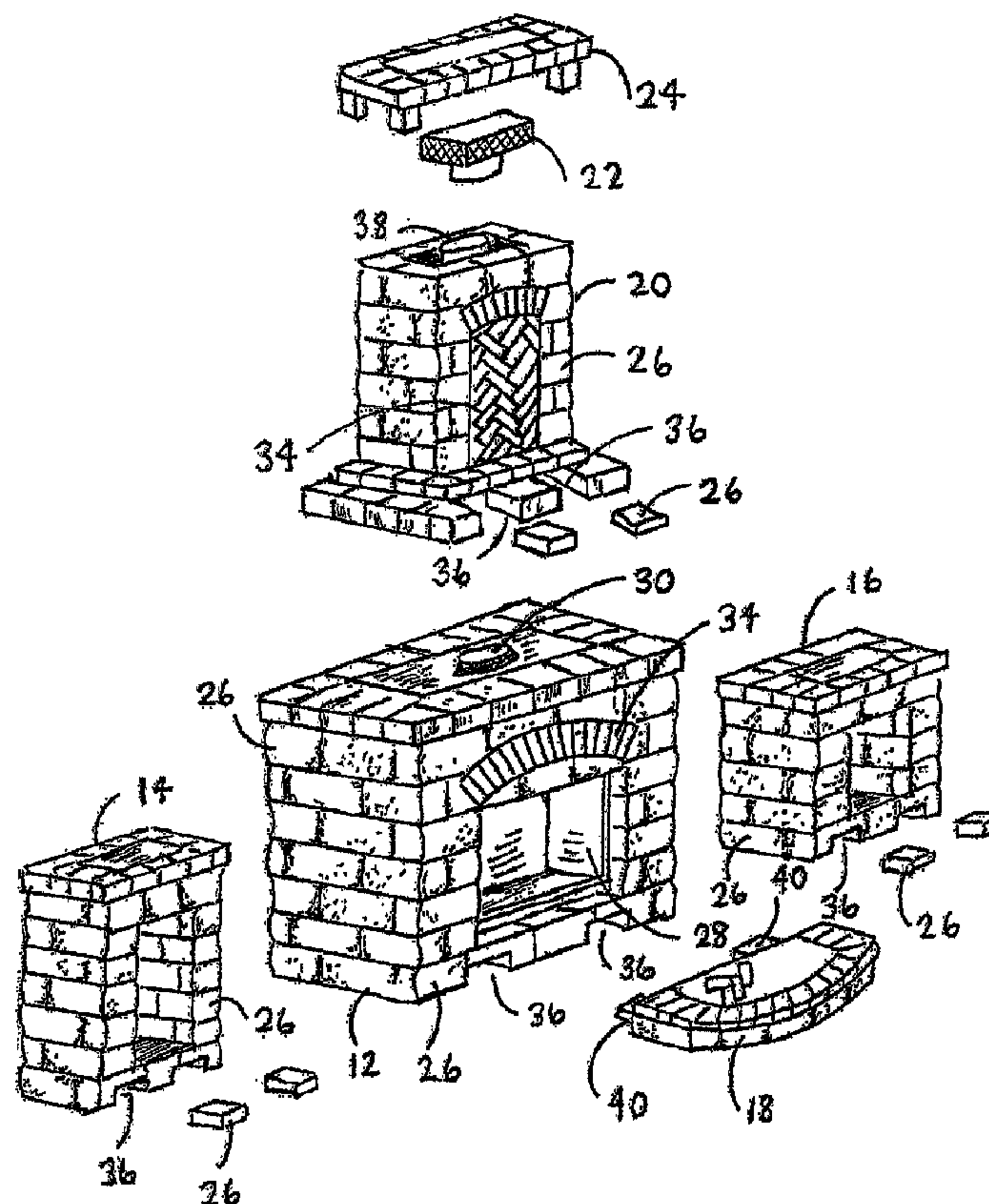




(86) Date de dépôt PCT/PCT Filing Date: 2008/04/18
(87) Date publication PCT/PCT Publication Date: 2008/10/30
(45) Date de délivrance/Issue Date: 2012/04/10
(85) Entrée phase nationale/National Entry: 2008/12/17
(86) N° demande PCT/PCT Application No.: US 2008/060788
(87) N° publication PCT/PCT Publication No.: 2008/131200
(30) Priorité/Priority: 2007/04/19 (US11/737,208)

(51) Cl.Int./Int.Cl. *E04B 1/343* (2006.01)
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(54) Titre : STRUCTURES D'EXTERIEUR MODULAIRES DE BRIQUES OU DE PARPAINGS
(54) Title: MODULAR BRICK OR BLOCK OUTDOOR STRUCTURES



(57) Abrégé/Abstract:

A modular brick or block outdoor structure includes an outdoor structure that is constructed in modular sections. Each modular section is fabricated from a plurality of paving bricks or retaining wall blocks that match the brick or block used to construct the

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

patio. The bricks or blocks are preferably assembled to each other with adhesive. Each modular section includes means for transporting thereof with some type of equipment, if necessary. It is preferable that each modular section include channels to receive lifting forks of an end loader or other suitable transport device, if necessary. However, other methods of transporting the modular section may also be used.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



PCT



(43) International Publication Date
30 October 2008 (30.10.2008)

(10) International Publication Number
WO 2008/131200 A1

(51) International Patent Classification:

***E04B 1/343* (2006.01)**

(21) International Application Number:

PCT/US2008/060788

(22) International Filing Date: 18 April 2008 (18.04.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/737,208	19 April 2007 (19.04.2007)	US
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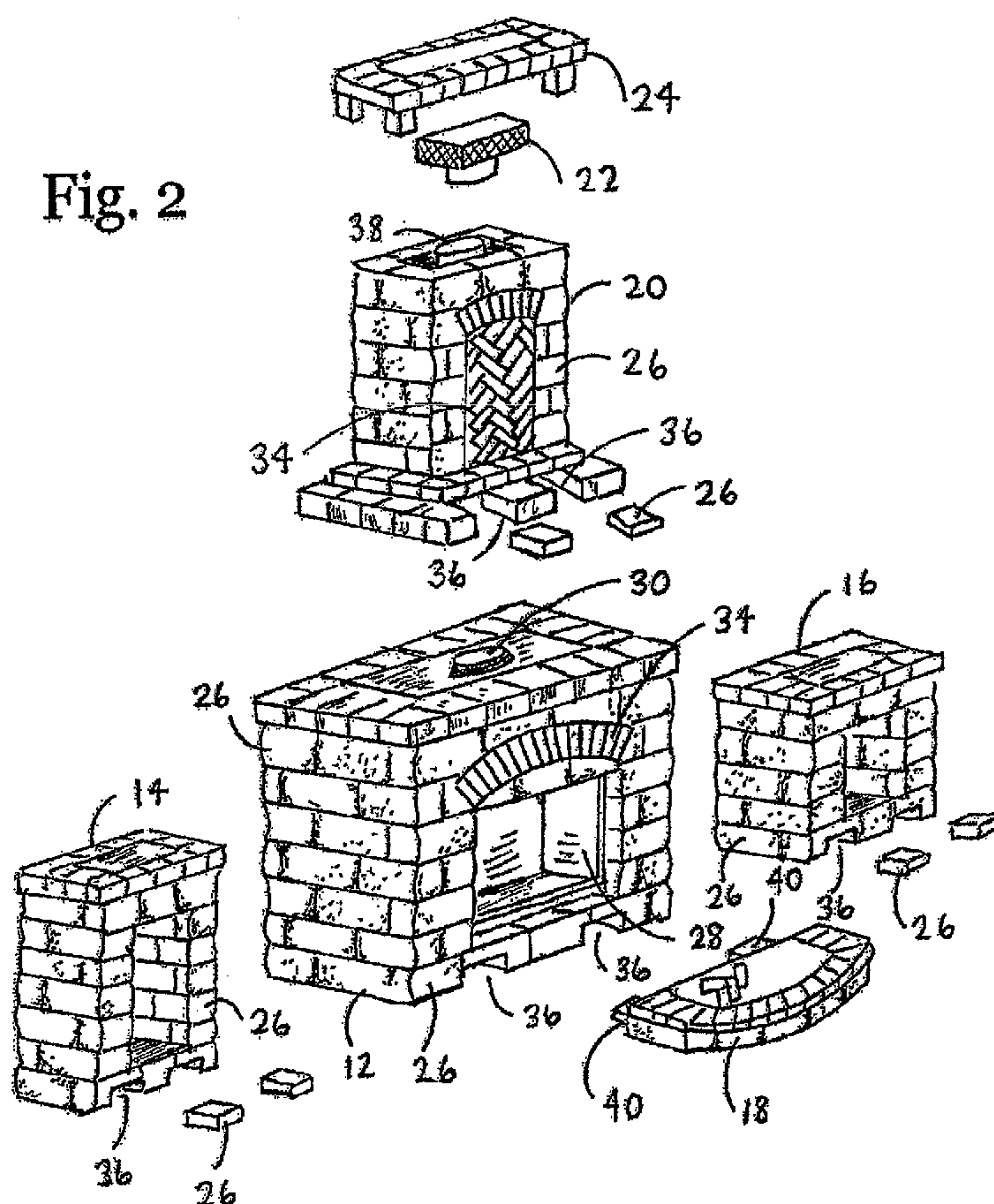
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MODULAR BRICK OR BLOCK OUTDOOR STRUCTURES



(57) Abstract: A modular brick or block outdoor structure includes an outdoor structure that is constructed in modular sections. Each modular section is fabricated from a plurality of paving bricks or retaining wall blocks that match the brick or block used to construct the patio. The bricks or blocks are preferably assembled to each other with adhesive. Each modular section includes means for transporting thereof with some type of equipment, if necessary. It is preferable that each modular section include channels to receive lifting forks of an end loader or other suitable transport device, if necessary. However, other methods of transporting the modular section may also be used.

WO 2008/131200 A1



Declarations under Rule 4.17:

- *as to the identity of the inventor (Rule 4.17(i))*
- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- *of inventorship (Rule 4.17(iv))*

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

PATENT COOPERATION TREATY APPLICATION

SPECIFICATION

MODULAR BRICK OR BLOCK OUTDOOR STRUCTURES

This application claims the benefit and priority of United States Utility Patent Application No. 11/737,208 filed April 19, 2007.

FIELD OF THE INVENTION

[0001] The present invention relates generally to patio accessories and more specifically to a modular brick or block outdoor structure, which is pre-constructed at one site and installed at a second site using laborers with minimal labor skills.

BACKGROUND OF THE INVENTION

[0002] Patio installers usually employ laborers with minimal labor skills. The laborers are not capable of doing masonry work to construct fire places, fire pits and kitchens out of stone or masonry block. Further, building fire places, fire pits and kitchens on a patio from single blocks or bricks is very costly and time consuming. Finally, most outdoor structures are constructed of materials that do not match the paving brick or retaining wall block used to construct a patio.

[0003] U.S. Patent No. 4,996,973 to Sigvardsson discloses a stove well as a method and a device for manufacturing and mounting fire-places. The Sigvardsson patent includes a method for manufacture and mounting of fireplaces, e.g. stoves, a lower and an upper half of the fire-place manufactured separately and transported to the mounting place.

[0004] Patent Application Publication No. US2004/0065313 by Thompson discloses a modular outdoor kitchen. The Thompson patent application includes a modular outdoor kitchen comprising a plurality of

weather-resistant outdoor kitchen modules. Each module comprises a frame having a plurality of outer faces. A plurality of weather-resistant facia panels are provided on at least a portion of the pluralities of outer faces of the frames.

[0005] U.S. Patent No. 7,140,364 by Buffington discloses a prefabricated modular lightweight fireplace. The Buffington patent discloses a firebox that is pre-cast in modular sections of lightweight vermiculate concrete.

[0006] Accordingly, there is a clearly felt need in the art for a modular brick or block outdoor structure, which is preconstructed at one site and installed at a second site using laborers with minimal labor skills and which reduces the cost of constructing an outdoor structure at the second site from single bricks or blocks.

SUMMARY OF THE INVENTION

[0007] The present invention provides a modular brick or block outdoor structure, which reduces the cost of constructing an outdoor structure at a second site from single bricks or blocks. The modular brick or block outdoor structure includes an outdoor structure that is constructed in modular sections. Each modular section is fabricated from a plurality of paving bricks or retaining wall blocks that match the brick or block used to construct the patio. The plurality of bricks or blocks are preferably assembled to each other with adhesive. Each modular section includes means for transporting thereof with some type of equipment. It is preferable that each modular section include channels to receive lifting forks of an end loader or any other suitable transport device. However, other methods of transporting the modular section may also be used.

[0008] Accordingly, it is an object of the present invention to provide a modular brick or block outdoor structure, which is preconstructed at one site and installed at a second site using laborers with minimal labor skills.

[0009] It is a further object of the present invention to provide a modular brick or block outdoor structure, which reduces the cost of constructing an outdoor structure at a second site from single bricks or blocks.

[0010] Finally, it is another object of the present invention to provide a modular brick or block outdoor structure, which includes paving brick or retaining wall block that matches the paving brick or retaining wall block of the patio that thereof is installed on.

[0011] These and additional objects, advantages, features and benefits of the present invention will become apparent from the following specification.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Figure 1 is a perspective view of a modular brick or block outdoor fireplace in accordance with the present invention.

[0013] Figure 2 is an exploded perspective view of a modular brick or block outdoor fireplace in accordance with the present invention.

[0014] Figure 3 is a perspective view of a modular brick or block outdoor kitchen in accordance with the present invention.

[0015] Figure 4 is a perspective view of a refrigerator or dishwasher retained in a base unit of a modular brick or block outdoor kitchen in accordance with the present invention.

[0016] Figure 5 is a perspective view of a plurality of brick or block being assembled to create an outdoor structure with a channel to receive a lifting fork in accordance with the present invention.

[0017] Figure 6a is a perspective view of a base of an outdoor structure fabricated with a pallet in accordance with the present invention.

[0018] Figure 6b is a perspective view of a base of an outdoor structure fabricated with pre-cast concrete plates and brick or block in accordance with the present invention.

[0019] Figure 7 is an exploded perspective view of an outdoor fire pit in accordance with the present invention.

[0020] Figure 8 is a perspective view of an outdoor pillar in accordance with the present invention.

[0021] Figure 9 is a perspective view of a pair of eye bolts used to lift a modular section of a fire place in accordance with the present invention.

[0022] Figure 10 is a perspective view of a friction lift unit for lifting a modular section of a fire place in accordance with the present invention.

[0023] Figure 11 is a perspective view of a modular brick or block wall corner connector and end pillar in accordance with the present invention.

[0024] Figure 12 is a perspective view of a modular brick or block curved wall corner connector in accordance with the present invention.

[0025] Figure 13 is a perspective view of a modular brick or block wall section in accordance with the present invention.

[0026] Figure 14 is a perspective view of a brick or block planter in accordance with the present invention.

[0027] Figure 15 is a perspective view of a patio having numerous modular brick or block outdoor structures in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0028] With reference now to the drawings, and particularly to figure 1, there is shown a perspective view of a modular brick or block outdoor

fireplace (outdoor fireplace) 10. With reference to figure 2, the outdoor fireplace 10 preferably includes a base fireplace section 12, a first wood storage box 14, a second wood storage box 16, a hearth section 18, a chimney section 20, a termination flue cap 22 and a decorative cap 24. The base fireplace section 12 includes a plurality of brick or block 26, a fire box 28 and a flue flange 30. The brick or block 26 is either paving brick or retaining wall block that matches the brick or block used to construct a patio, where the fireplace 10 is placed.

[0029] With reference to figure 5, the brick or block 26 is secured to each other with adhesive 32, but other types of adhesive 32 may also be used. Other types of brick 34 may also be used to create a modular section besides the brick or block 26. Two channels 36 are created in a bottom of the base fireplace section 12 by assembly of the brick or block 26 in a particular pattern. The channel 36 is sized to slidably receive a lift fork 100. The lift fork 100 of an end loader or the like is used to transfer the modular section from a truck to a patio.

[0030] When the modular section is set in-place; a single brick or block 26 with adhesive 32 is applied thereto and inserted into the channel 36 to cosmetically remove the channel 36. The brick or block 26 is assembled around the fire box 28 to create the outdoor fireplace 10 preferably by a manufacturer at a first site and shipped to a second site, such as a patio. Fire boxes are well known in the art and need not be explained in detail. The flue flange 30 extends above the fire box 28 to receive the flue pipe 38. The flue flange 30 receives the exhaust of the fire box 28.

[0031] The first and second wood storage boxes include a plurality of brick or block 26 assembled with adhesive 32. Two channels 36 are formed in a bottom of the first and second wood storage boxes to receive two lift

forks 100. A hearth section 18 includes a plurality of brick or block 26 assembled with adhesive 32. Two channel projections 40 extend from a rear of the hearth section 18. The two channel projections 40 are sized to be received by the two channels 36 in the fireplace base section 12. The hearth section 18 may be moved by a couple of laborers. The chimney section 20 includes a plurality of brick or block 26 assembled with adhesive 32. Two channels 36 are formed on a bottom of the chimney section 20. The flue pipe 38 extends through a center of the chimney section 20. A termination flue cap 22 is secured to an end of the flue pipe 38. The decorative cap 24 includes either brick or block 26 or other types of brick 34, which area assembled with adhesive 32. The decorative cap 24 may be moved by one or two laborers.

[0032] With reference to figure 3, a modular brick or block outdoor kitchen (outdoor kitchen) 42 includes at least one base unit 44. A first base unit 44 would be placed adjacent to one side of a corner unit 46 and a second base unit 44 would be placed adjacent to a perpendicular side of the corner unit 46. Essentially, each base unit 44 includes a kitchen component and a plurality of brick or block 26 built around the kitchen component. The kitchen components include a grill 48, a refrigerator 50, a dishwasher 52, a cabinet 54, a burner 56, an audio speaker 58 and the like. A forty five degree corner unit 60 may also be used instead of the corner unit 46. However, other angles besides 45 and 90 may also be used.

[0033] A back splash 62 and/or lights 64 may be formed on a top of the base unit 44 and/or the corner unit 46, 60. Alternatively, a bar top 66 may be formed on a top of the base unit 44 and/or the corner unit 46, 60. The bar top 66 extends over at least one side of the base unit 44 and/or the

corner unit 46, 60. A foot rail 68 may be formed at a bottom of the base unit 44 and/or the corner unit 46, 60.

[0034] With reference to figure 4, the base unit 44 includes the refrigerator 50 or the dishwasher 52; a plurality of brick or block 26; the bar top 66; and the foot rail 68. The plurality of brick or block 26 is built around the refrigerator 50 or the dishwasher 52. Two channels 70 are formed in a bottom of the base unit 44 to receive two lift forks 100. A single brick 26 is inserted into each channel 70 to hide thereof for cosmetic purposes.

[0035] With reference to figure 6a, a bottom of a brick or block outdoor structure 72 may be created by building thereof on top of a pallet 74. The plurality of brick or block 26 is attached to a top of the pallet 74 with adhesive 32 or the like. A bottom perimeter of the pallet 74 is covered by attaching the plurality of brick or block 26 with adhesive 32. With reference to figure 6b, a bottom of a brick or block outdoor structure 76 may be created using pre-cast concrete plates 78 and a plurality of brick or block 26. A perimeter ledge 82 is cut on an inside perimeter of a first row of brick or block 26 to receive the pre-cast concrete plates 78. The pre-cast concrete plates 78 are preferably attached to the brick or block 26 with adhesive 32. Two channels 80 are cut through two of the plurality of brick or block 26 to receive two lift forks 100.

[0036] With reference to figure 7, an outdoor fire pit 84 includes a pit enclosure 86, a fire pit liner 88 and a pit top 90. The pit enclosure 86 includes a plurality of brick or block 26 built around the fire pit liner 88. The fire pit liner 88 are well known in the art and may be purchased from numerous sources. Two channels 92 are formed in a bottom of the pit enclosure 86. The two channels 92 are sized to receive two lift forks 100. The two channels 92 are hidden by inserting two bricks or blocks 26. The

pit top 90 is fabricated by attaching a plurality of brick or block 26 together with adhesive 32 or the like. The pit top 90 is attached to a top of the pit enclosure 86 with adhesive 32.

[0037] With reference to figure 8, an outdoor pillar 94 includes a plurality of brick or block 26. Two channels 96 are cut in a bottom of the plurality of brick or block 26 to receive two lift forks 100. At least two brick or blocks 26 are inserted into the two channels 96 to hide thereof.

[0038] With reference to figure 9, a brick or block outdoor structure 98 is lifted with a boom 102 of a crane. Two threaded taps 104 are formed in two brick or blocks 26. Two eye bolts 106 are threaded into the two threaded taps 104. The ends of a three wire sling 110 are attached to the two eye bolts 106 and a hook 112 extending from the boom 102. With reference to figure 10, a friction lift unit 114 is suspended from the boom 102 of a crane with a chain 116. The crane may be used to move a brick or block outdoor structure 98 instead of two lift forks 100.

[0039] With reference to figures 11 - 13, components of a brick or block outdoor wall are shown. Figure 11 illustrates a modular brick or block square wall corner connector (square corner connector) 118 and an end pillar 120. The square corner connector 118 is fabricated from a plurality of brick or block 26. A top portion of the square corner connector 118 is preferably topped with a plurality of brick 34. An engagement projection 122 preferably extends from one end of the square corner connector 118 and a projection notch 124 is formed in the other end thereof. The end pillar 120 includes a projection slot 125 that is sized to receive the engagement projection 122. A pair of channels 126 are formed in a bottom of the square corner connector 118 to receive two lift forks 100. Two bricks or blocks 26' are sized to be received by the pair of channels 126. The end pillar 120 is

fabricated from a plurality of brick or block 26. A top of the end pillar 120 is preferably topped with a plurality of brick 34. A pair of channels 127 are formed in a bottom of the end pillar 120. Two bricks or blocks 26 are sized to be received by the pair of channels 127.

[0040] Figure 12 illustrates a modular brick or block curved wall corner connector (curved corner connector) 128. The curved corner connector 128 is fabricated from a plurality of brick or block 26. A top portion of the curved corner connector 128 is preferably topped with a plurality of brick 34. An engagement projection 130 preferably extends from one end of the curved corner connector 128 and a projection notch 135 extends from the other end thereof. A pair of channels 132 are formed in a bottom of the square corner connector 128 to receive two lift forks 100. Two bricks or blocks 26 are sized to be received by the pair of channels 132.

[0041] Figure 13 illustrates a modular brick or block wall section (wall section) 134. The wall section 134 is fabricated from a plurality of brick or block 26. A top portion of the wall section 134 is preferably topped with a plurality of brick 34. An engagement projection 136 preferably extends from one end of the wall section 134 and a projection notch 137 is formed in the other end thereof. A pair of channels 138 are formed in a bottom of the wall section 134 to receive two lift forks 100. Two bricks or blocks 26 are sized to be received by the pair of channels 138.

[0042] Figure 14 illustrates a brick or block wall planter (planter) 140. The planter 140 is fabricated from a plurality of brick or block 26. A top portion of the planter 140 is preferably topped with a plurality of brick 34. A pair of channels 142 are formed in a bottom of the planter 140 to receive two lift forks 100. Two bricks or blocks 26 are sized to be received by the pair of channels 142.

[0043] Figure 15 illustrates a patio having numerous modular brick or block outdoor structures located adjacent to each other. A first pillar 94 is located adjacent one end of the wall section 134. The other end of the first wall section 134 is located adjacent one end of the curved corner connector 128. The other end of the curved corner connector 128 is located adjacent one end of a first square corner connector 118. The other end of the first square corner connector 118 is located adjacent a first end of the outdoor fireplace 10. The other end of the outdoor fireplace 10 is located adjacent to one end of a second square corner connector 118. The other end of the square corner connector 118 is located adjacent a first base unit 44. The first base unit 44 is located adjacent the corner unit 46. One end of a second base unit 44 is located adjacent the corner unit 46. The second base unit 44 includes a grill 48. The other end of the second base unit 44 is adjacent a second pillar 94. The planter 140 is also disclosed in figure 14.

[0044] While particular embodiments of the invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from the invention in its broader aspects, and therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of the invention. For example, it is to be understood that other means of attaching or securing portions of the modular brick or block structures together could be used other than by using adhesive 32 as described here. Further, other outdoor living appliances and accessory items, in addition to kitchen components, could be incorporated into the modular brick or block structures as described here without deviating from the scope of the present invention.

- 11 -

WHAT IS CLAIMED IS:

1. A modular section comprising:
a plurality of bricks, a plurality of blocks, or a combination of a
5 plurality of bricks and blocks;
an adhesive to secure the plurality of bricks, blocks, or combination
thereof in a pre-assembled configuration of such bricks, blocks
or combination thereof, the pre-assembled configuration hav-
ing a bottom portion;
10 two channels formed within the bottom portion;
wherein the pre-assembled configuration is assembled at a first site;
and
a pair of bricks, blocks, a combination of bricks and blocks, or a
portion thereof;
15 wherein the pair of bricks, blocks, a combination thereof, or a por-
tion of such pair, is inserted into the two channels to cosmetic-
ally hide the channels from view following installation of the
modular section at a second site.
- 20 2. The modular section of claim 1 wherein the two channels are formed
to receive two lift forks.
3. The modular section of claim 2 wherein the modular section is
combined with at least one other modular section as part of an
25 outdoor structure.
4. The modular section of claim 3 wherein the outdoor structure com-
prises an outdoor fireplace, the fireplace comprising a first modular
section in the form of a fireplace base; a fire box in the fireplace

- 12 -

base; a second modular section in the form of a hearth; a third modular section in the form of a chimney; a flue pipe in the chimney; a termination flue cap; and a fourth modular section in the form of a decorative cap.

5

5. The modular section of claim 4 further comprising a fifth modular section in the form of a wood box.

10

6. The modular section of claim 4 further comprising a fifth modular section in the form of a first wood box and a sixth modular section in the form of a second wood box.

15

7. The modular section of claim 3 wherein the outdoor structure is an outdoor kitchen.

8. The outdoor kitchen of claim 7 further comprising one or more kitchen components from a group consisting of a refrigerator, a dishwasher, a cabinet, a burner, an audio speaker, a back splash, lights or a bar top.

20

9. The modular section of claim 1 wherein the assembled configuration is a section constructed on top of a pallet.

25

10. The modular section of claim 9 further comprising a plurality of bricks, blocks, or combination thereof adhered to the pallet to conceal the pallet.

- 13 -

11. The modular section of claim 2 wherein the assembled configuration is an outdoor fire pit, the fire pit further comprising a pit enclosure, a pit liner and a pit top.
- 5 12. The modular section of claim 2 wherein the assembled configuration is an outdoor pillar.
13. The modular section of claim 2 wherein the assembled configuration is a outdoor wall.
- 10 14. The modular section of claim 2 wherein the assembled configuration is a wall corner connector.
- 15 15. The modular section of claim 2 wherein the assembled configuration is a planter.

Fig. 1

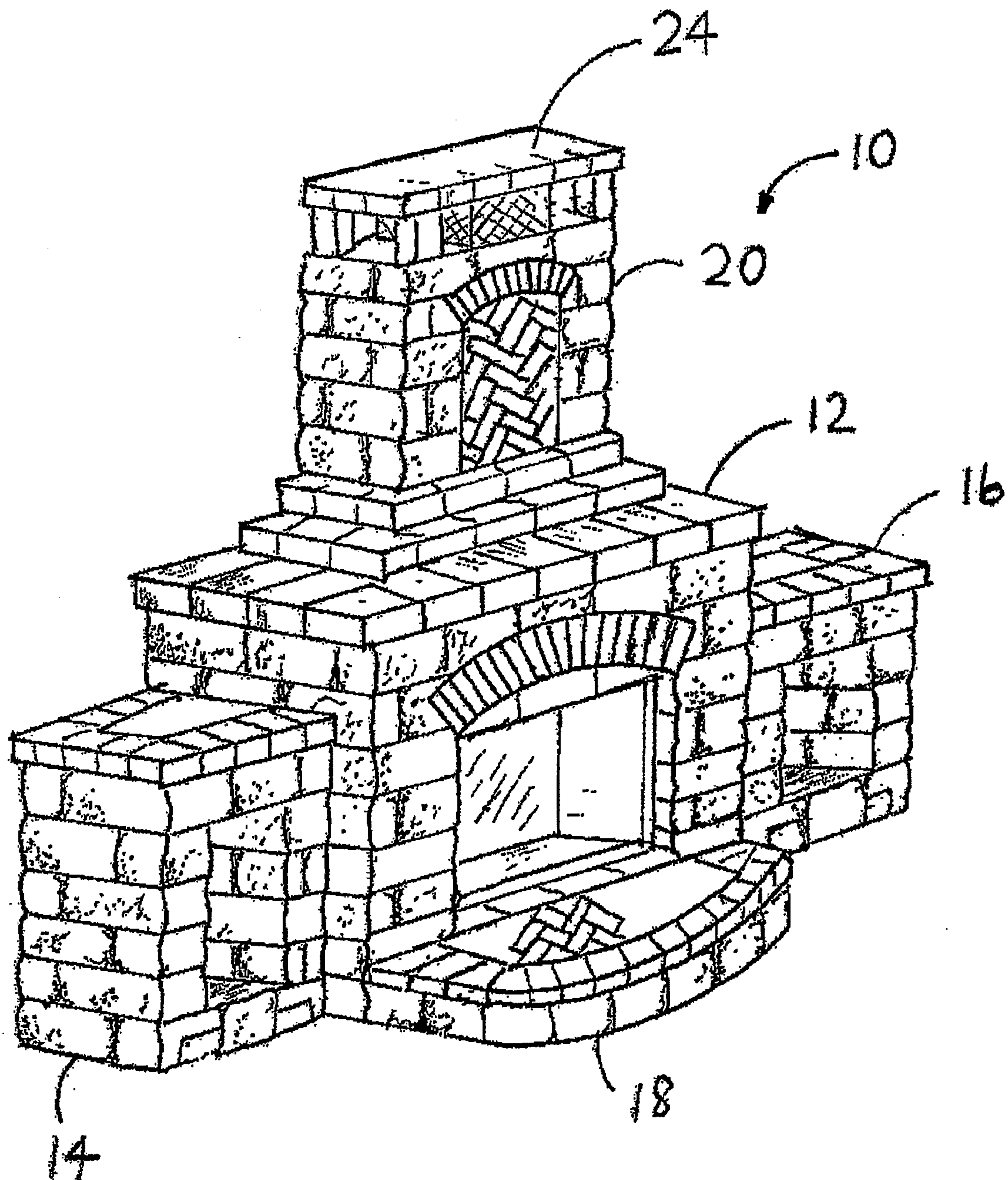


Fig. 2

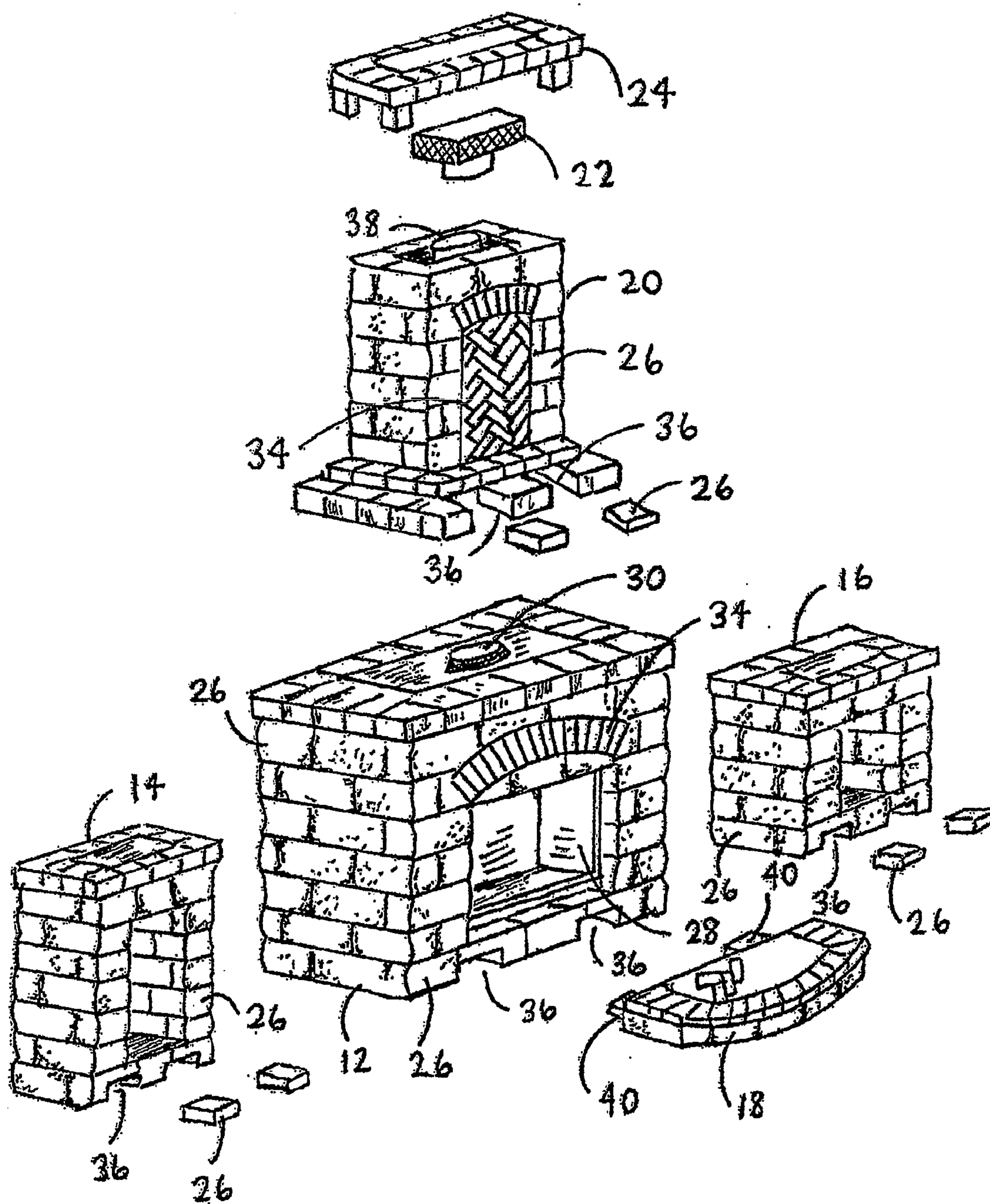


Fig. 3

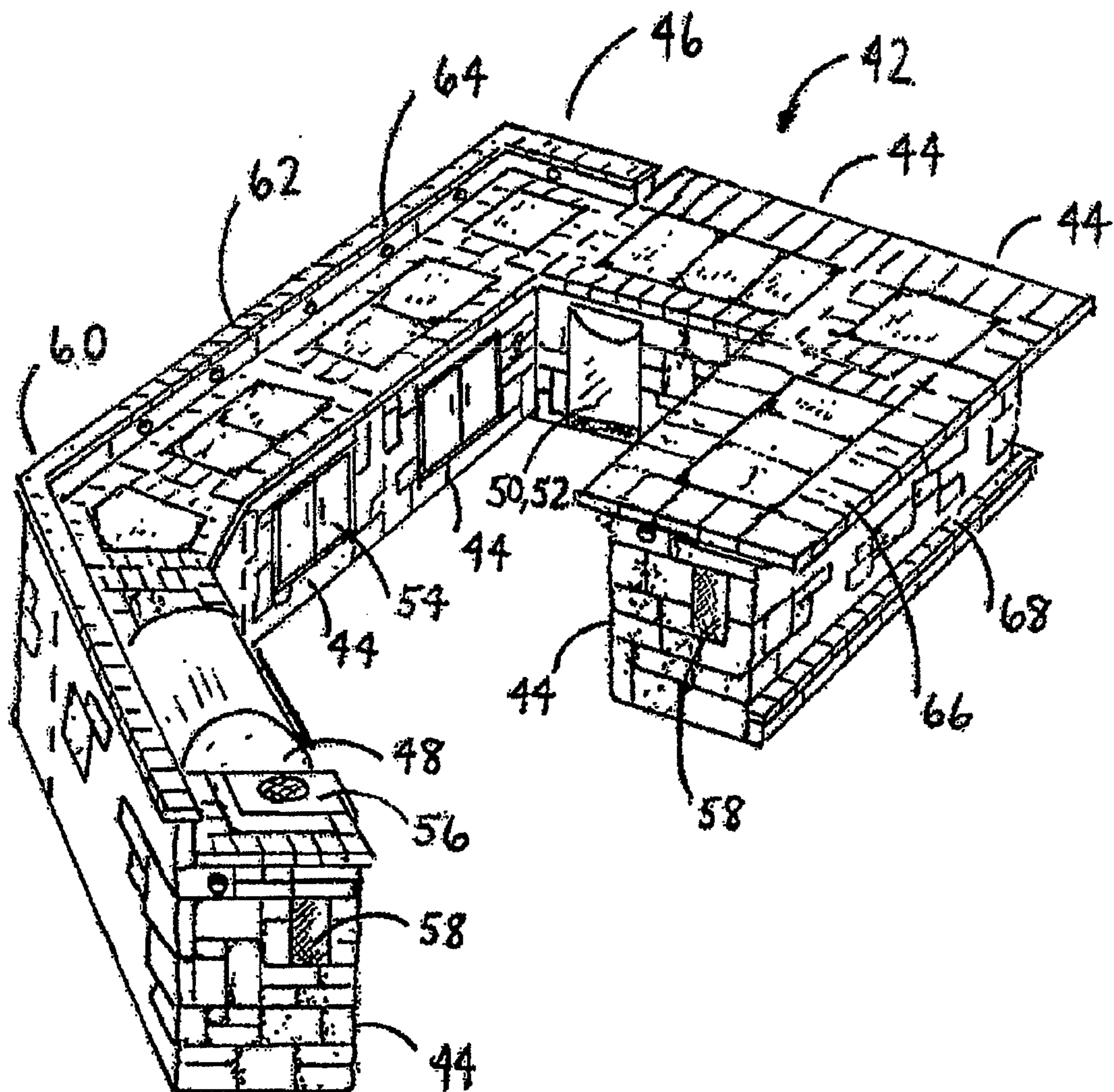


Fig. 4

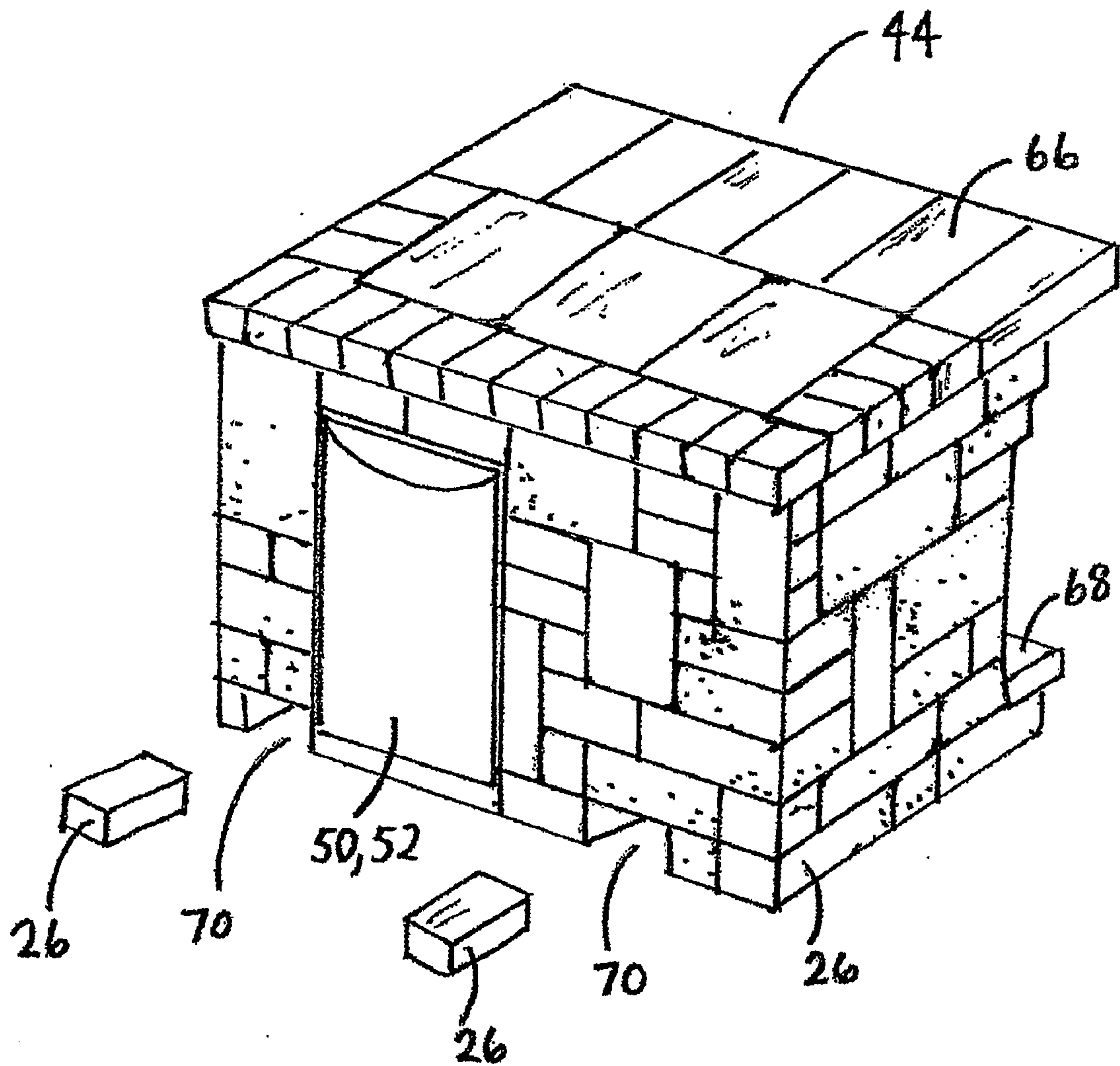


Fig. 5

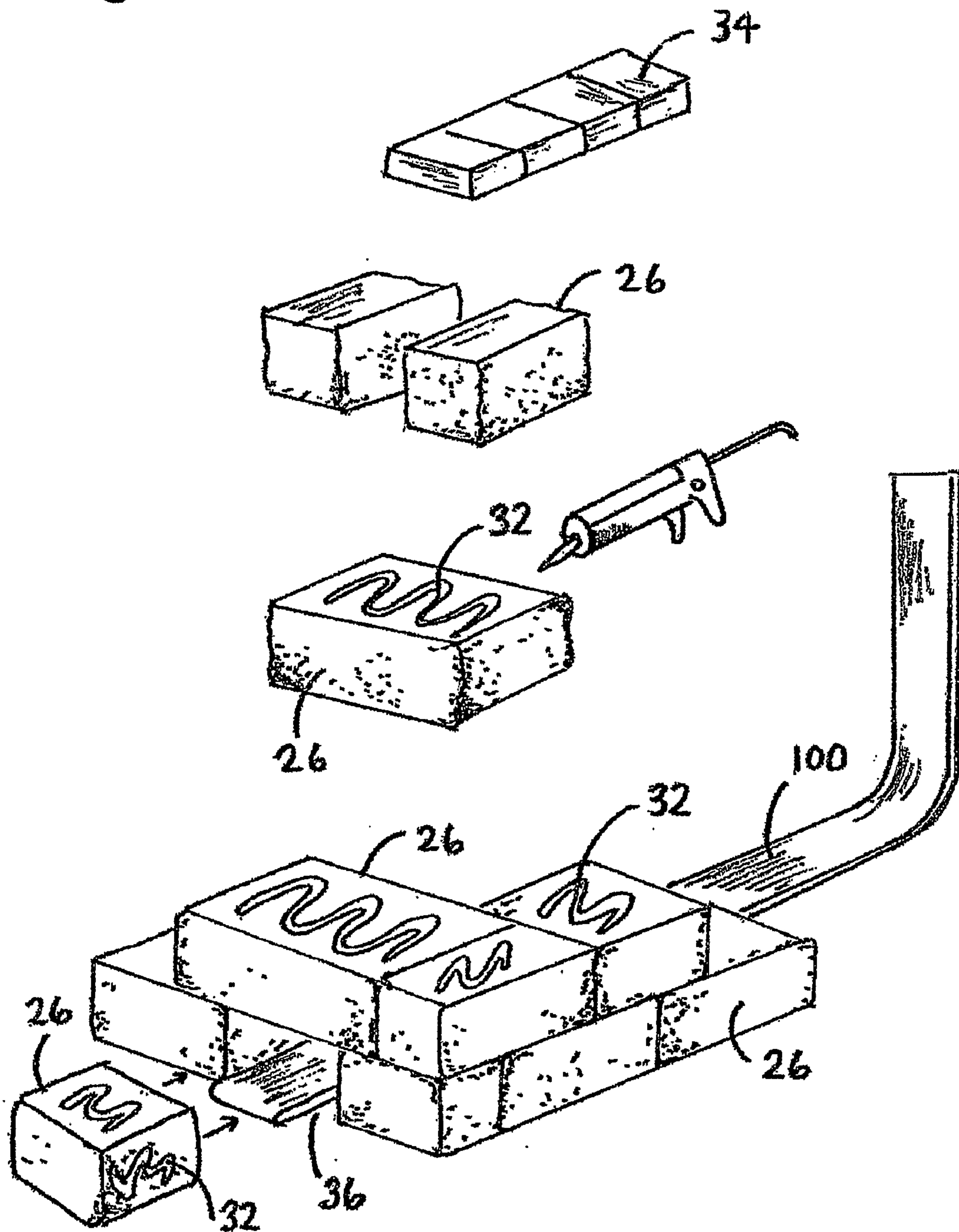


Fig. 6a

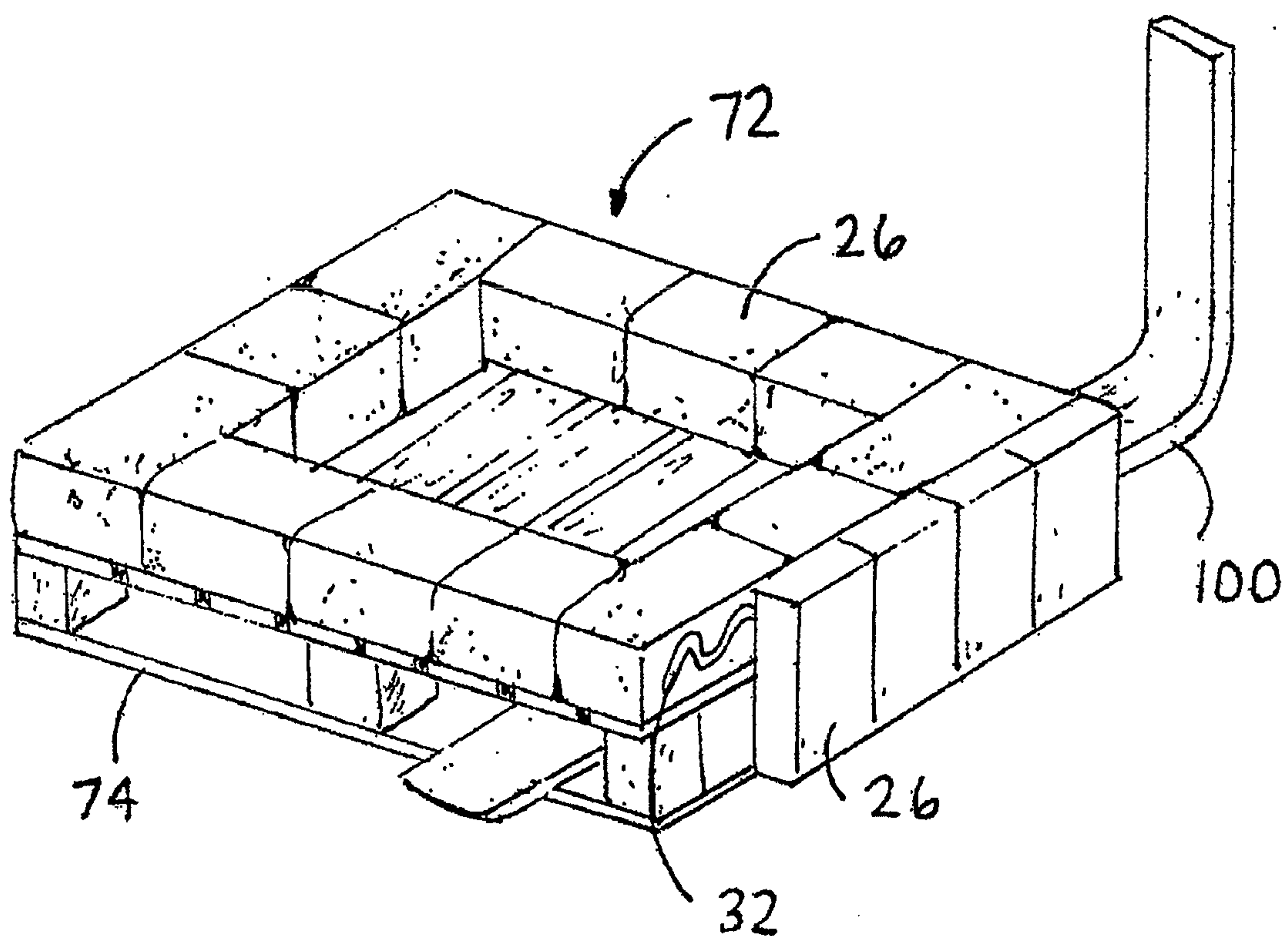


Fig. 6b

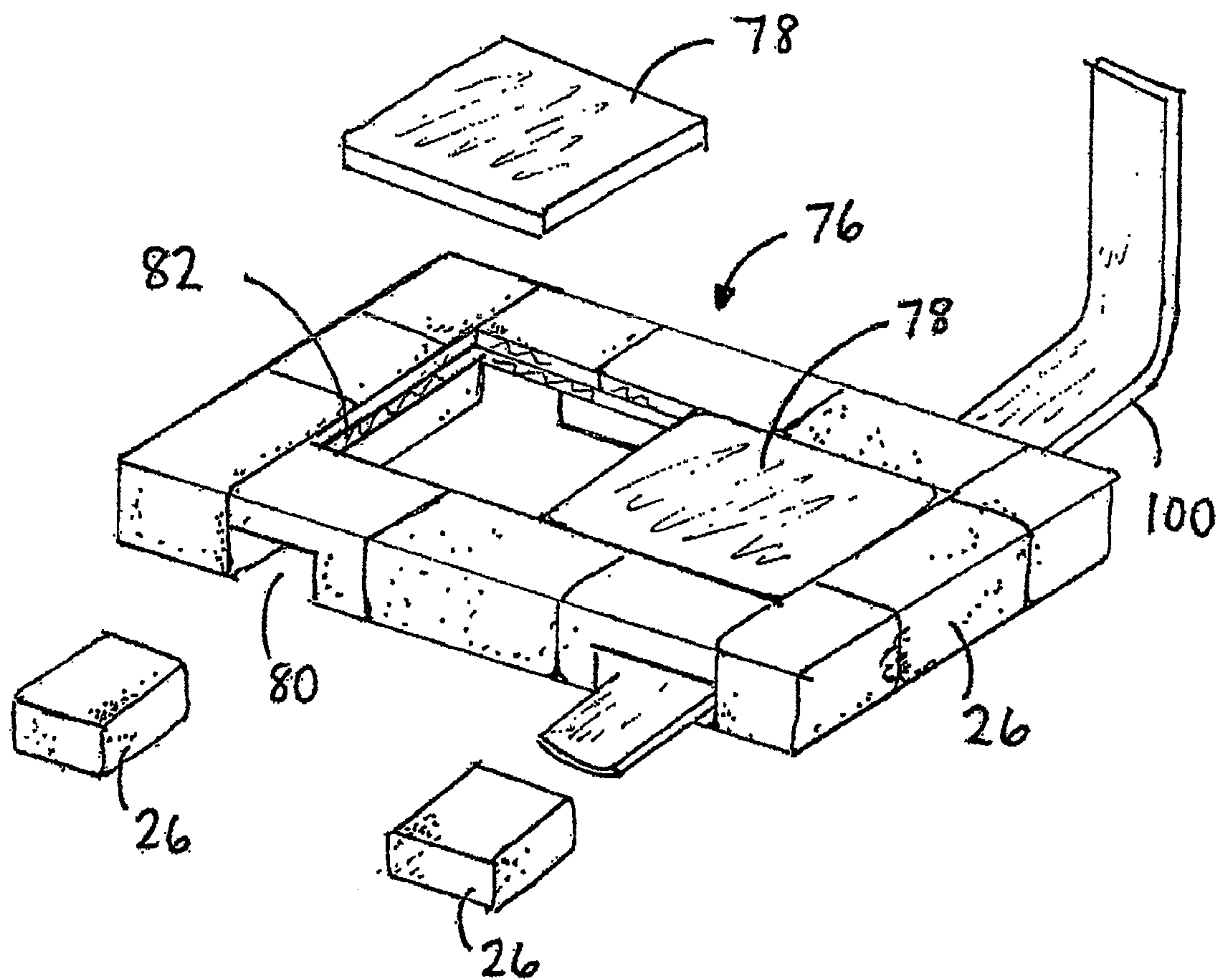


Fig. 7

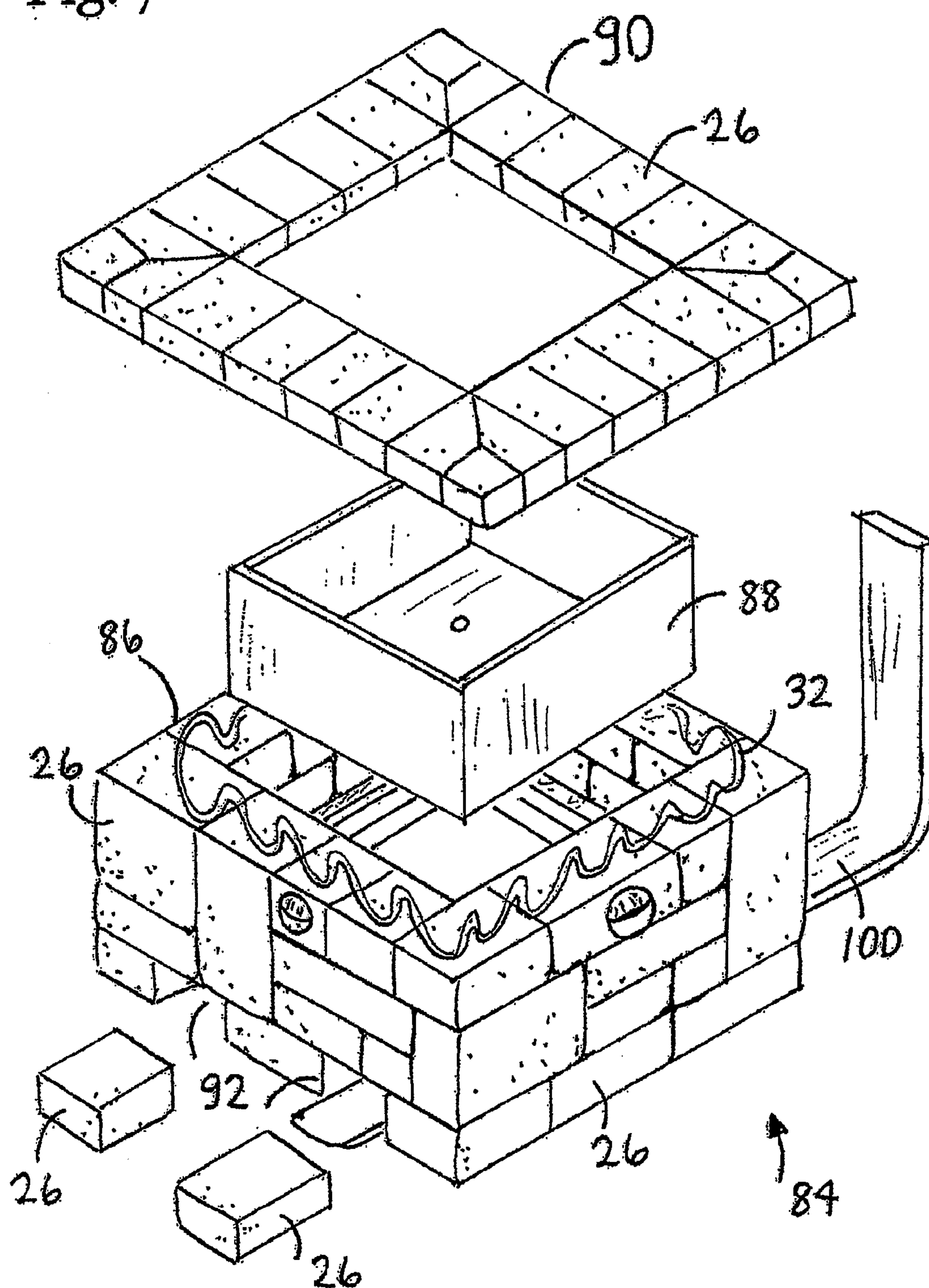


Fig. 8

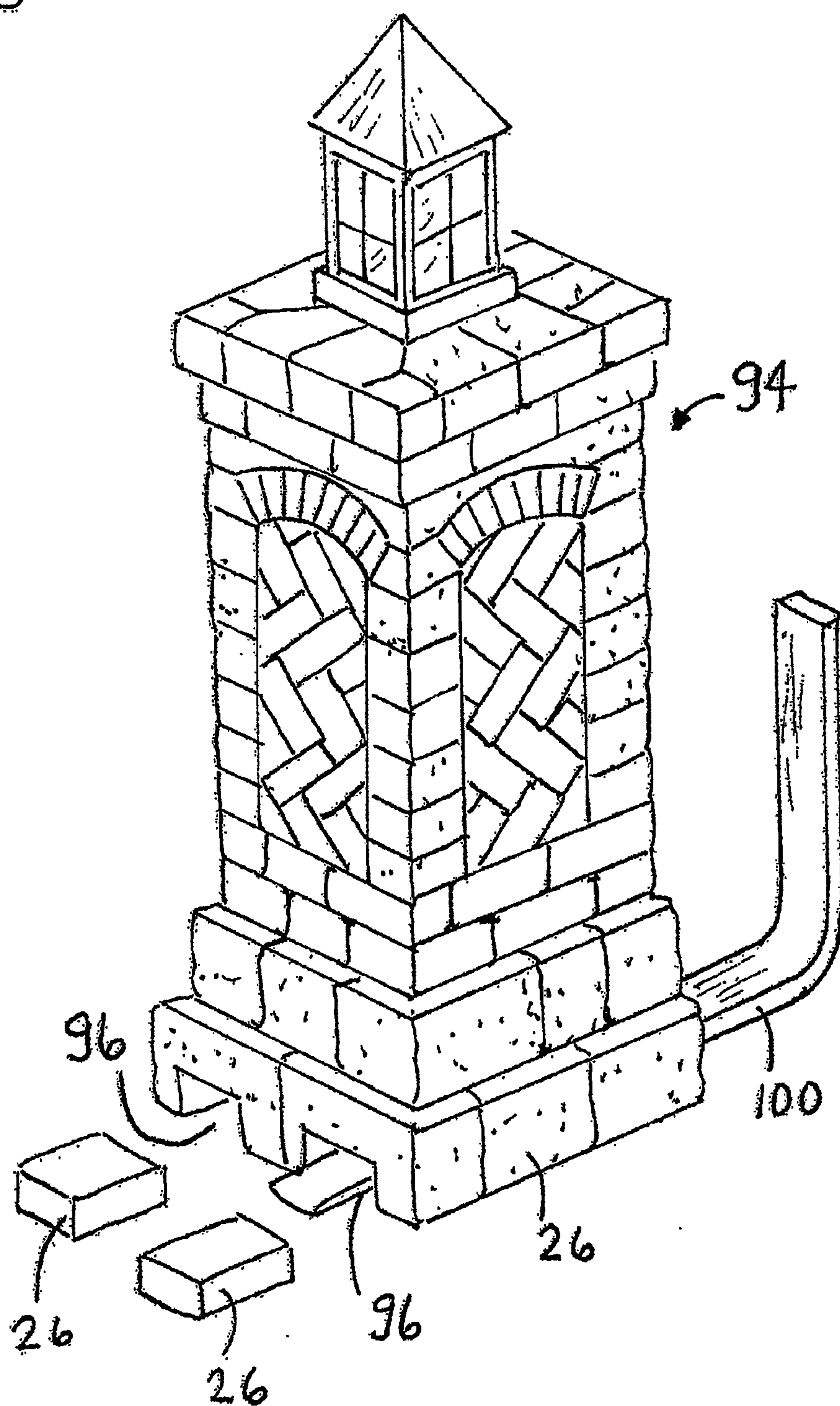


Fig. 9

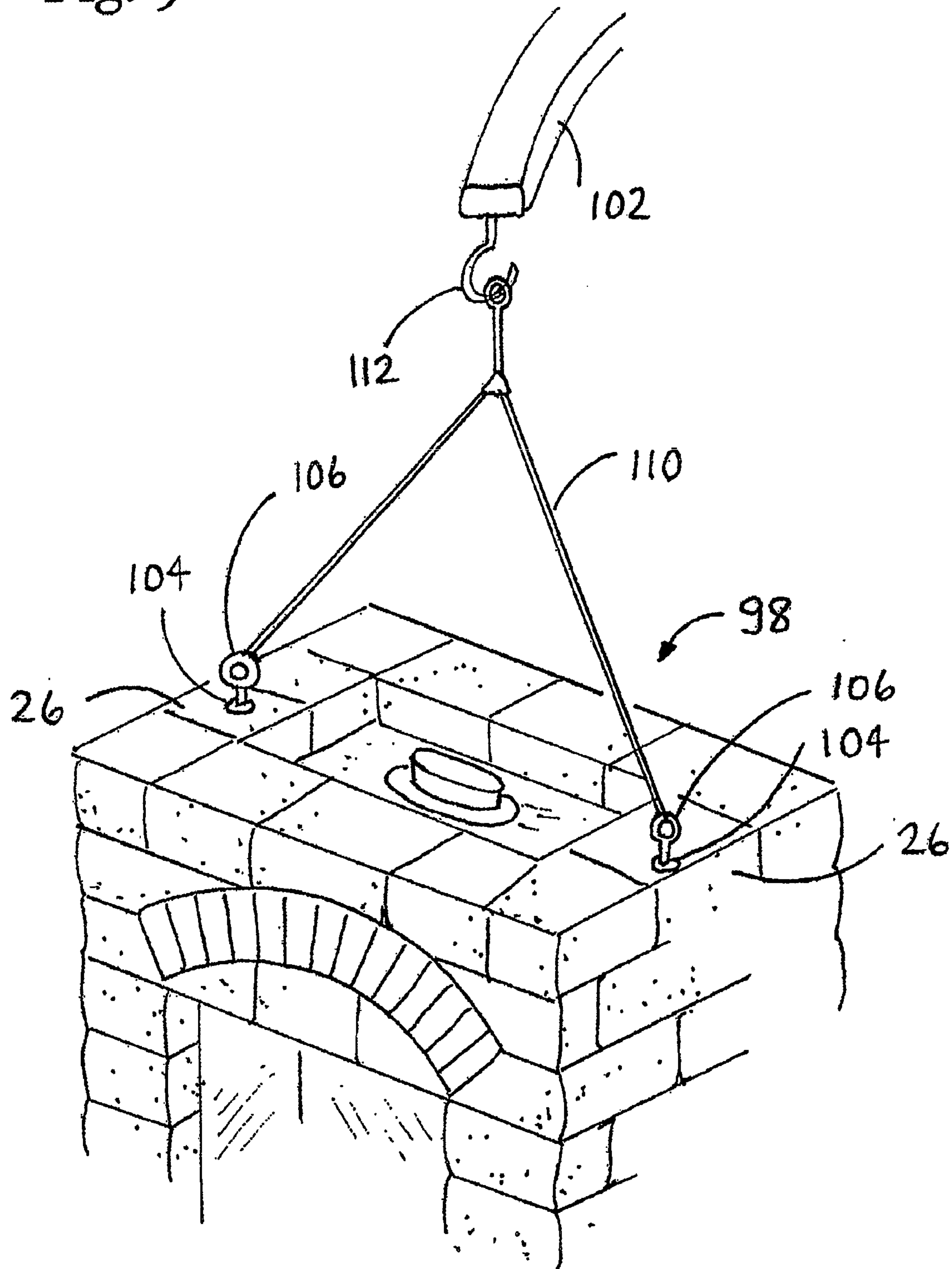


Fig. 10

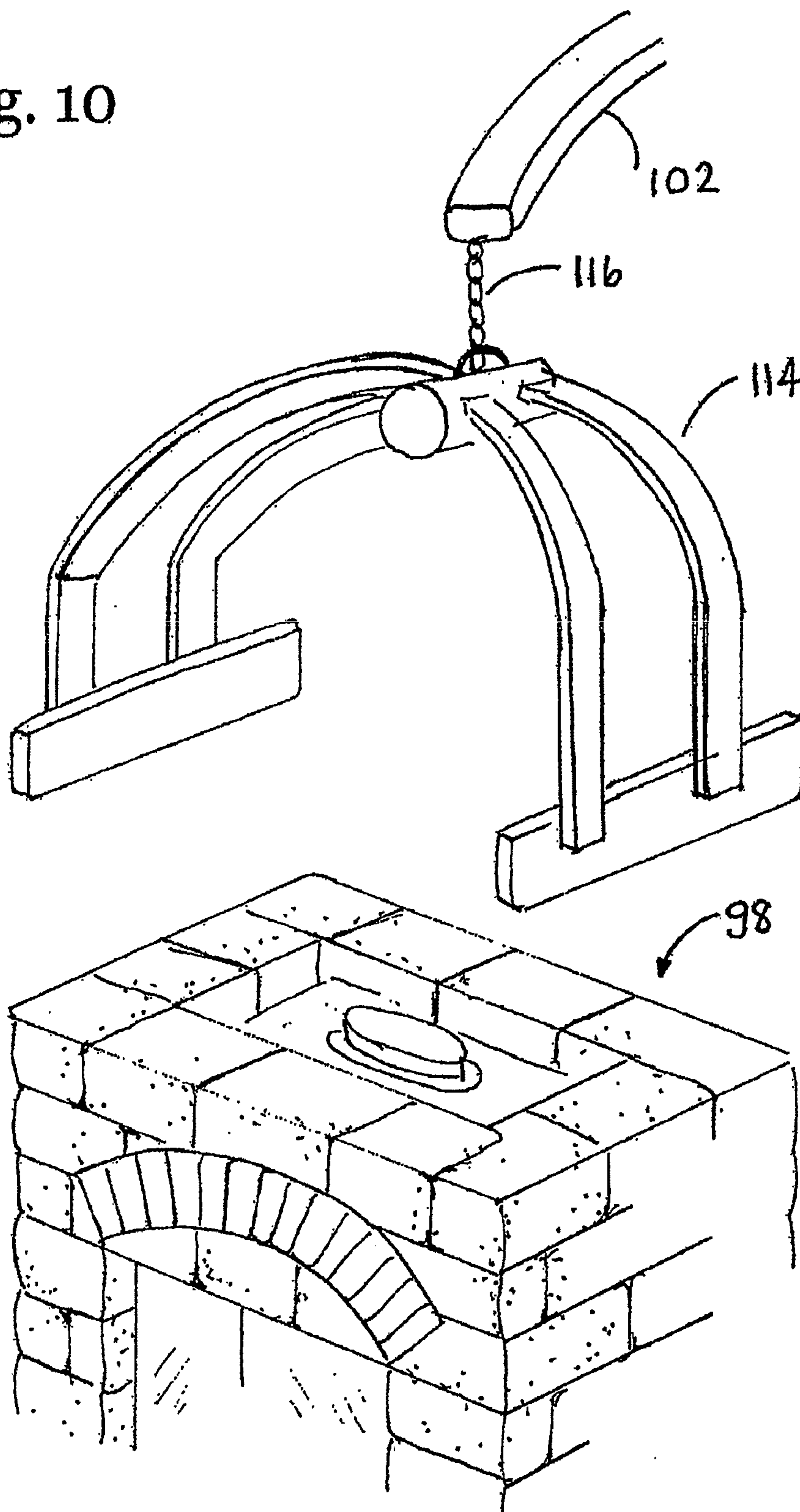


Fig. 11

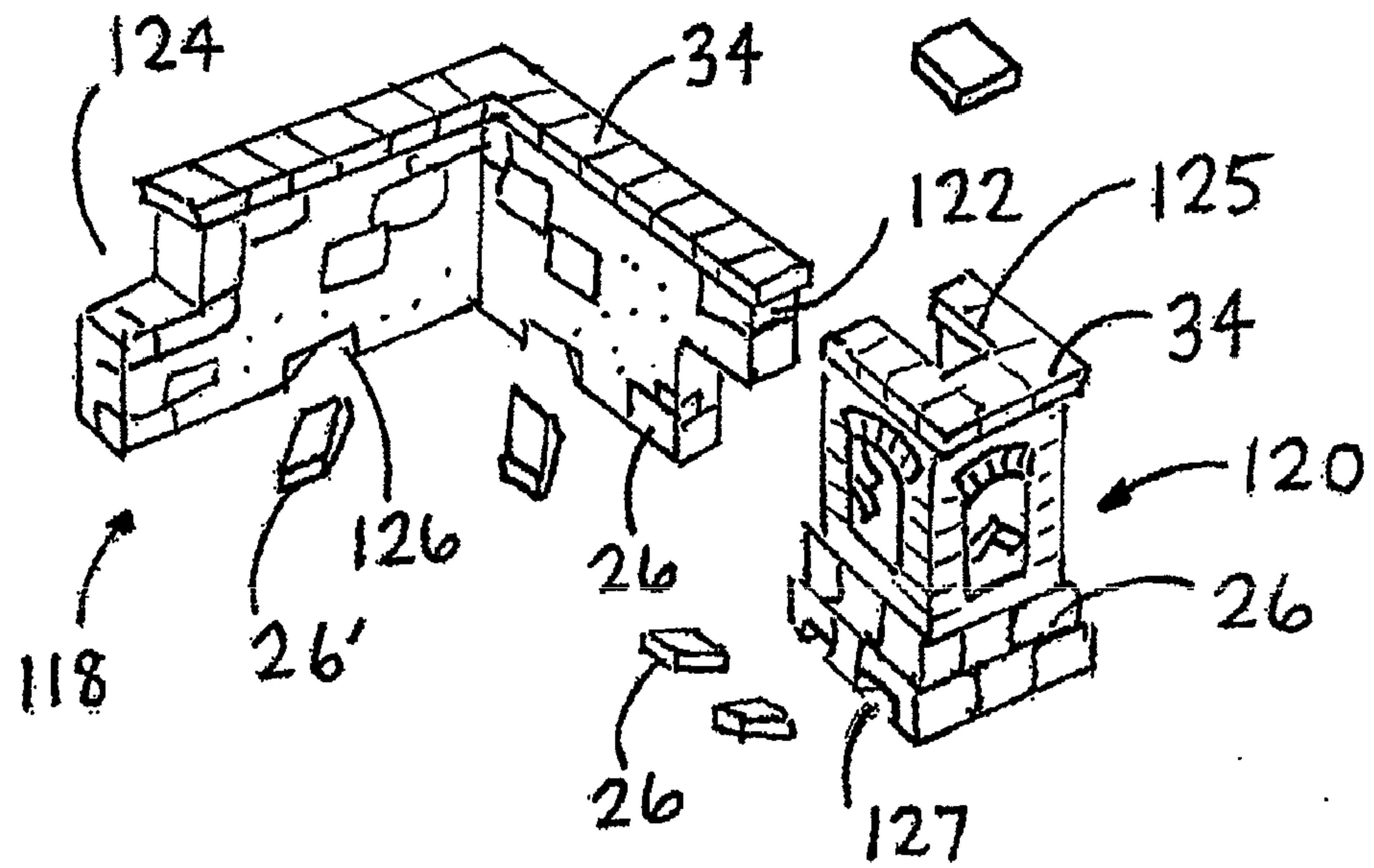


Fig. 12

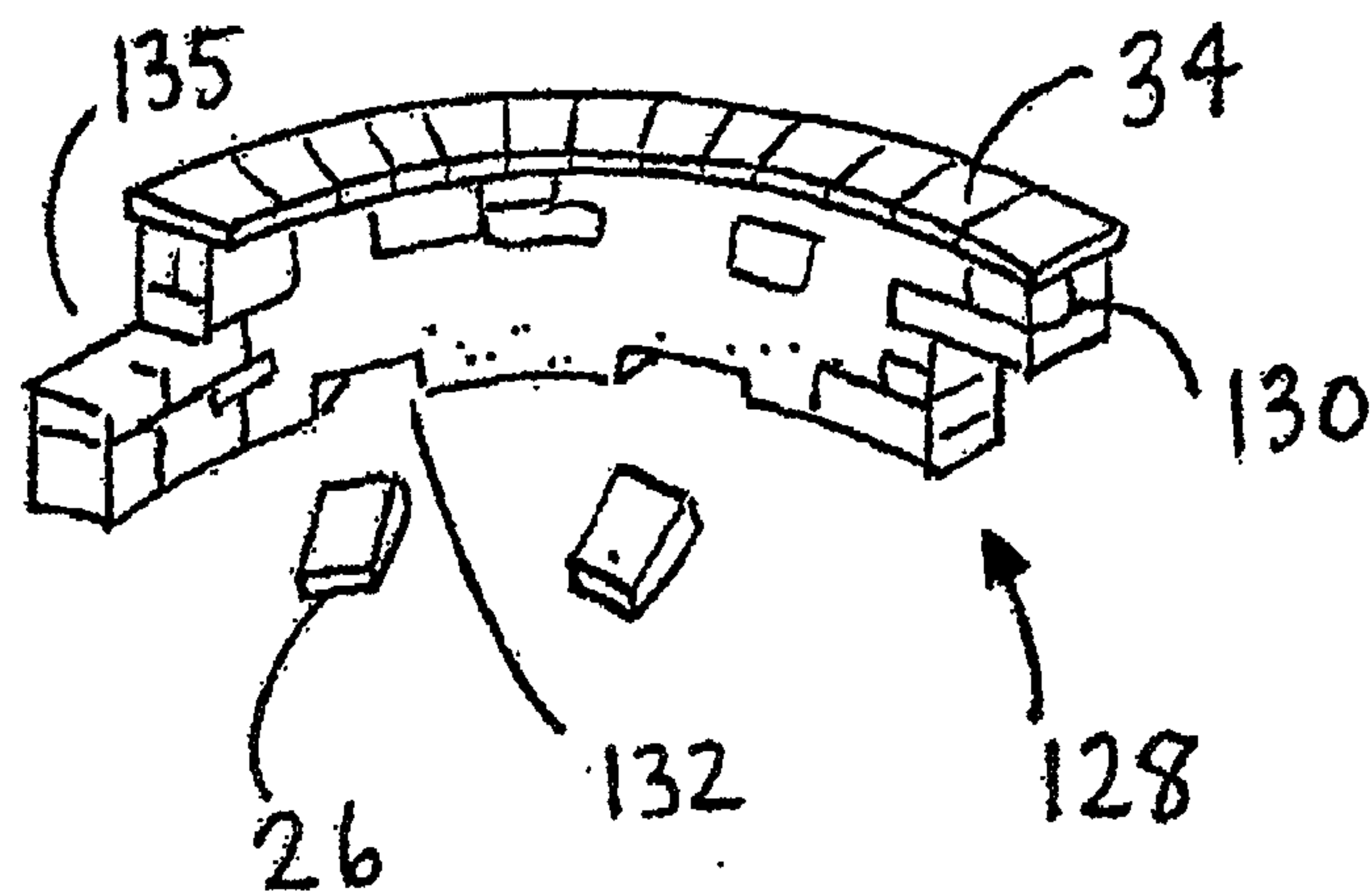


Fig. 13

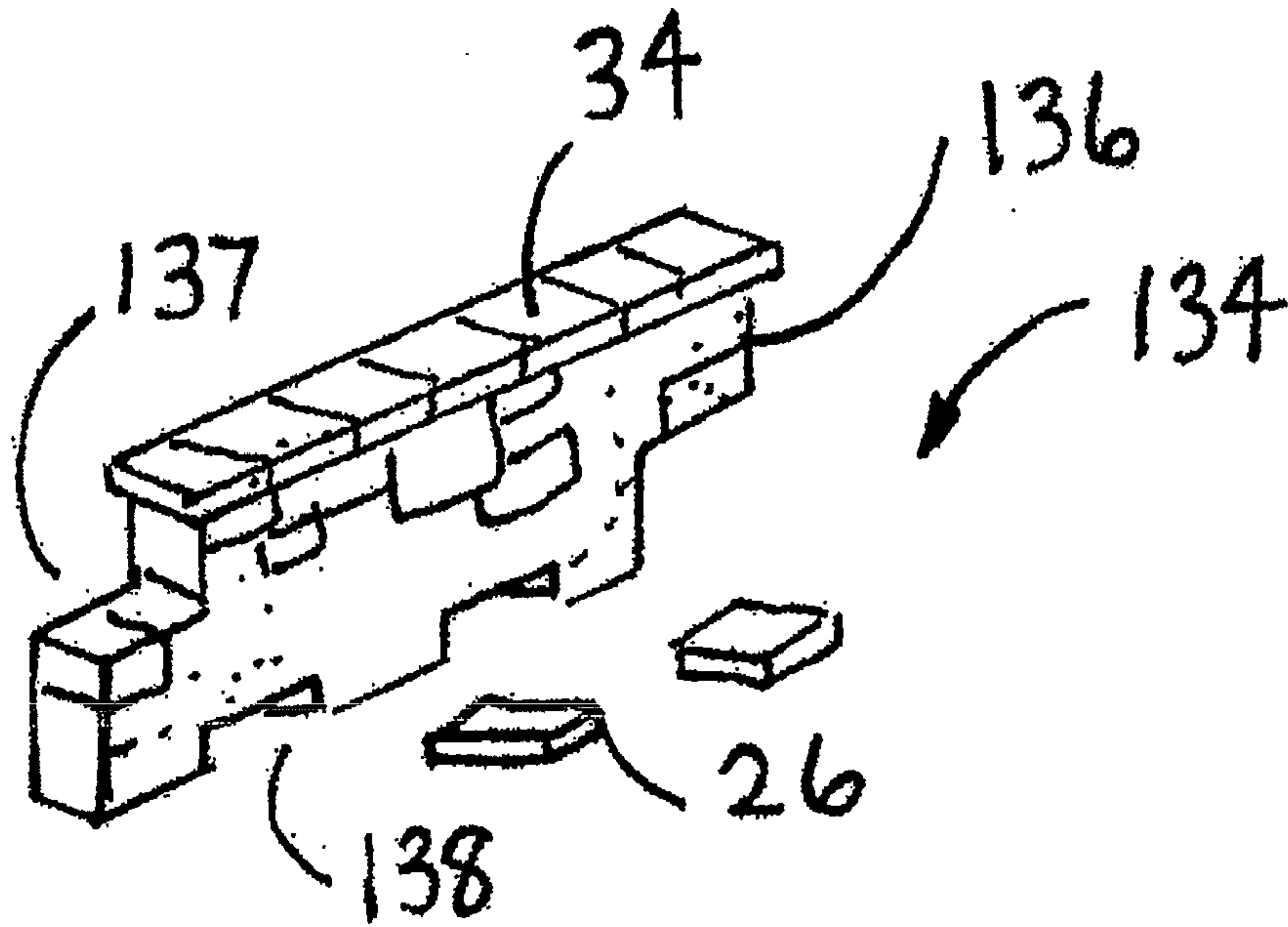


Fig. 14

