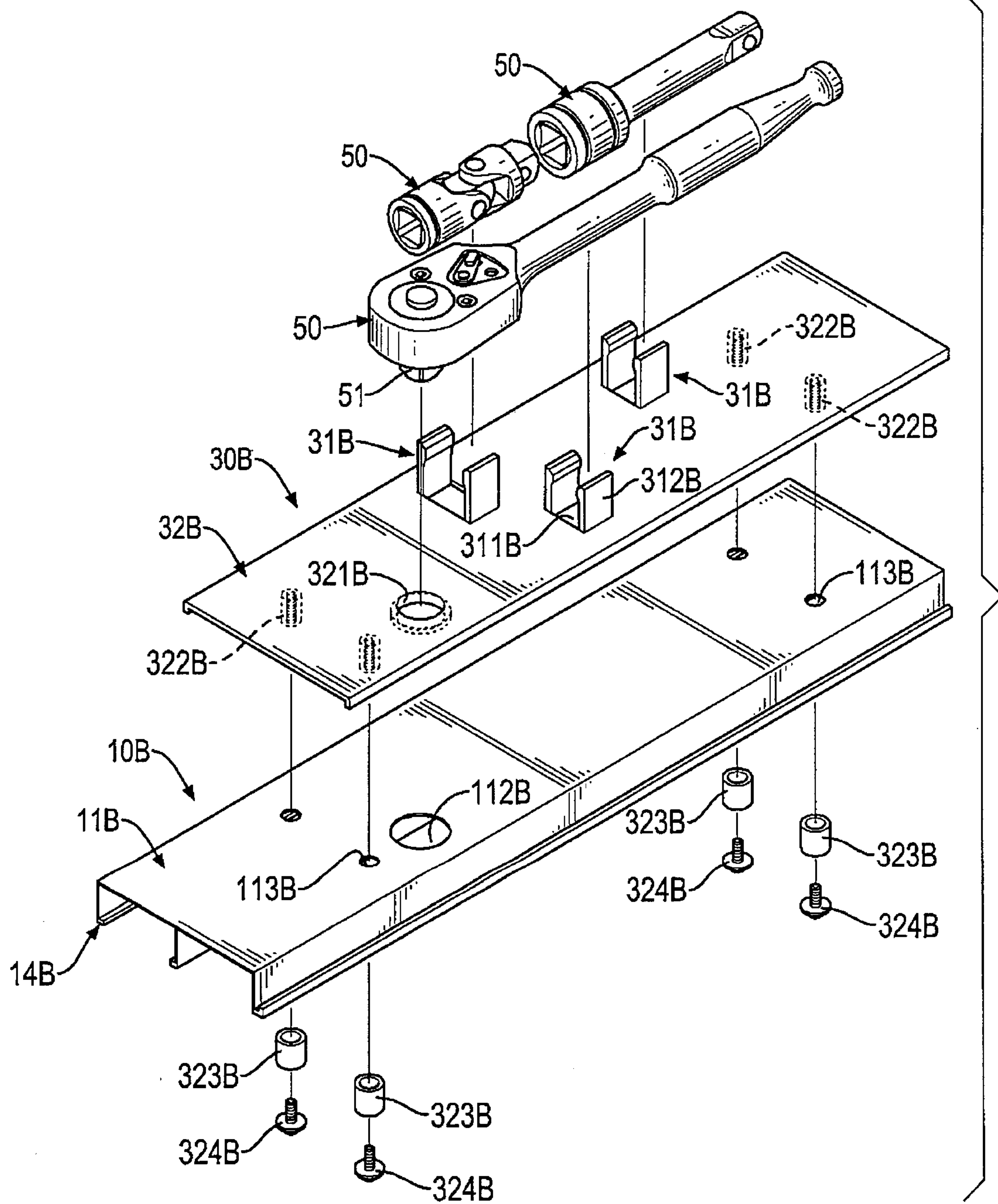


FIG.3

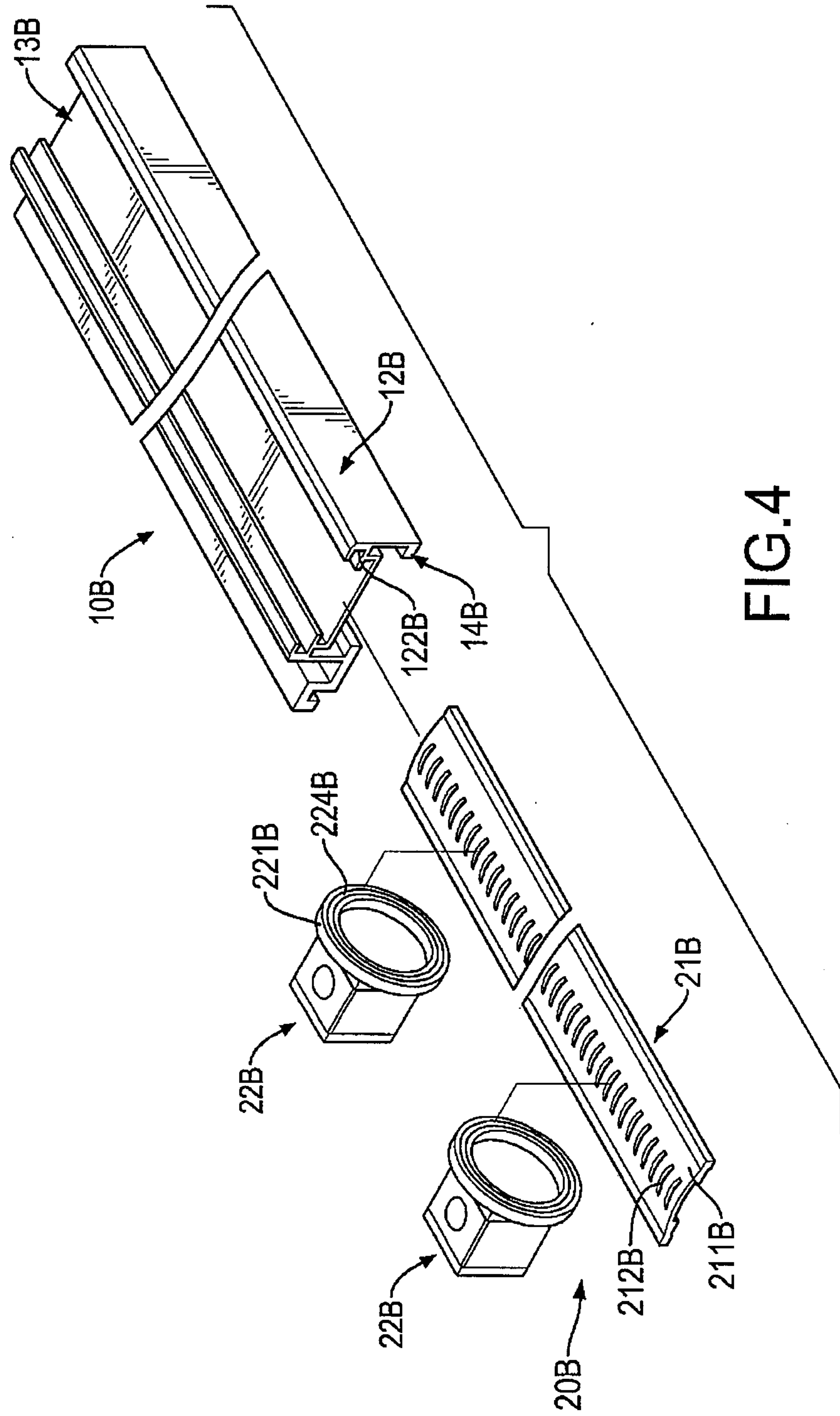


FIG. 4

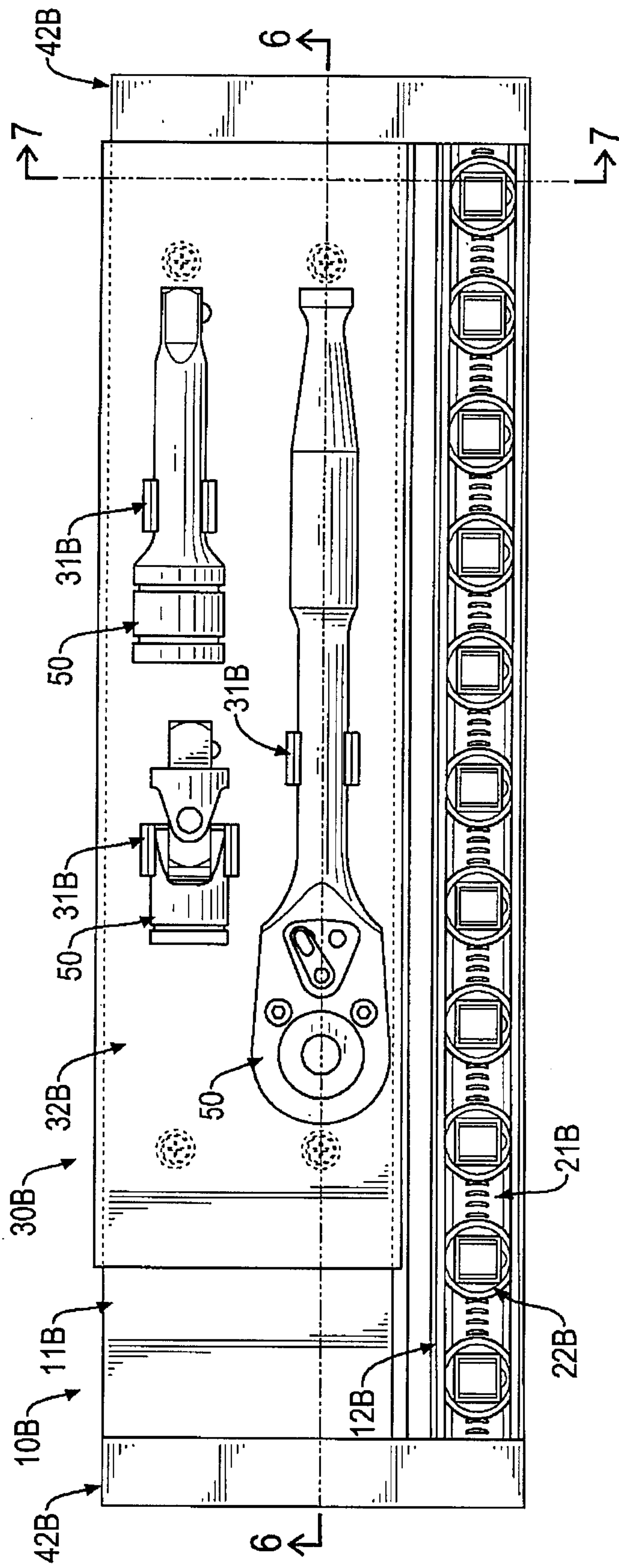


FIG. 5

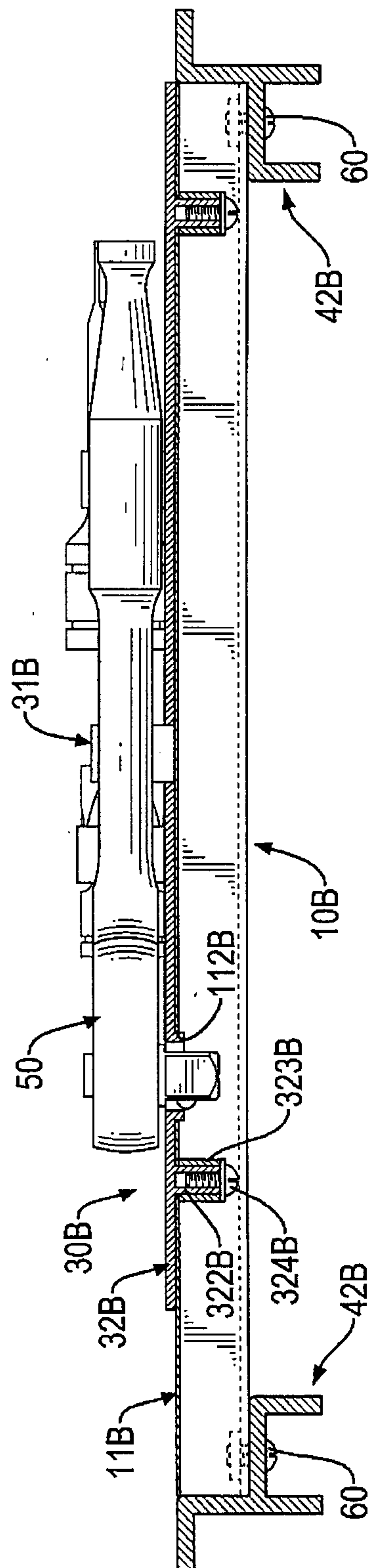


FIG.6

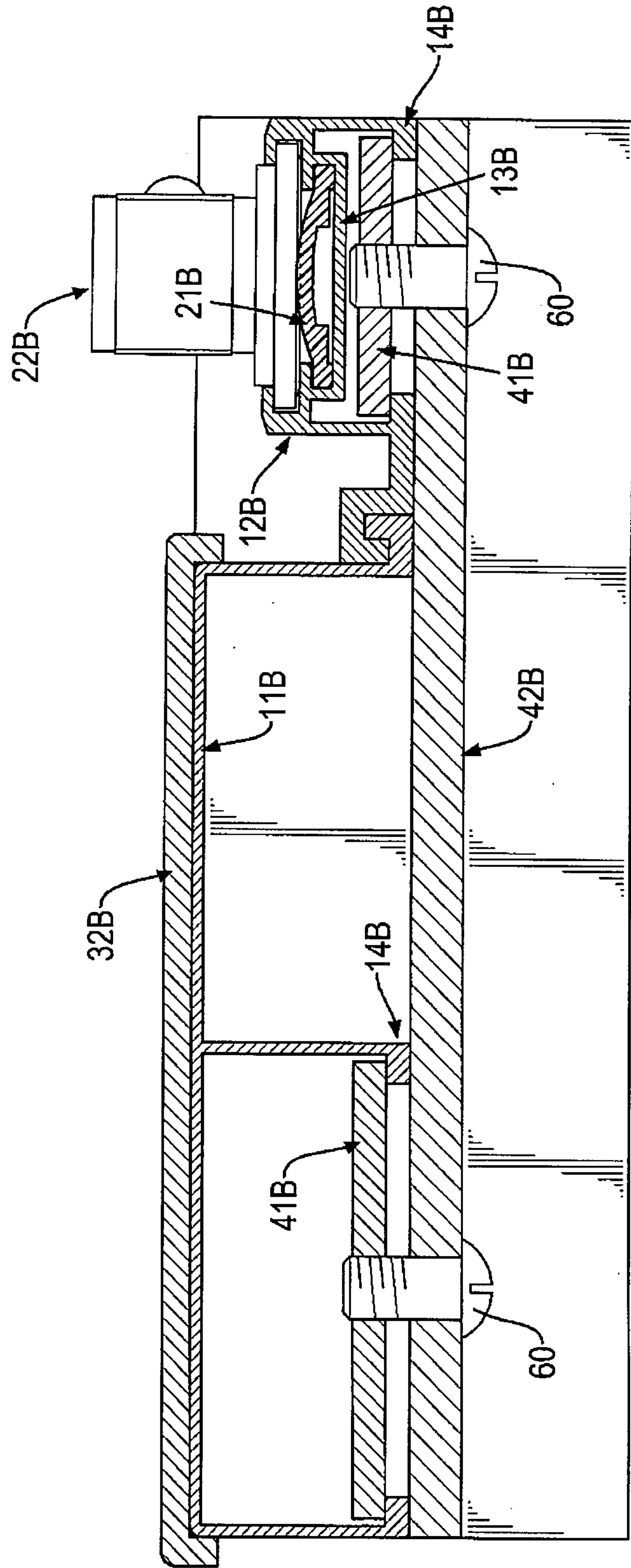


FIG.7

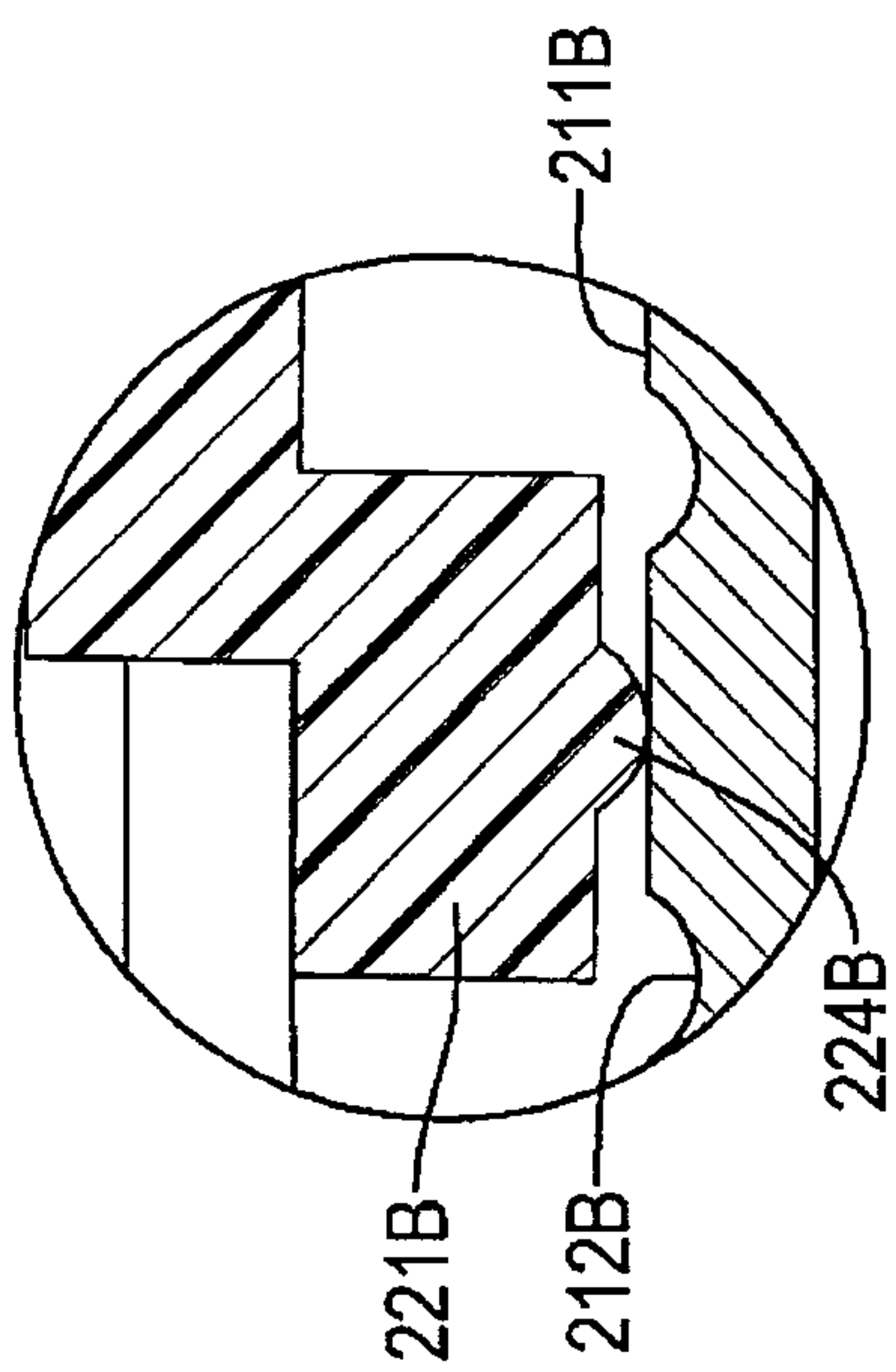


FIG. 8A

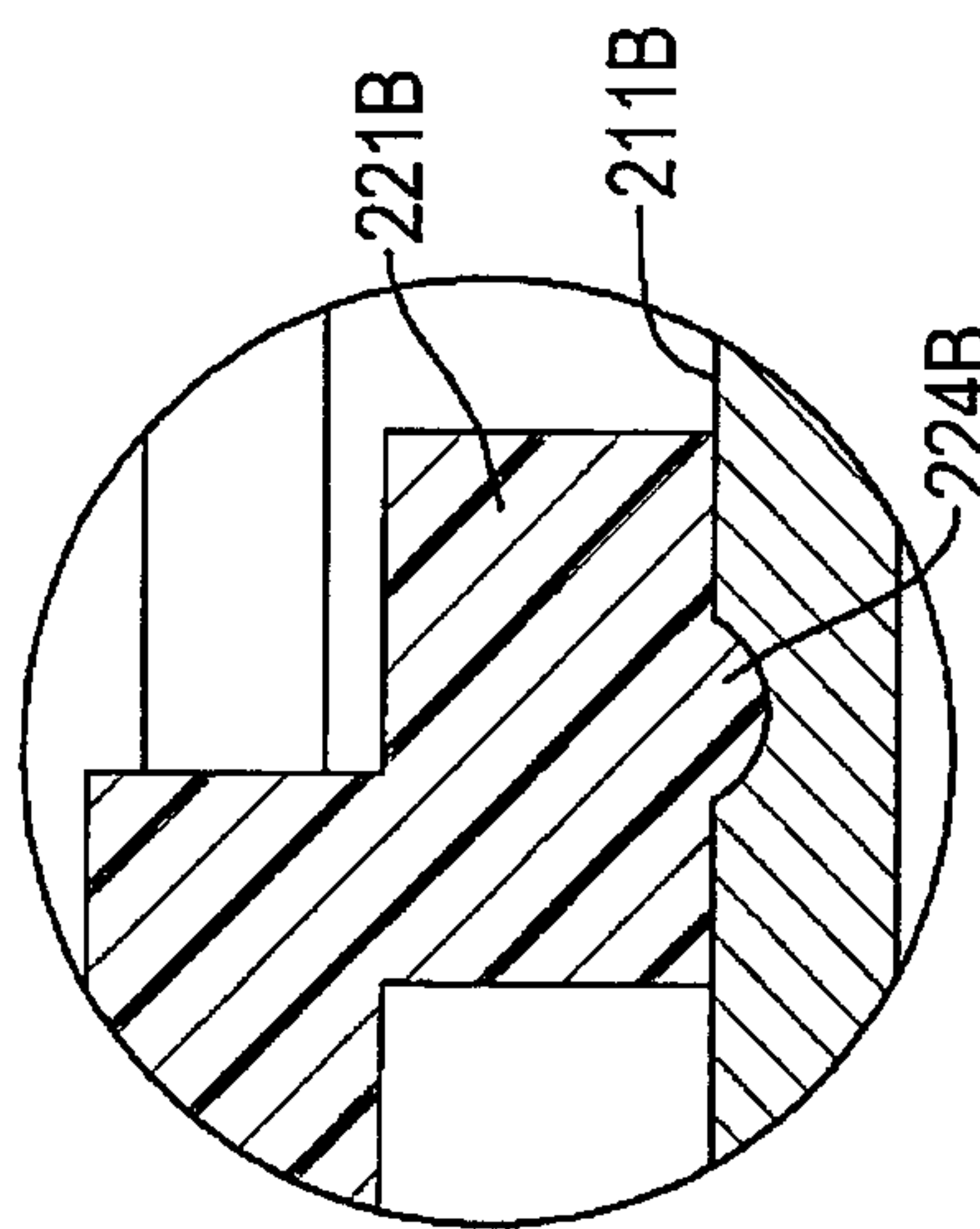


FIG. 8B

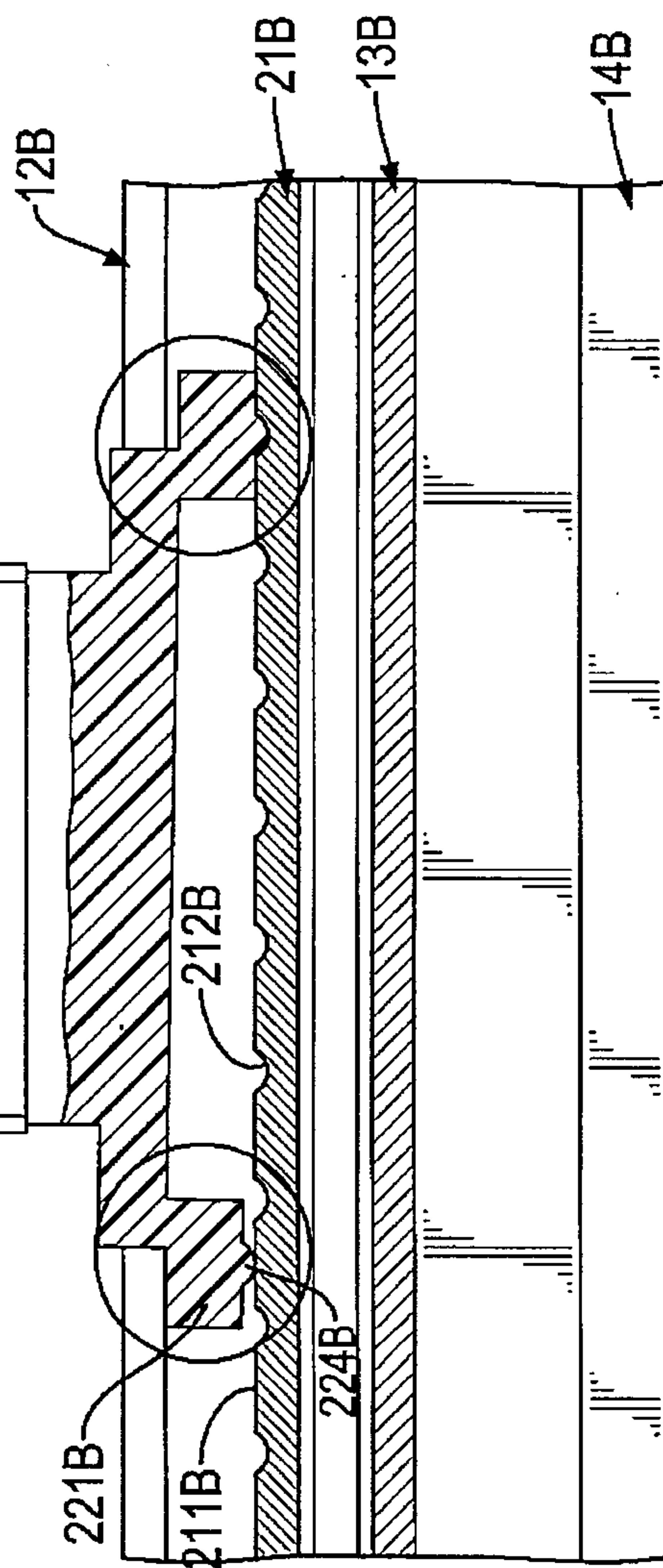
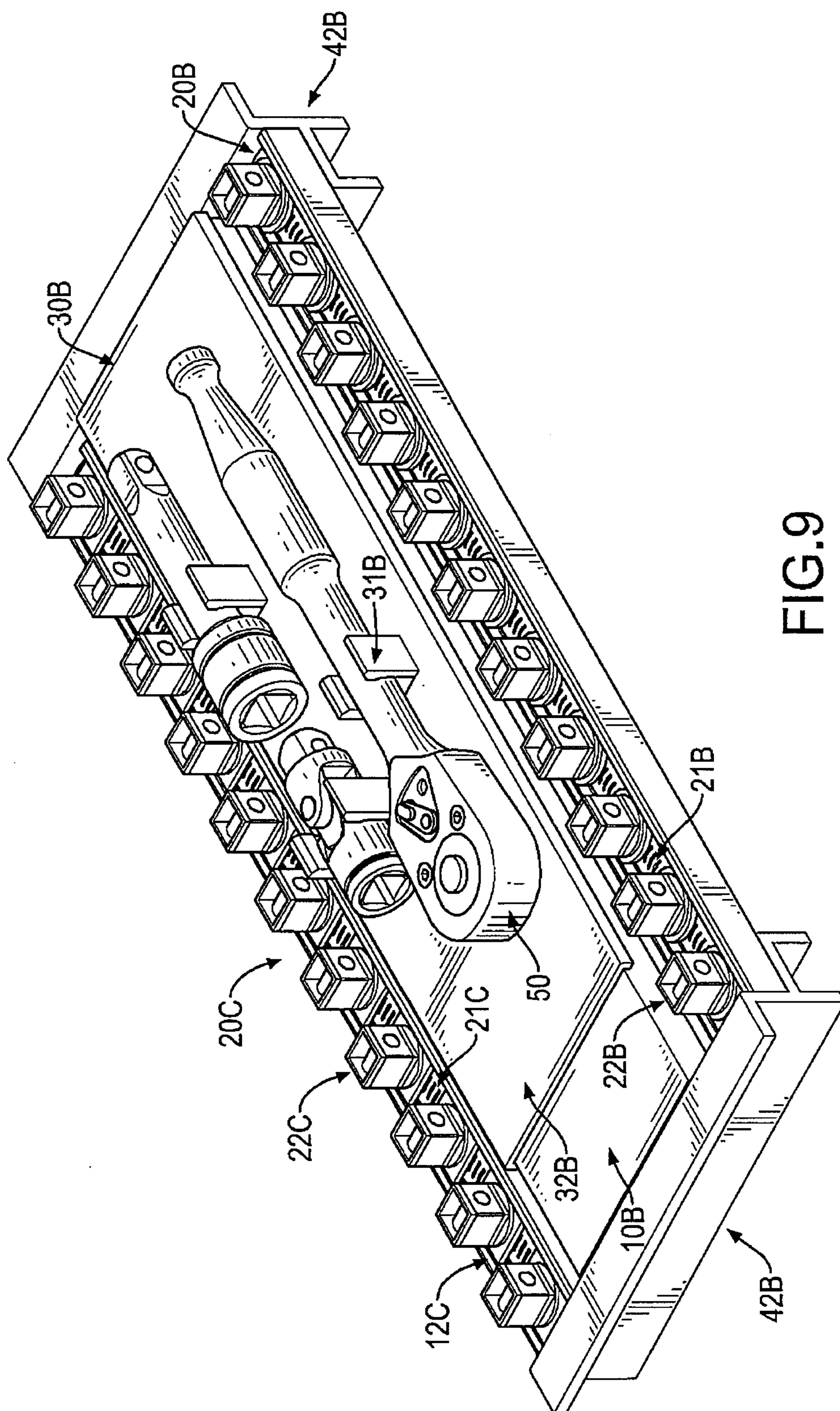
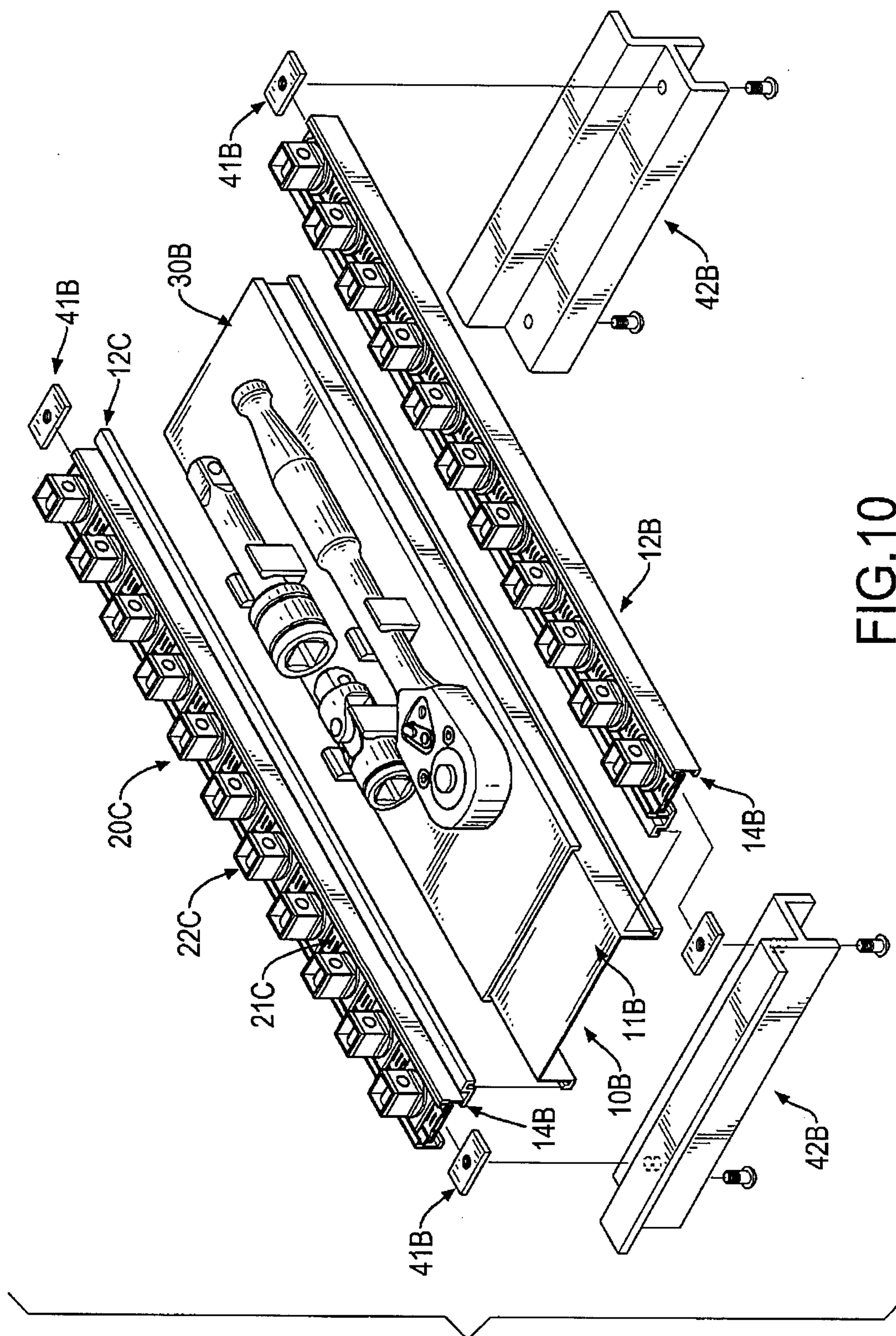
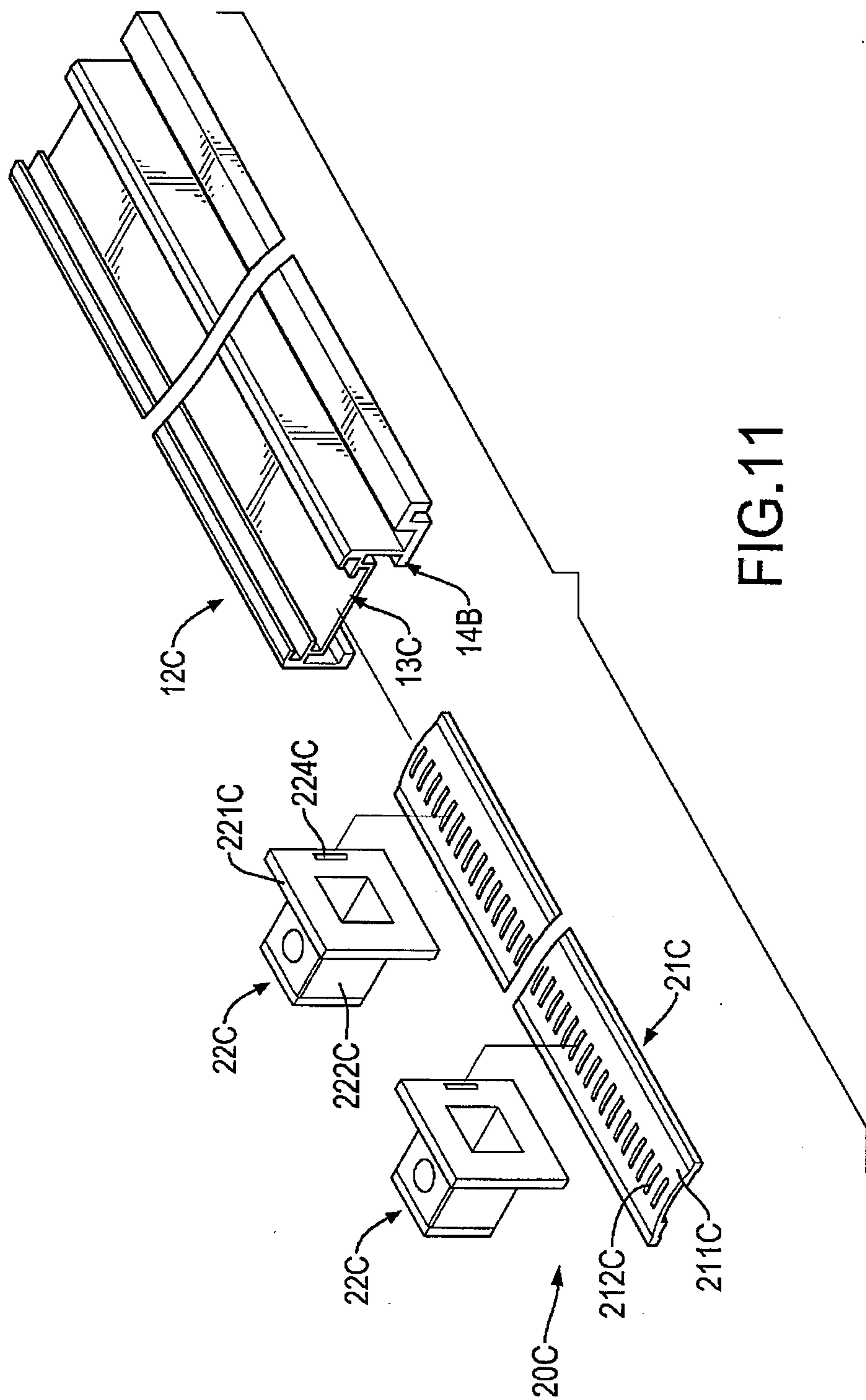
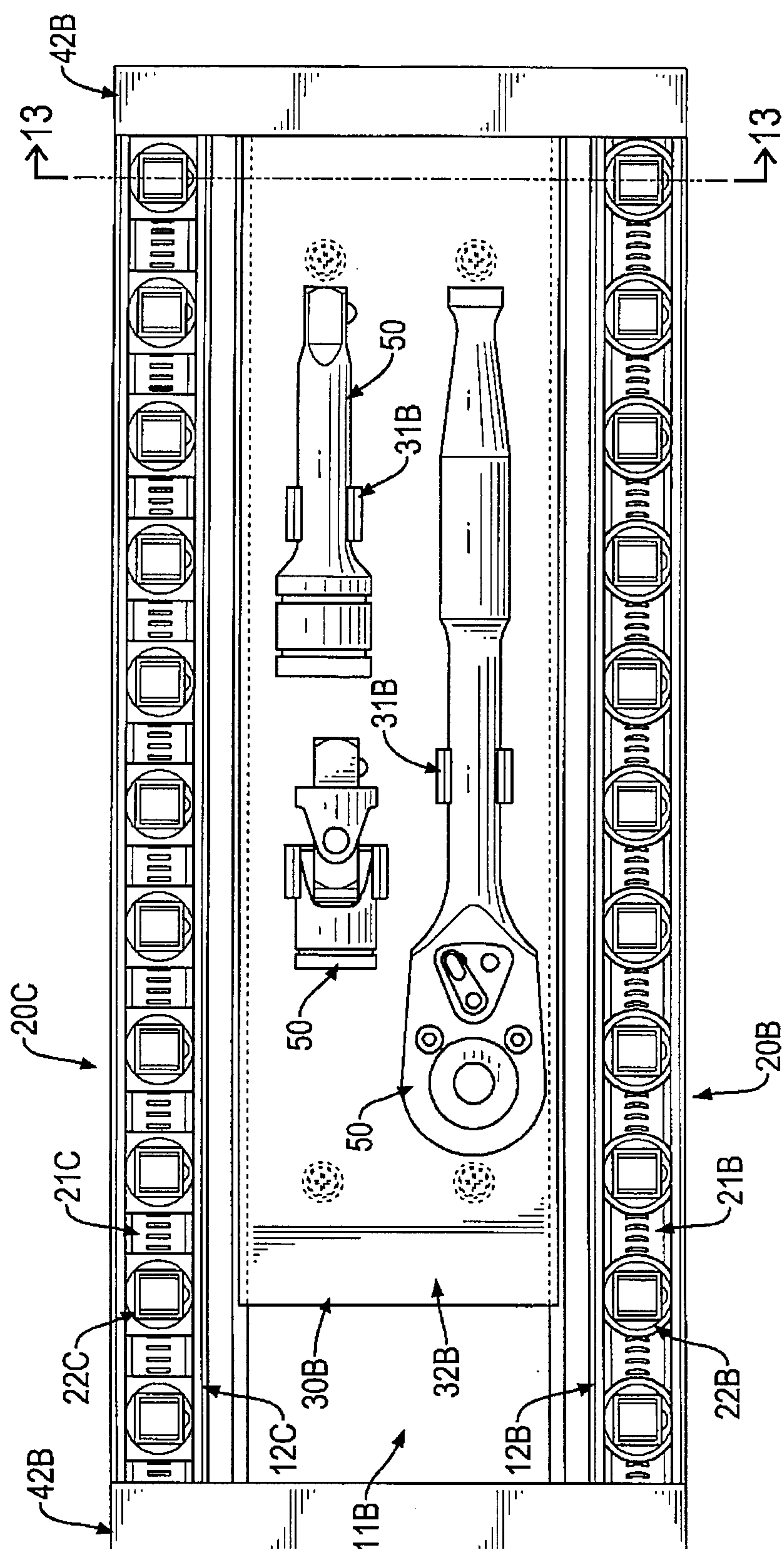


FIG. 8









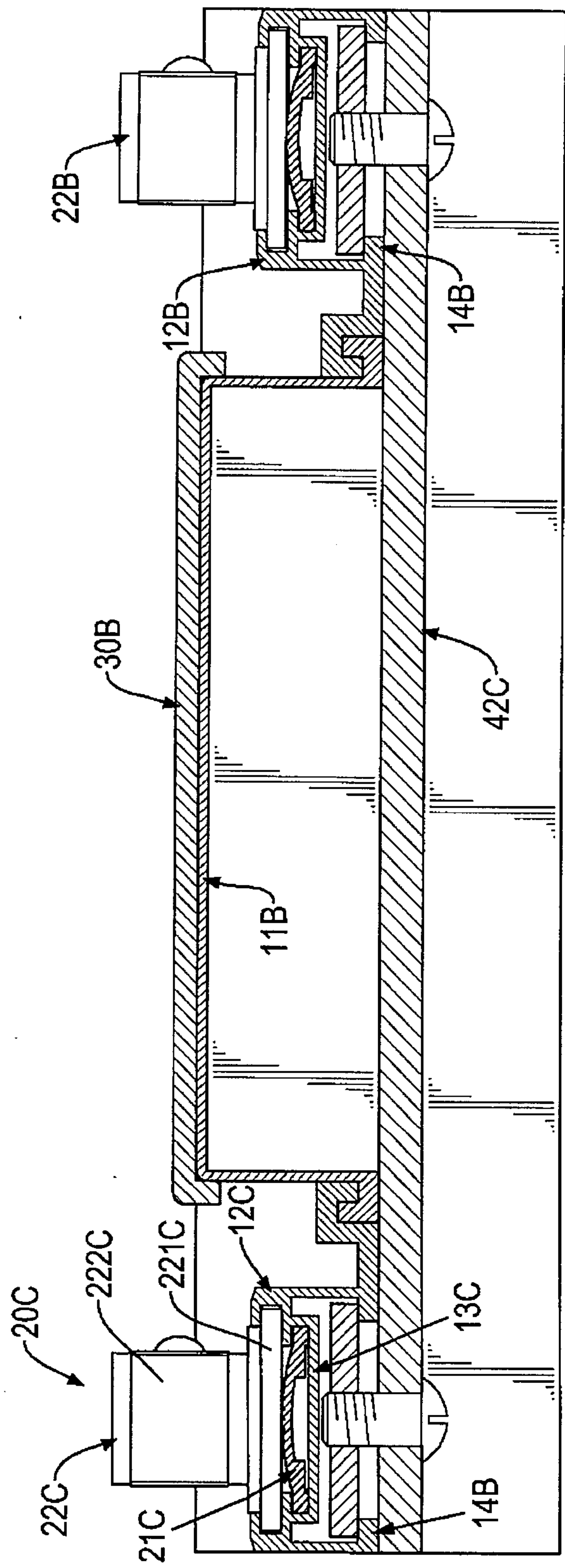


FIG.13

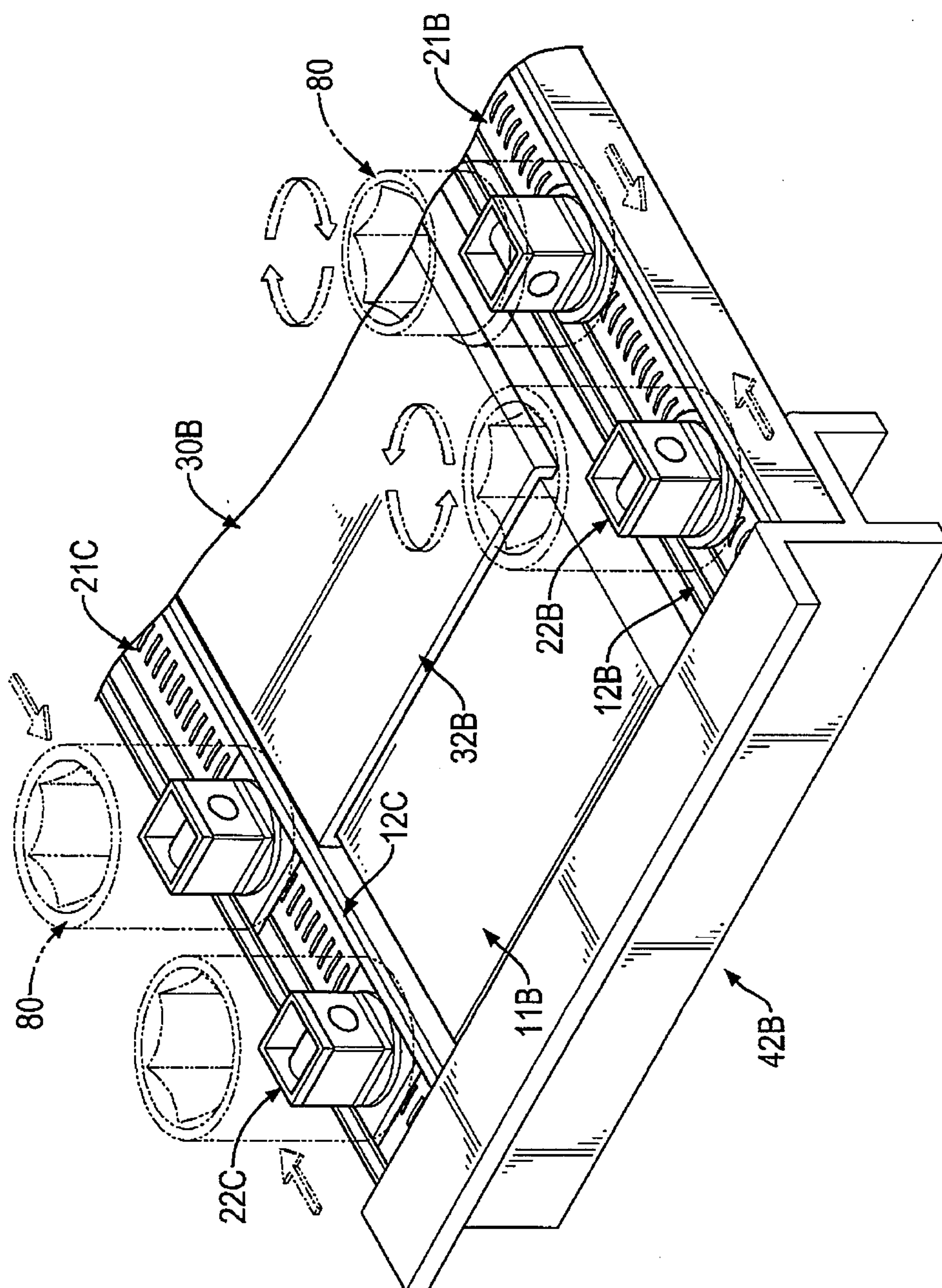


FIG.14

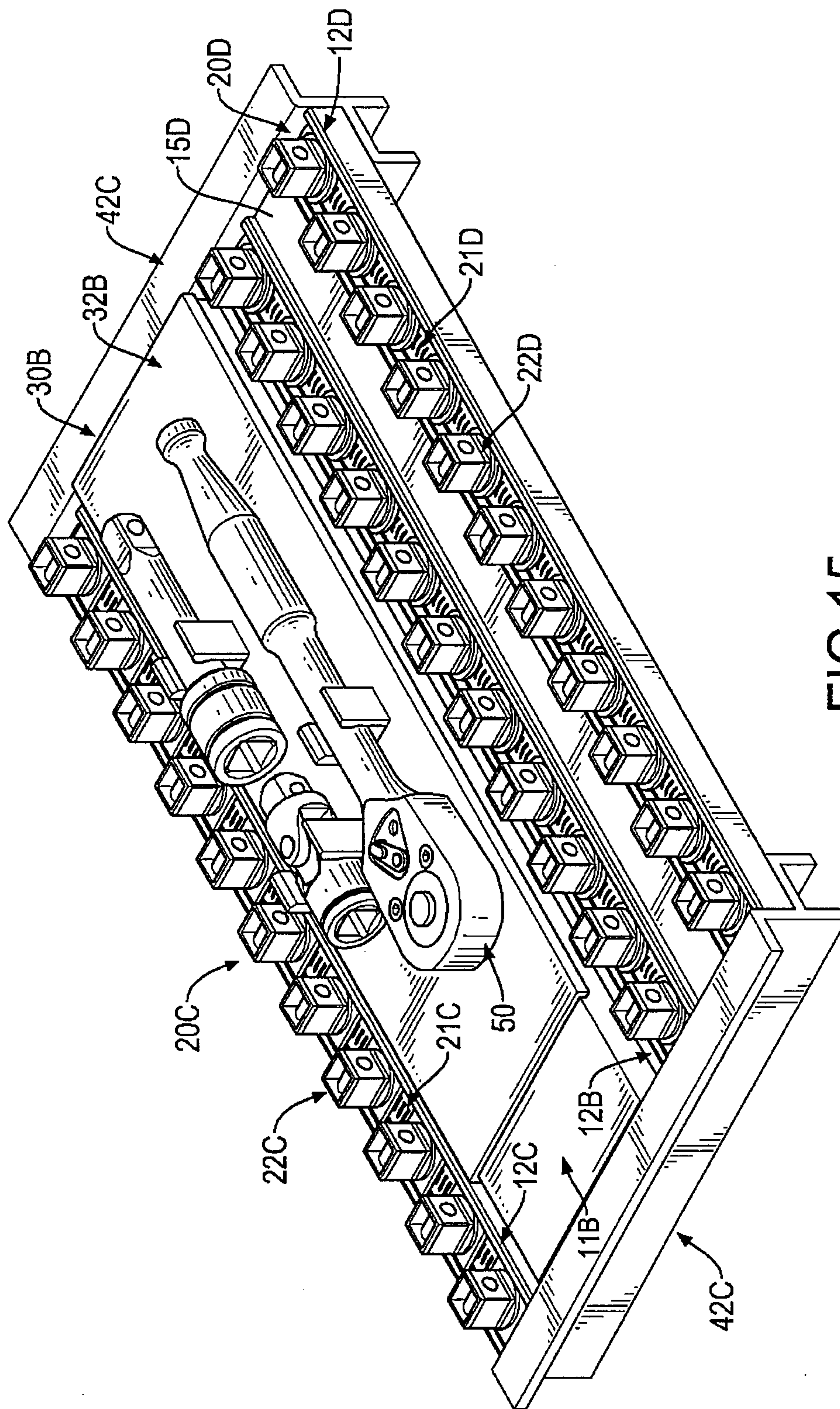


FIG.15

