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(54) Title: MATTRESS TOPPER COMPRISING POCKETED SPRING ASSEMBLY WITH AT LEAST ONE CUSHIONING LAYER

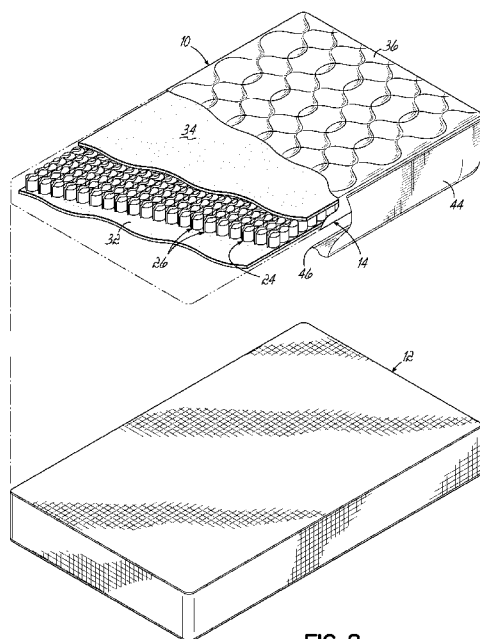


FIG. 2

(57) Abstract: A topper (10) for use with a bedding or seating product, such as a mattress (12), comprises a casing (14) surrounding a pocketed spring assembly (24) and at least one cushioning layer (32, 34). The topper (10) has a skirt (44) which may fit around the mattress (12). The skirt (44) may have a drawstring or an elastic band (46) which helps keep the removable topper (10) on top of the bedding or seating product (12). The height of the springs (30) in the pocketed spring assembly (24) is typically less than the height of the bedding or seating product (12).

MATTRESS TOPPER COMPRISING POCKETED SPRING ASSEMBLY WITH AT LEAST ONE CUSHIONING LAYER**Background of the Invention**

[0001] This invention relates generally to bedding or seating products and, more particularly, to a mattress topper or pad for use in on a finished mattress.

[0002] Traditionally, toppers for mattresses have consisted of relatively thin members which may be removed from the mattress for a variety of purposes. U.S. Patent No. 6,009,579 discloses a topper for a feather bed. U.S. Patent No. 6,922,862 discloses a topper designed to be placed on top of a conventional mattress.

[0003] One drawback of known toppers for use with conventional mattresses is that the toppers are not durable enough and may have to be replaced frequently.

[0004] In order to achieve greater durability in a topper adapted to be removed from a bedding or seating product, such as a mattress, it would be desirable to include a pocketed spring assembly into the topper. Therefore, making a topper having a pocketed spring assembly incorporated therein, the topper being sold separately from a mattress, would be desirable.

Summary of the Invention

[0005] This invention provides a mattress pad or topper which may be sold separately from a finished bedding or seating product, such as a mattress. The present invention is not intended to be limited for use with any particular bedding or seating product. For example, the mattress topper of the present invention may be used with a mattress having an innerspring core or a foam core or any combination thereof.

[0006] According to one aspect of the present invention, a mattress topper may be used with any mattress. The mattress topper comprises a bucket or casing comprising a bottom and sides. A pocketed spring assembly is located inside the bucket. At least one cushioning layer may be located

above the pocketed spring assembly. The mattress topper further comprises a quilted top layer and a skirt adapted to fit around a mattress. The bucket, skirt and quilted top layer are sewn together. In some instances, inner edges of the bucket, skirt and quilted top layer may be taped together before being sewn together.

[0007] The skirt of the mattress topper may have an elastic band or draw string sewn therein to better secure the mattress topper around the mattress.

[0008] One or more of the cushioning layers may be polyurethane or latex or memory foam or any other type of foam. One or more of the cushioning layers may alternatively or collectively be a layer of fiber batt or down for insulation purposes. Another type of cushioning layer may be a gel layer.

[0009] In some versions of the mattress topper, cushioning materials are located only above the pocketed spring assembly. However, in other versions of the mattress topper, cushioning or insulating materials may be located above and below the pocketed spring assembly.

[0010] According to another aspect of the present invention, a mattress may be used in combination with a mattress topper. The mattress topper may be removed from the mattress without disturbing the mattress. The mattress topper may comprise a casing surrounding a pocketed spring assembly; at least one cushioning layer and a quilted top layer. The mattress topper may further comprise a skirt sized or adapted to fit around or surround the mattress. The skirt may have an elastic band or drawstring at the bottom of the skirt. The cushioning layer may include one or more layers of foam and/or fiber. The cushioning layer(s) may cover one or opposed surfaces of the pocketed spring assembly. The casing, skirt and quilted top layer may be sewn together.

[0011] Although several types of mattress topper have been described herein, any of the mattress toppers shown or described herein may be used in any bedding or seating product, including a mattress. For example, the topper may be used in a seat cushion, such as a car seat.

Brief Description of the Drawings

[0012] The objectives and features of the invention will become more readily apparent from the following detailed description taken in conjunction with the accompanying drawings in which:

[0013] Fig. 1 is a perspective view of a mattress topper according to one embodiment on top of a mattress;

[0014] Fig. 2 is a perspective view, partially broken away, of the mattress topper of Fig. 1 pulled away from the mattress of Fig. 1;

[0015] Fig. 3 is a cross-sectional view taken along the line 3-3 of Fig. 1, the mattress being shown in phantom;

[0016] Fig. 4 is an enlarged cross-sectional view of the encircled area 4 of Fig. 3;

[0017] Fig. 4A is an enlarged view like Fig. 4 of an alternative seam;

[0018] Fig. 5 is a perspective view, partially broken away, of another embodiment of mattress topper pulled away from a mattress;

[0019] Fig. 6 is a cross-sectional view of the mattress topper of Fig. 5 on a mattress, the mattress being shown in phantom;

[0020] Fig. 7 is a perspective view, partially broken away, of another embodiment of mattress topper pulled away from a mattress;

[0021] Fig. 8 is a cross-sectional view of the mattress topper of Fig. 7 on a mattress, the mattress being shown in phantom;

[0022] Fig. 9 is a perspective view, partially broken away, of another embodiment of mattress topper pulled away from a mattress;

[0023] Fig. 10 is a cross-sectional view of the mattress topper of Fig. 9 on a mattress, the mattress being shown in phantom;

[0024] Fig. 11 is a perspective view, partially broken away, of another embodiment of mattress topper pulled away from a mattress;

[0025] Fig. 11A is an enlarged view of the encircled area of Fig. 11; and

[0026] Fig. 12 is a cross-sectional view of the mattress topper of Fig. 11 on a mattress, the mattress being shown in phantom.

Detailed Description of the Invention

[0027] Referring to the drawings and, particularly to Fig. 1, a mattress topper 10, according to one embodiment of this invention, is shown in connection with a bedding or seating product in the form of a mattress 12. As shown in Fig. 1, the mattress 12 has a longitudinal dimension or length L and a transverse dimension or width W. Although the length L is shown as being greater than the width W, they may be identical. As shown in Fig. 1, the combination of mattress topper 10 and mattress 12 has a height H.

[0028] The mattress 12 may be any known mattress and is not intended to be limited to any particular mattress. For example, the mattress 12 may include a spring core or spring assembly or may be entirely foam. The mattress topper 10 of the present invention may be used in connection with any adjustable bed mattress or sofa sleeper mattress also.

[0029] The mattress topper 10 need not be sold with a mattress or other bedding or seating product. The mattress topper 10 may be sold separately and replaced at any desired time. Fig. 2 illustrates one embodiment of mattress topper 10 separated from a mattress 12. As shown in Figs. 2 and 3, the mattress topper 10 comprises a bucket or casing 14 having a bottom 16 and sides 18. As shown in Fig. 4, an upper portion 20 of each bucket side 18 may be turned inwardly at location 22 to a generally horizontal orientation for assembly purposes, as described below.

[0030] As best shown in Figs. 2 and 3, the mattress topper 10 further comprises a pocketed spring assembly 24 inside the bucket or casing 14. As shown in Fig. 2, pocketed spring assembly 24 comprises a plurality of longitudinally extending strings 26 of individually pocketed springs joined together and extending from end-to-end of the mattress topper 10. Alternatively, the strings of individually pocketed springs may extend transversely or from side-to-side inside the bucket 14 of the mattress topper 10. As shown in Fig. 3, each string of pocketed springs 16 comprises a row of individual fabric pockets 28, each containing at least one spring 30. Although one pocketed spring assembly is illustrated, any known pocketed spring assembly may be used including the one disclosed in U.S. Patent No.

8,087,114, for example. Any of the mattress toppers shown or described herein are not intended to limit the pocketed spring assembly incorporated therein.

[0031] As shown in Figs. 2 and 3, mattress topper 10 further comprises a first cushioning layer of polyurethane foam 32 below the pocketed spring assembly 24 inside the bucket or casing 14 immediately above the bottom 16 of the bucket or casing 14. The mattress topper 10 further comprises a second cushioning layer of polyurethane foam 34 above the pocketed spring assembly 24. Each of the cushioning layers of polyurethane foam 32, 34 may be any desired depth. However, in one embodiment, the depth of each cushioning layer of polyurethane foam 32, 34 is one-half inch. As an alternative, any type of foam, including but not limited to memory foam, may be used for one or both of the cushioning layers 32, 34.

[0032] Another component of the mattress topper 10 is a quilted top layer or fiber panel 36. As best shown in Figs. 3 and 4, this quilted fiber panel 36 comprises an outer fabric layer 38 surrounding a fiber interior 40 sewn together along seams 42 which assume any desired pattern.

[0033] As shown in Figs. 2 and 3, mattress topper 10 further comprises a skirt 44 adapted to fit around mattress 12. At its bottom, the skirt 44 has an elastic band 46 adapted to fit underneath mattress 12 so that the skirt 44 stays on top of the mattress 12. As shown in Fig. 3, the skirt 44 extends from a combination seam 48 shown in detail in Fig. 4 downwardly along the sides 50 of the mattress 12 and along the lower surface 52 of the mattress 12.

[0034] Fig. 4 illustrates the details of the combination seam 48 which joins together the elements of the mattress topper 10 and, more particularly, the bucket 14, the skirt 44 and the quilted upper layer 36. As shown in Fig. 4, tape 54 is wrapped around outer edges of the bucket 14, the skirt 44 and the quilted upper layer 36. The combination seam 48 joins together the upper generally horizontally oriented portion 20 of sidewalls 18 of bucket 14 below a bent generally horizontally oriented upper portion 56 of skirt 44 and an outer generally horizontally oriented portion 58 of the quilted top layer or fiber panel 36. The generally horizontally oriented portion 58 of the quilted top layer or

fiber panel 36 is located above the generally horizontally oriented upper portion 56 of skirt 44.

[0035] Fig. 4A illustrates the details of another combination seam 48a which may join together the elements of the mattress topper 10 and, more particularly, the bucket 14, the skirt 44 and the quilted upper layer 36. As shown in Fig. 4A, tape 54 is wrapped around outer edges of the bucket 14, the skirt 44 and the quilted upper layer 36. The combination seam 48a joins together an edge portion 20a of sidewall 18 of bucket 14, an edge portion 56a of skirt 44 and an edge portion 58a of the quilted top layer or fiber panel 36 along with the tape 54. As shown in Fig. 4A, the edge portion 58a of the quilted top layer or fiber panel 36 is located between the edge portion 20a of sidewall 18 of bucket 14 and the edge portion 56a of skirt 44. Once, the edge portion 58a of the quilted top layer 36 and the edge portion 20a of sidewall 18 of bucket 14 and the edge portion 56a of skirt 44 are sewn together with the tape 54 with combination seam 48a, the sidewall 18 of bucket 14 is bent at location 66 downwardly to form an inverted U-shape outside the combination seam 48a. Similarly, the skirt 44 is bent at location 68 downwardly to form an inverted U-shape outside the combination seam 48a.

[0036] Figs. 5 and 6 illustrate an alternative embodiment of mattress topper 10a identical to the mattress topper 10, but omitting the lower cushioning layer 32.

[0037] Figs. 7 and 8 illustrate an alternative embodiment of mattress topper 10b identical to the mattress topper 10, but including two additional cushioning layers 60, 62. Each of the cushioning layers 60, 62 comprises fiber batt. As illustrated in Fig. 8, cushioning layer 60 is located between the quilted top layer or fiber panel 36 and the upper foam cushioning layer 34. Similarly, cushioning layer 62 is located between the bottom 16 of the casing 14 and the lower foam cushioning layer 32.

[0038] Figs. 9 and 10 illustrate an alternative embodiment of mattress topper 10c identical to the mattress topper 10, but having a non-quilted top layer 64 in place of a quilted top layer. The non-quilted top layer 64 may be made of any desired material. In either of the combination seams 48, 48a

shown in Figs. 4 and 4A, a non-quilted top layer 64 may be inserted in place of a quilted top layer.

[0039] Figs. 11 and 12 illustrate an alternative embodiment of mattress topper 10d identical to the mattress topper 10, but having a different pocketed spring assembly 24d in place of pocketed spring assembly 24. The pocketed spring assembly 24d need not be made of strings of individually pocketed springs joined together. Rather the pocketed spring assembly 24d may comprise a blanket of individually pocketed springs, each spring 30d being in a pocket 28d. Although the springs 30d shown in pockets 28d are illustrated as being shorter than the springs 30 in pockets 28 of the mattress topper 10, they may be any desired size. As shown in Fig. 12, pockets 28d comprise upper and lower plies 66, 68, respectively, joined together along intersecting seams 70. As shown in Fig. 11A, the spaced seams 70 intersect each other at intersections 72 and assume a checkerboard type of pattern. Some of the seams 70 extend transversely or from side-to-side while other seams 70 extend longitudinally or from head-to-foot.

[0040] One of ordinary skill in the art will readily recognize that the alternative embodiments of the mattress topper shown herein are exemplary only of a wide variety of alternative configurations that are readily possible within the scope of this invention.

[0041] From the above disclosure of the general principles of the present invention, and the preceding detailed description of at least one preferred embodiment, those skilled in the art will readily comprehend the various modifications to which this invention is susceptible. Therefore, we desire to be limited only by the scope of the following claims and equivalents thereof.

[0042] We claim:

1. A mattress topper for use on a mattress, the mattress topper comprising:
a bucket comprising a bottom and sides;
a pocketed spring assembly located inside the bucket;
at least one cushioning layer above the pocketed spring assembly;
a quilted top layer; and
a skirt adapted to fit around a finished mattress wherein the bucket, skirt and quilted top layer are sewn together.
2. The mattress topper of claim 1 further comprising tape wrapped around portions of the bucket, skirt and quilted top layer.
3. The mattress topper of claim 1 wherein the skirt has an elastic band.
4. The mattress topper of claim 1 wherein at least one cushioning layer is made of foam.
5. The mattress topper of claim 1 wherein at least one cushioning layer is made of polyurethane foam.
6. The mattress topper of claim 1 wherein the mattress topper comprises two cushioning layers.
7. The mattress topper of claim 1 wherein the mattress topper comprises at least one fiber layer.
8. The mattress topper of claim 1 wherein the quilted top layer comprises multiple layers quilted together.
9. The mattress topper of claim 1 wherein the mattress topper has at least one cushioning layer above and at least one cushioning layer below the pocketed spring assembly.

10. In combination,
a mattress; and
a mattress topper removable from the mattress, wherein the mattress topper comprises a casing surrounding a pocketed spring assembly, at least one cushioning layer, a quilted top layer; and a skirt adapted to fit around the mattress wherein the casing, skirt and quilted top layer are sewn together.
11. The combination of claim 10 wherein the skirt has one of a drawstring and an elastic band.
12. The combination of claim 10 wherein at least one cushioning layer is made of foam.
13. The combination of claim 10 wherein the mattress topper has at least two cushioning layers.
14. The combination of claim 10 wherein at least one of the cushioning layers is above the pocketed spring assembly and at least one of the cushioning layers is below the pocketed spring assembly.
15. The combination of claim 10 wherein at least one cushioning layer comprises a fiber layer.
16. The combination of claim 10 wherein the skirt of the mattress topper fits around the mattress.
17. The combination of claim 18 wherein the quilted top layer comprises multiple layers of fiber quilted together.
18. The combination of claim 18 further wherein the skirt of the mattress pad has an elastic loop therein.

19. The combination of claim 18 wherein at least two of the cushioning layers are fiber layers.

20. The combination of claim 18 wherein the skirt of the mattress topper fits around the sides of the mattress.

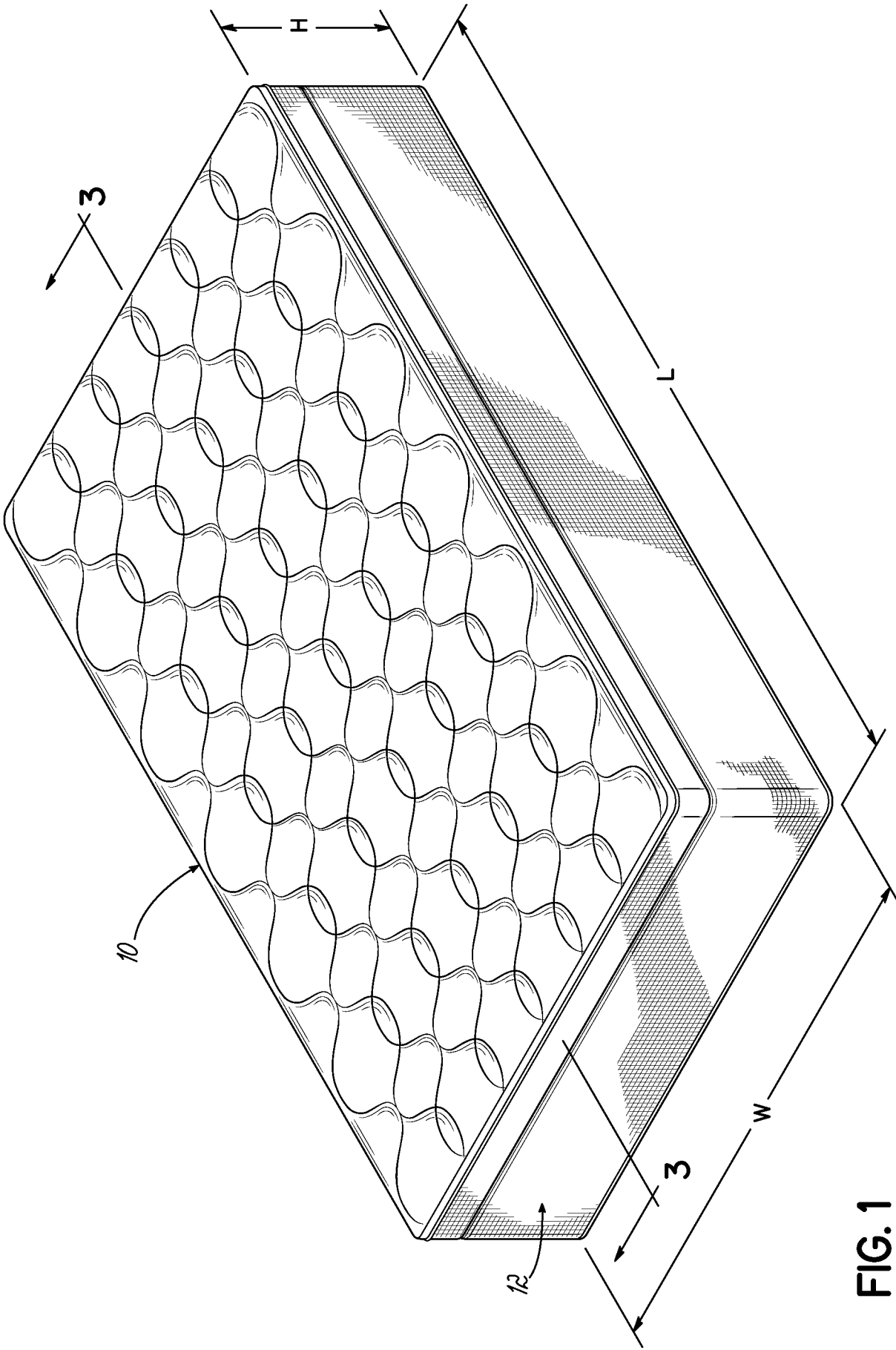


FIG. 1

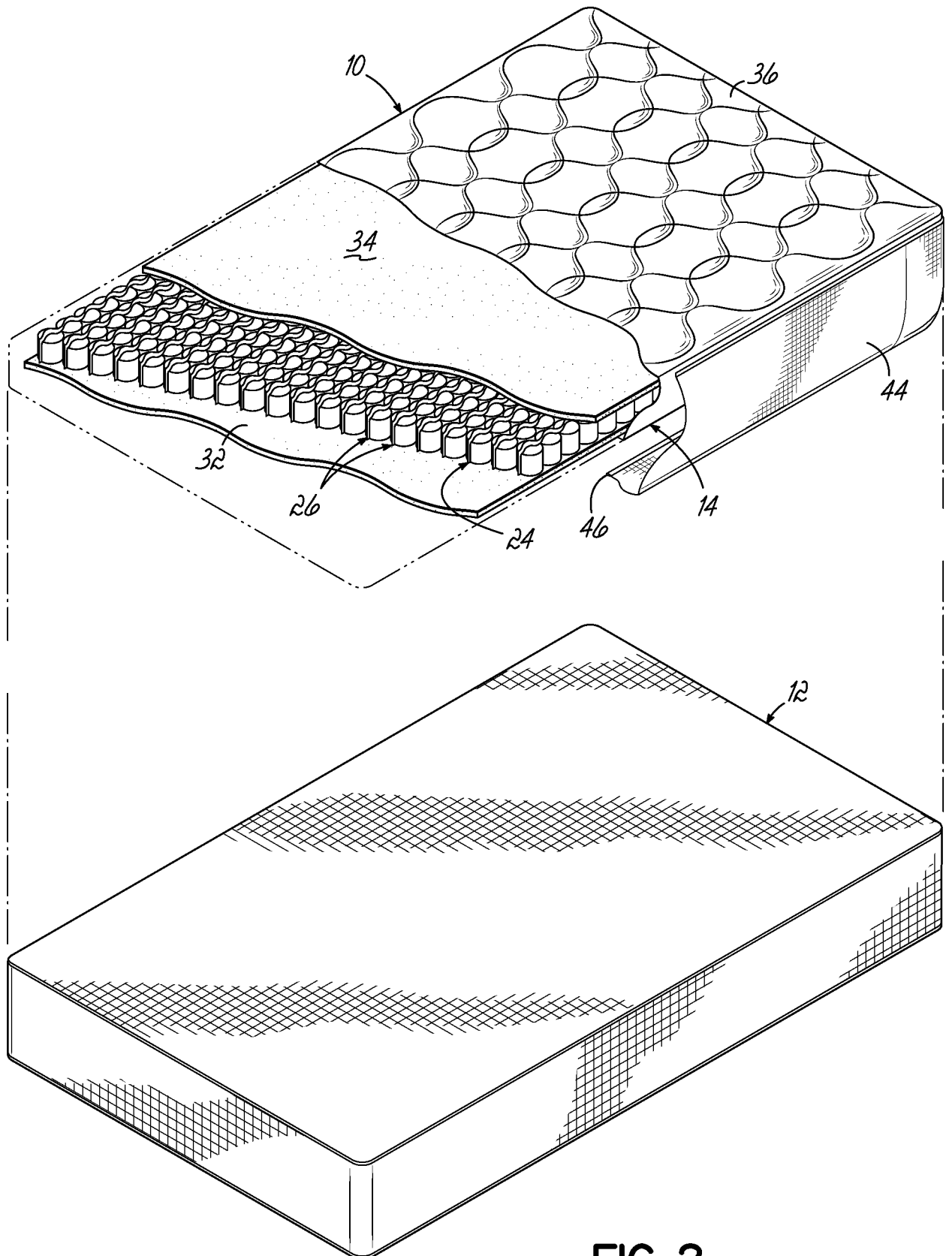


FIG. 2

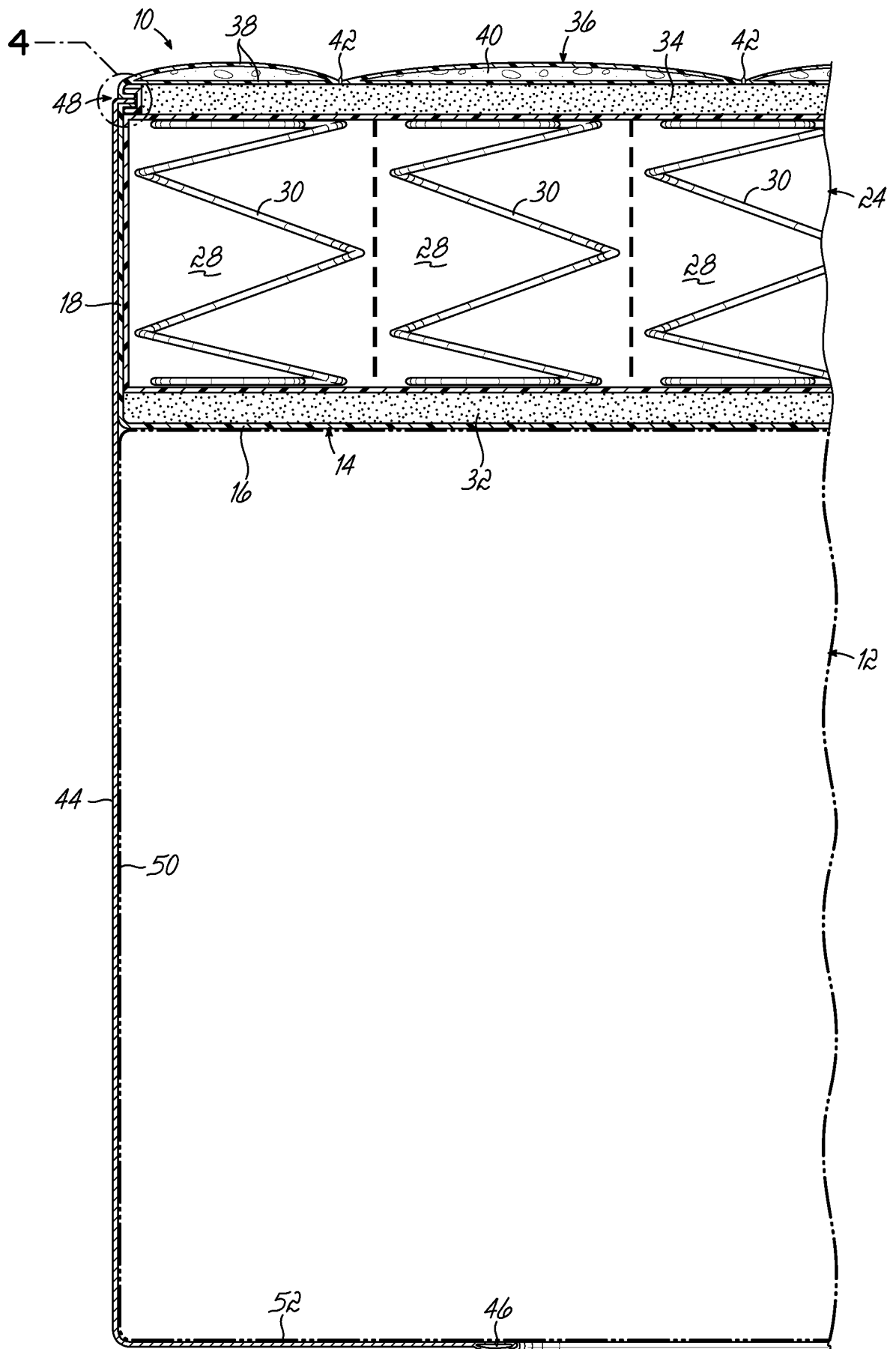


FIG. 3

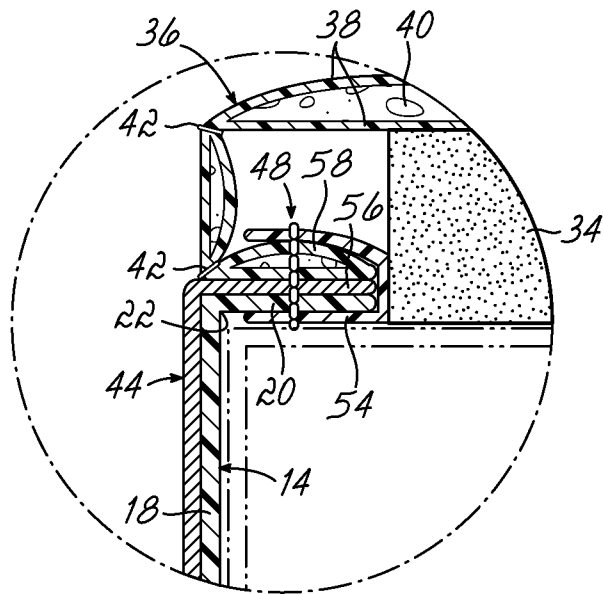


FIG. 4

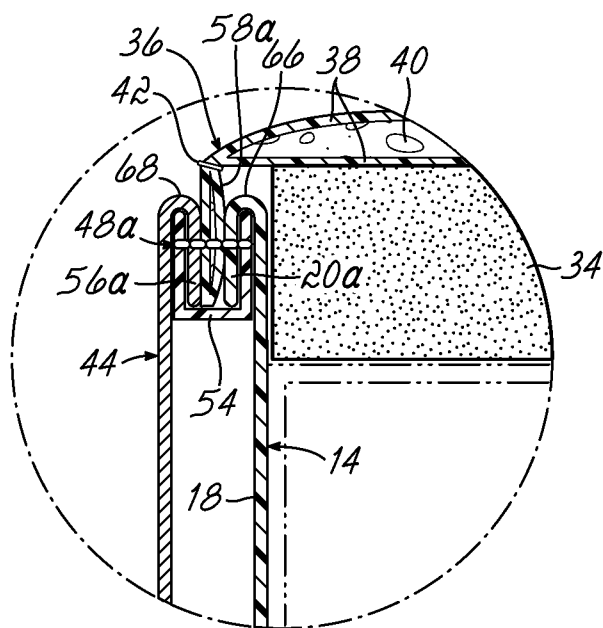


FIG. 4A

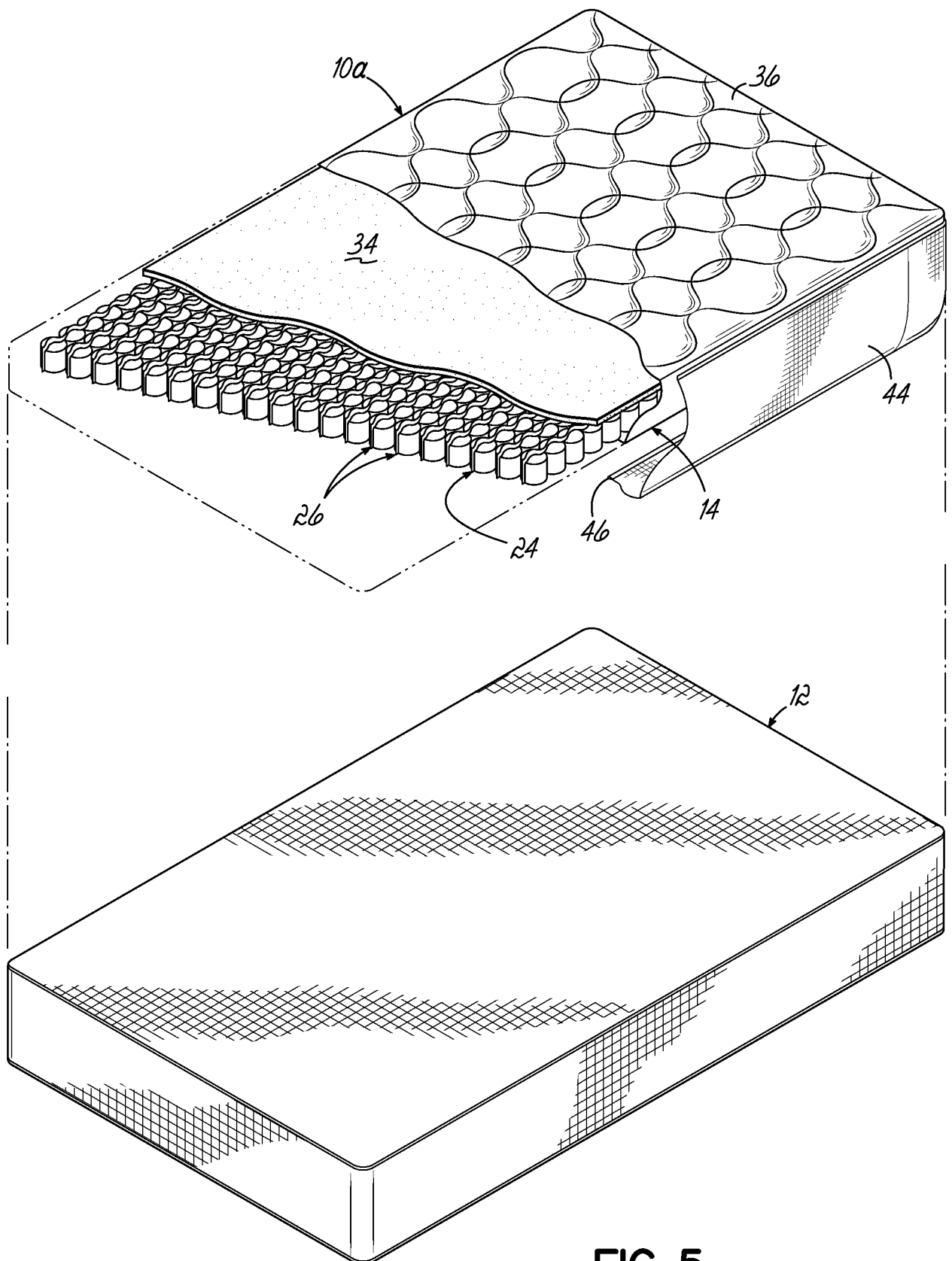


FIG. 5

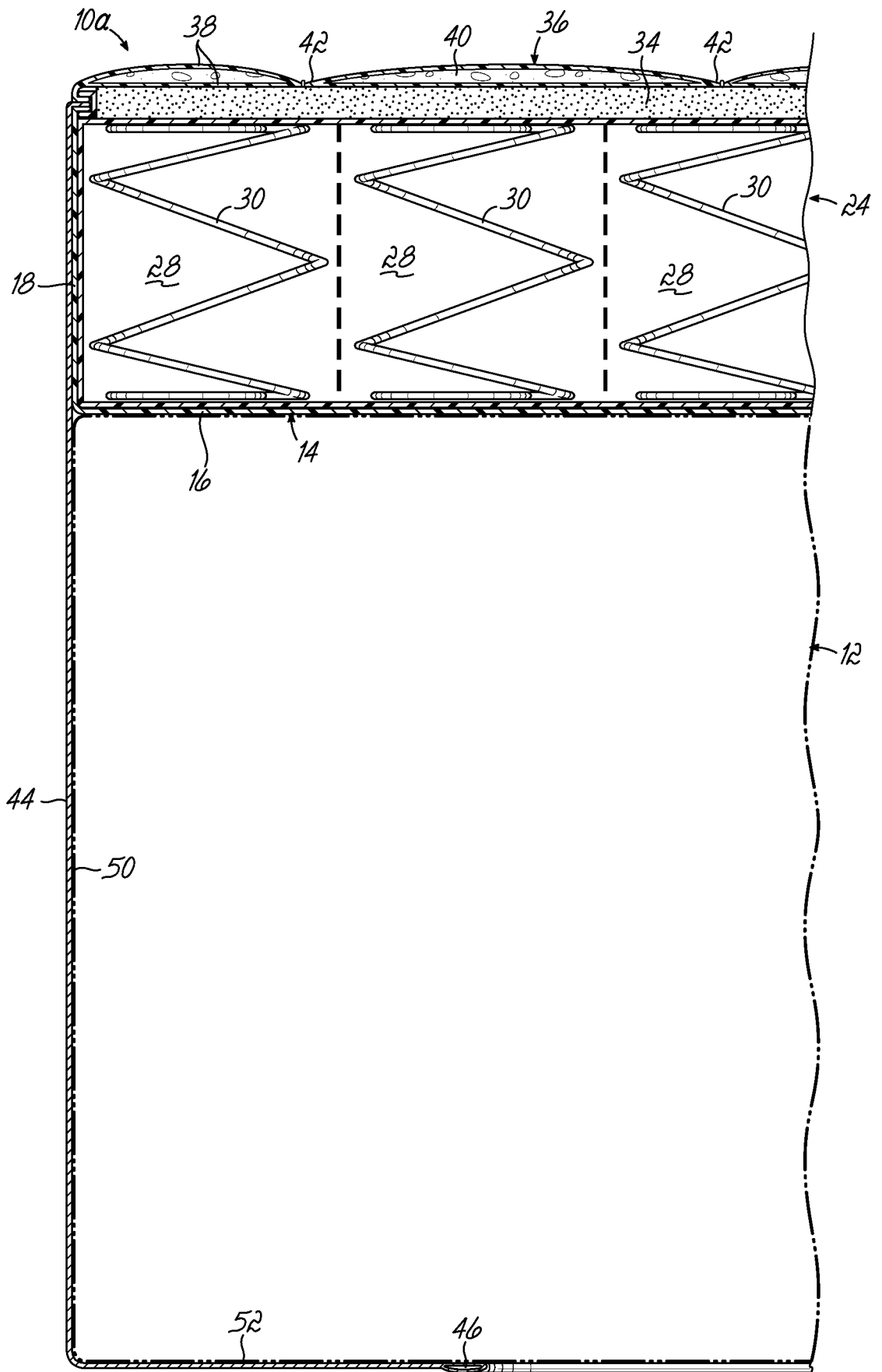


FIG. 6

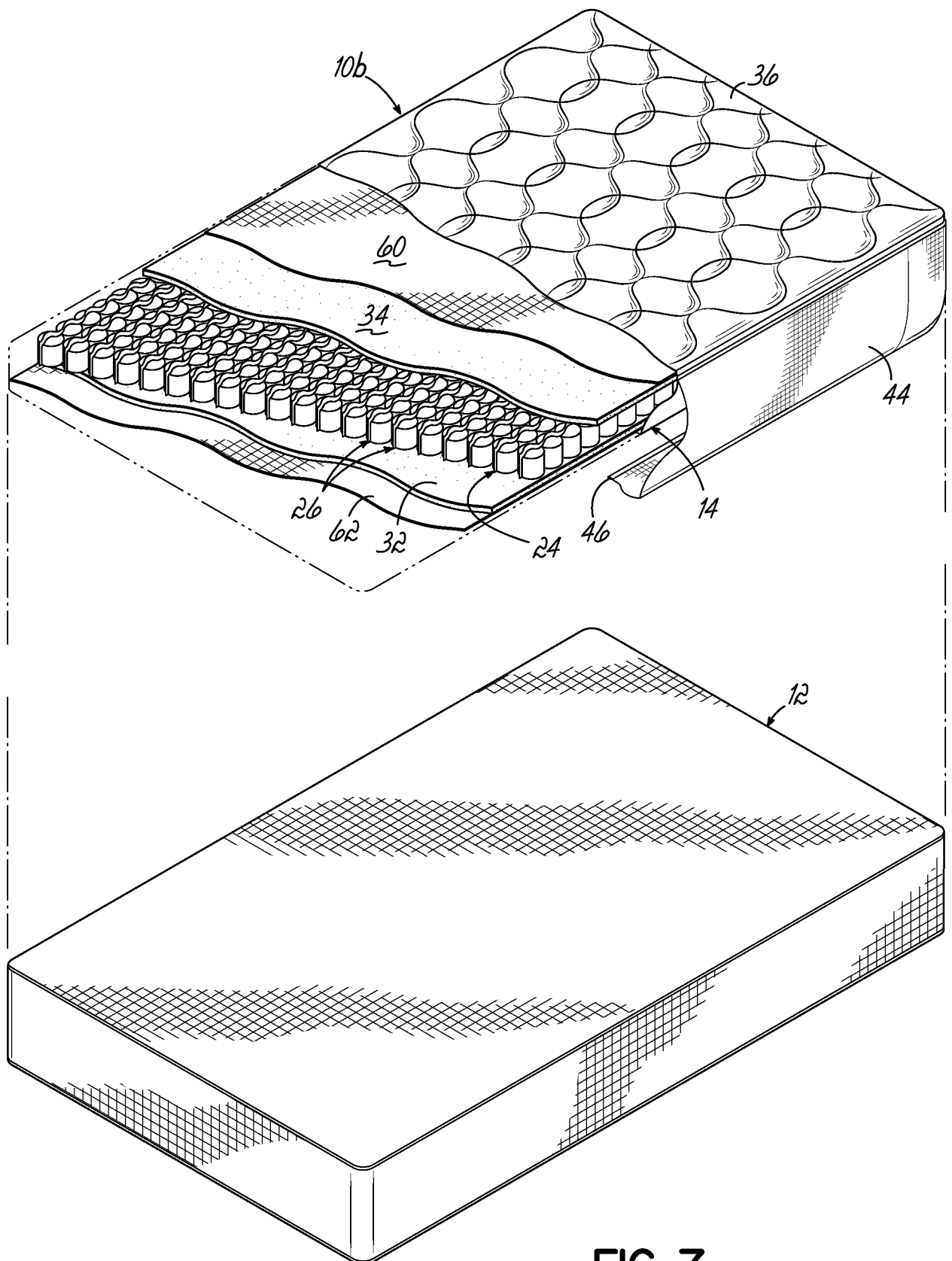


FIG. 7

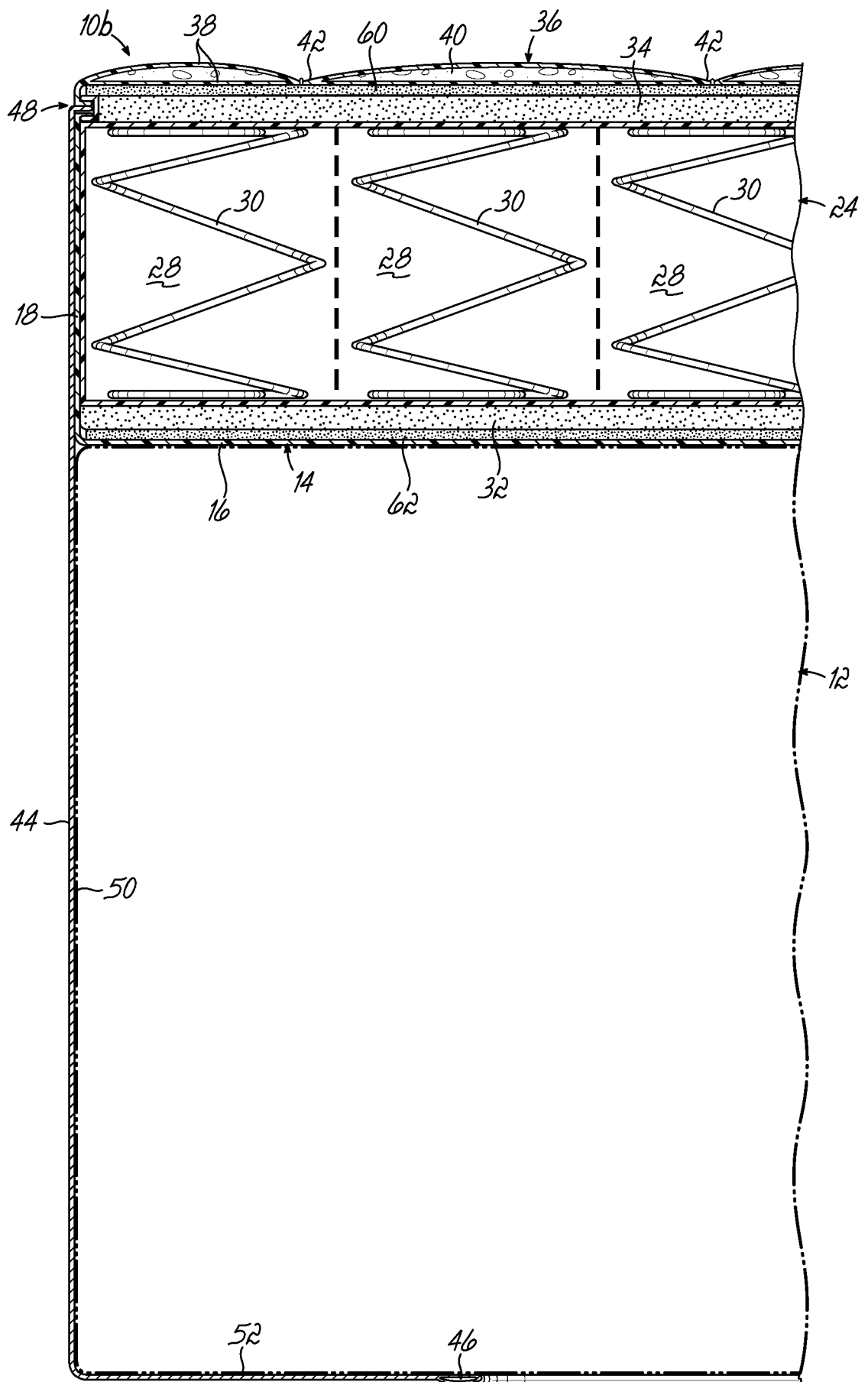


FIG. 8

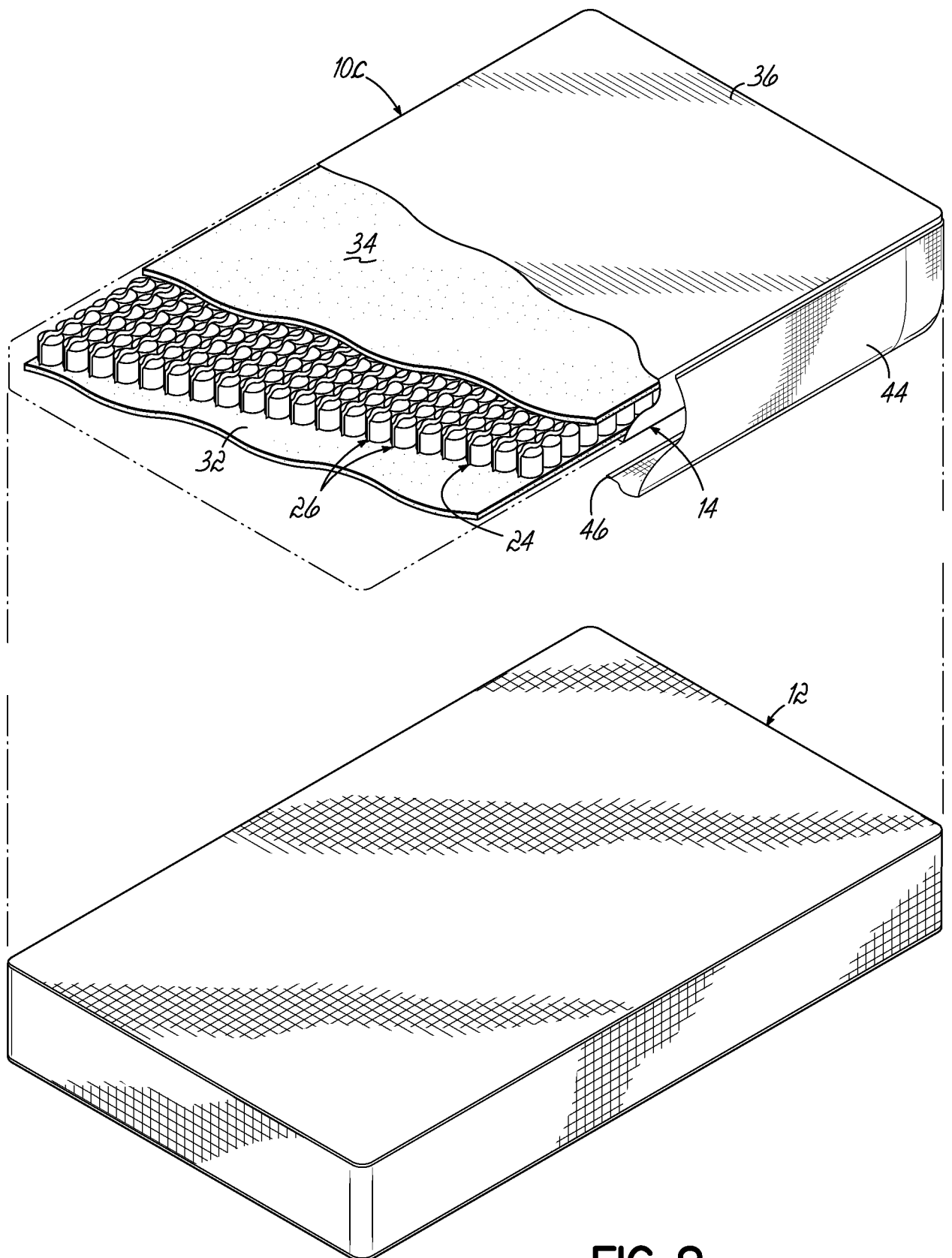


FIG. 9

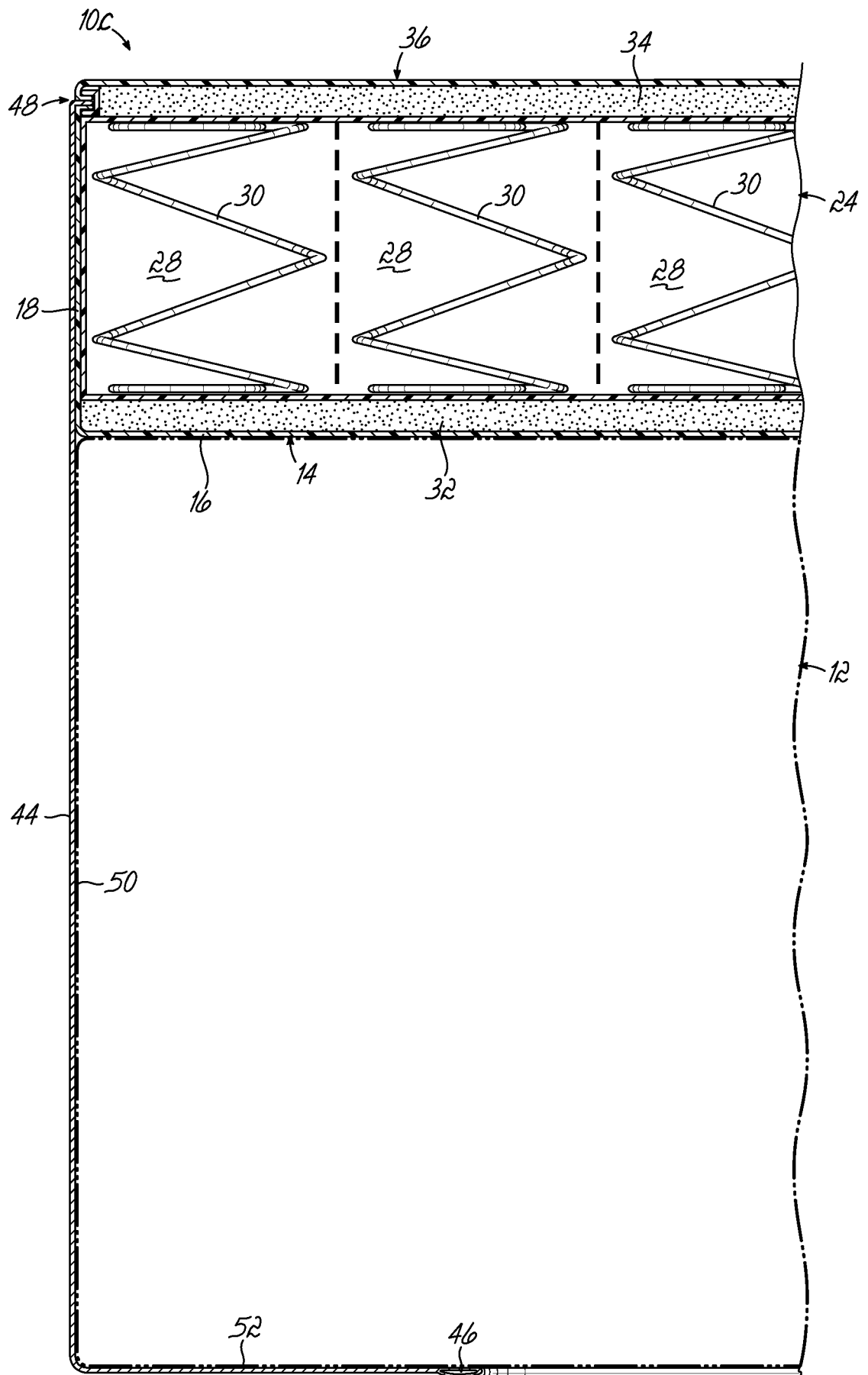


FIG. 10

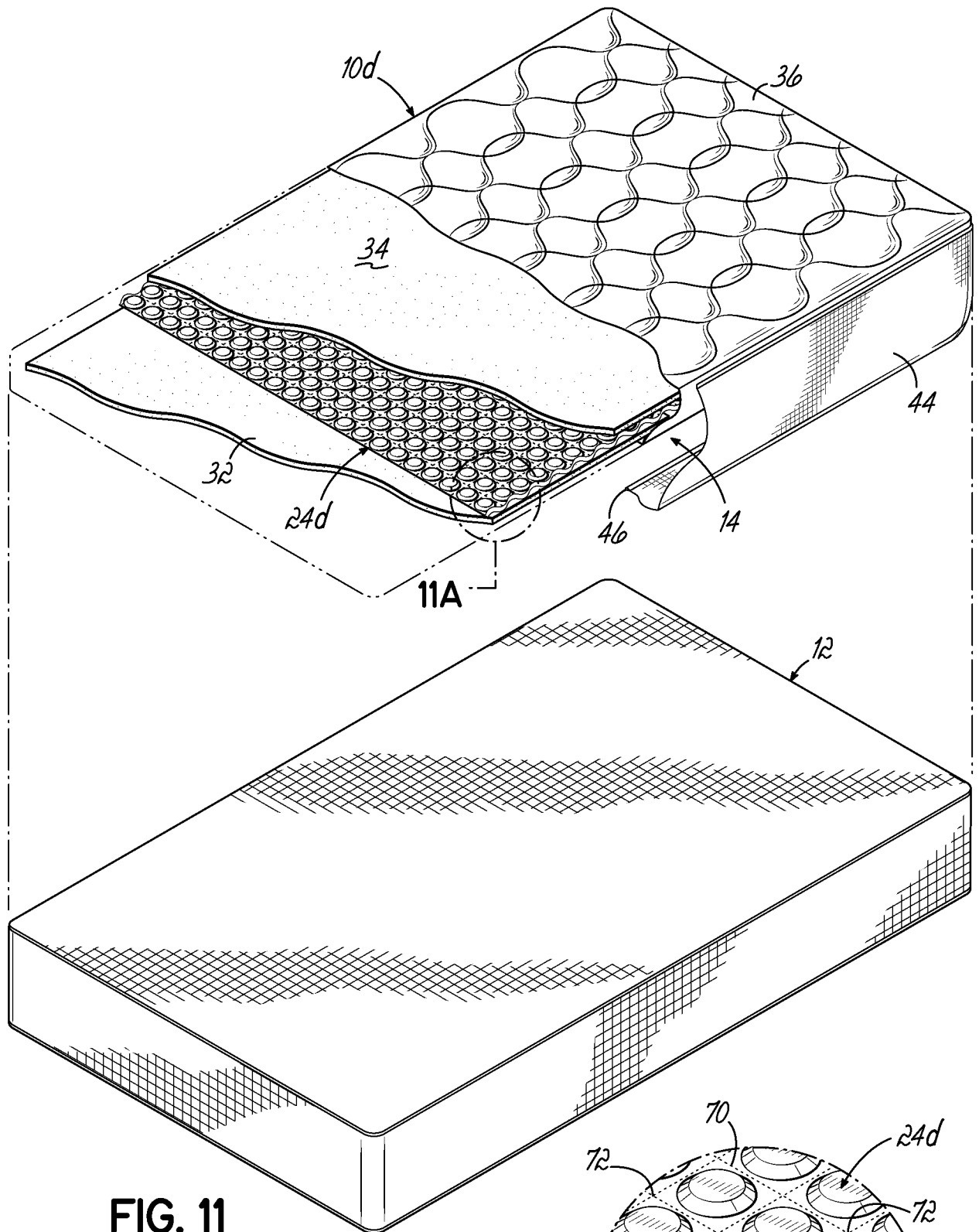
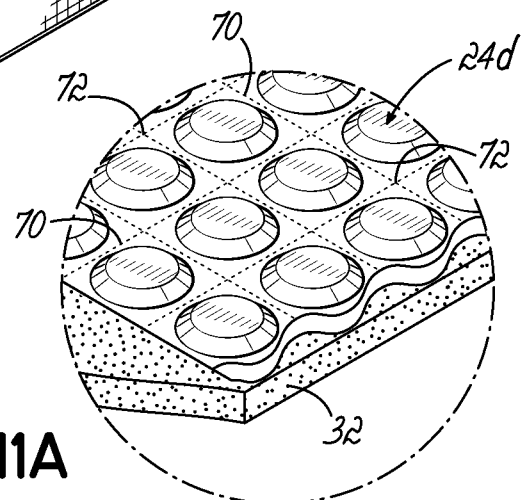


FIG. 11A



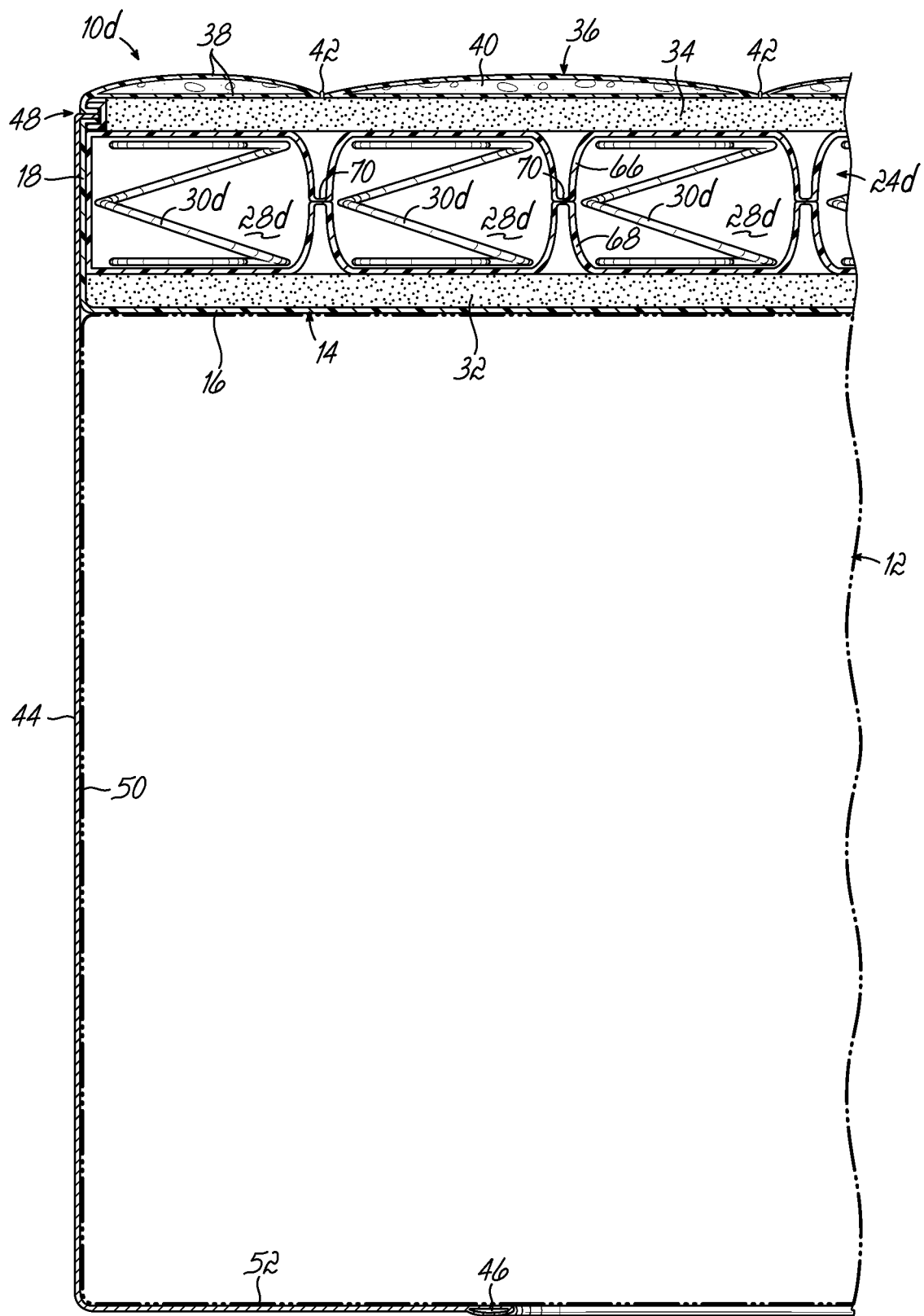


FIG. 12

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2014/043759

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A47C 27/05 (2014.01)

CPC - A47C 27/05 (2014.09)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - A47C 27/04, 27/05, 27/15, 27/20 (2014.01)

CPC - A47C 27/04, 27/05, 27/053, 27/056, 27/063, 27/064, 27/15, 27/20 (2014.09)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 5/654.1, 655.7, 655.8, 690, 691, 716, 720

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Orbit, Google Patents, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008/0263774 A1 (LEE) 30 October 2008 (30.10.2008) entire document	1-20
A	US 6,243,900 B1 (GLADNEY et al) 12 June 2001 (12.06.2001) entire document	1-20
A	US 6,658,682 B1 (WELLS) 09 December 2003 (09.12.2003) entire document	1-20
A	US 2013/0000043 A1 (BULLARD et al) 03 January 2013 (03.01.2013) entire document	1-20
A	US 2007/0234479 A1 (WARSHAVER) 11 October 2007 (11.10.2007) entire document	1-20

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

01 October 2014

Date of mailing of the international search report

03 NOV 2014

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