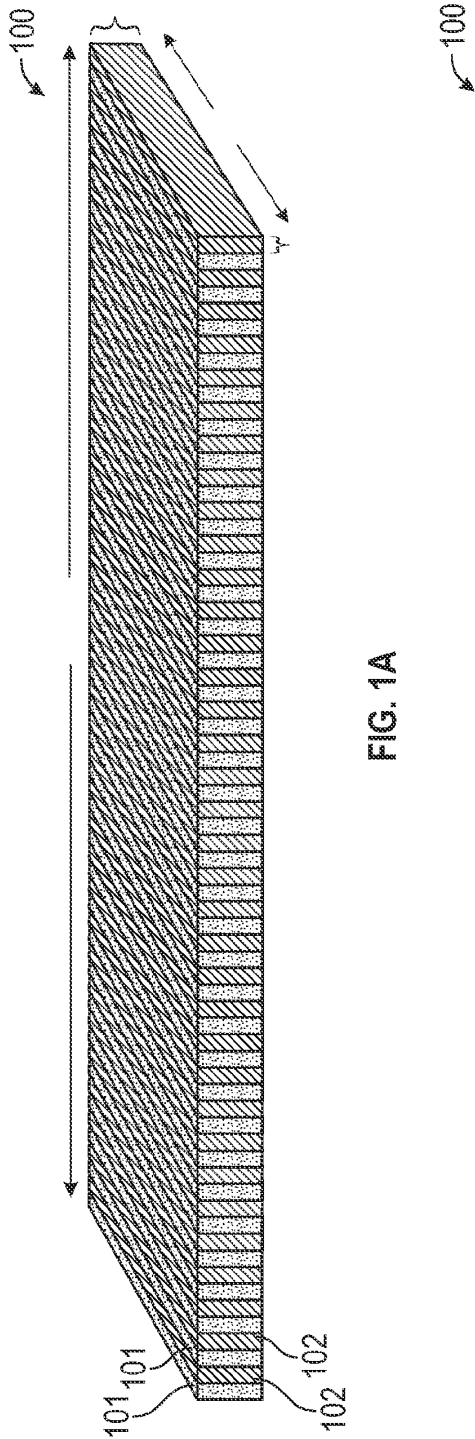
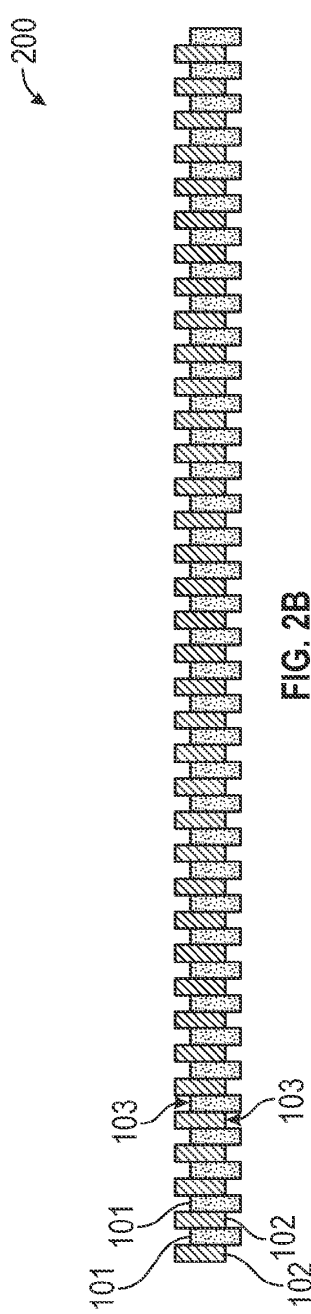
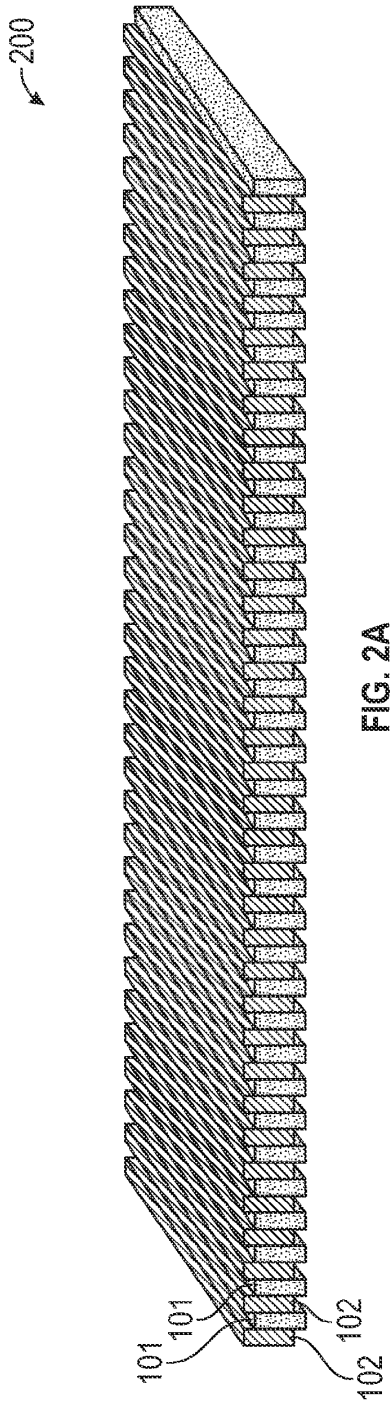
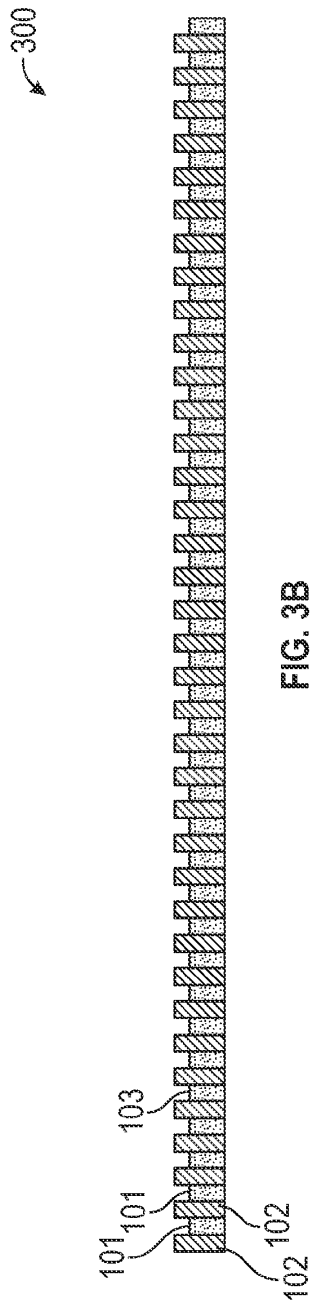
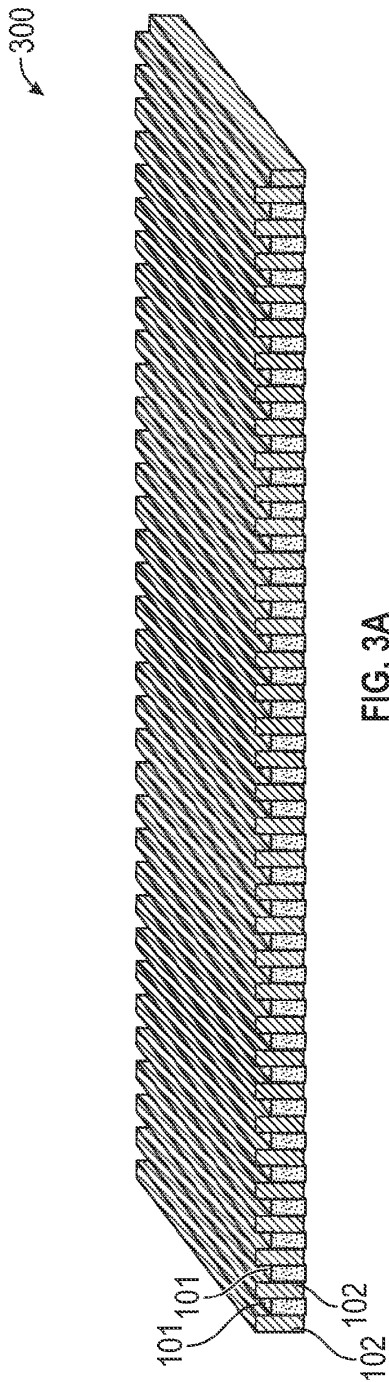






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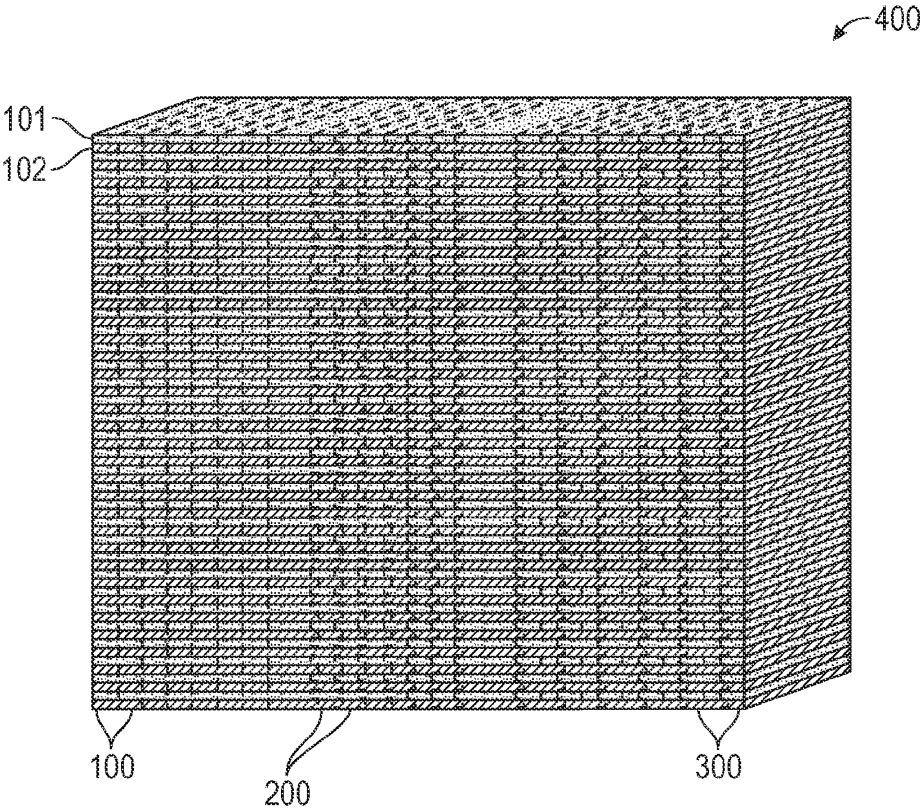


FIG. 4

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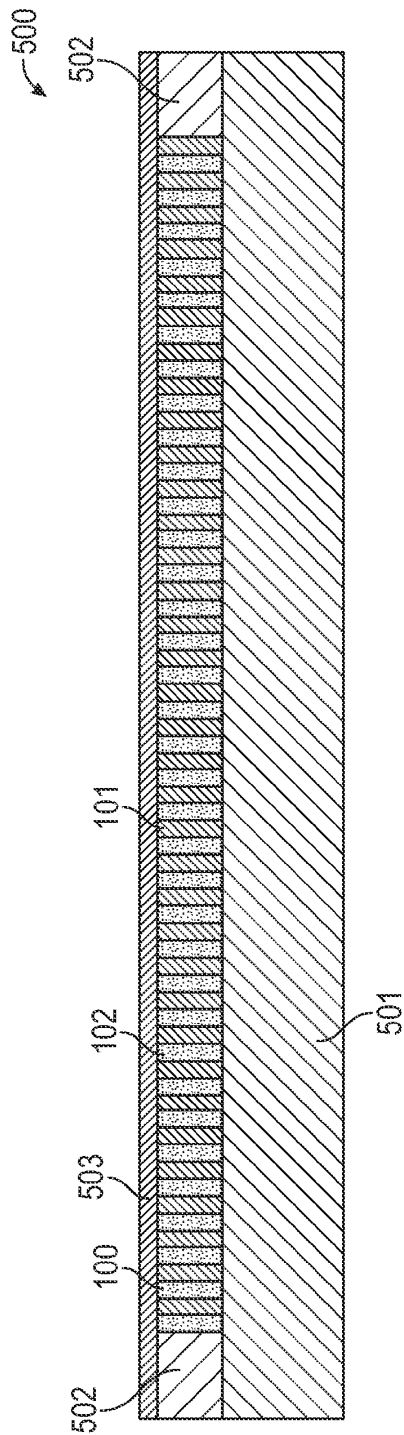


FIG. 5A

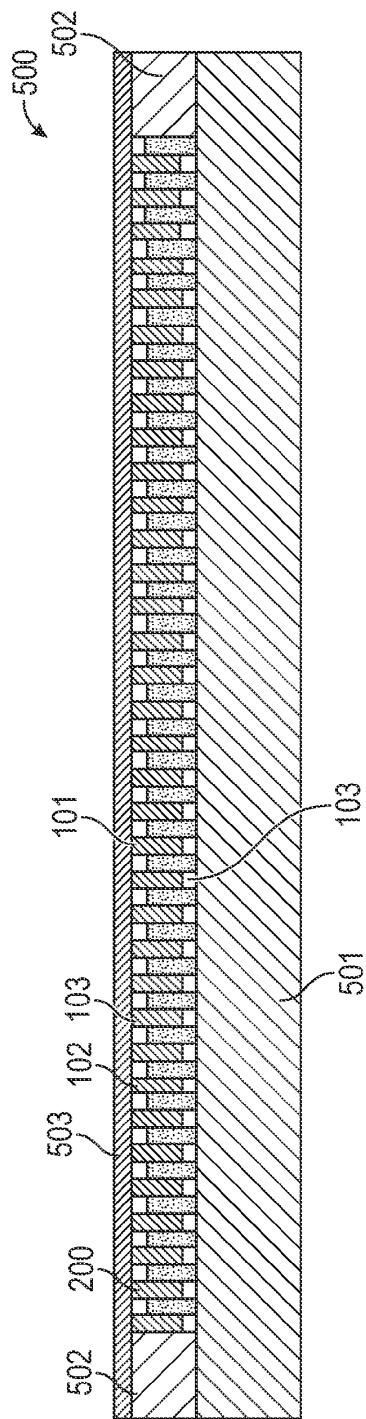


FIG. 5B

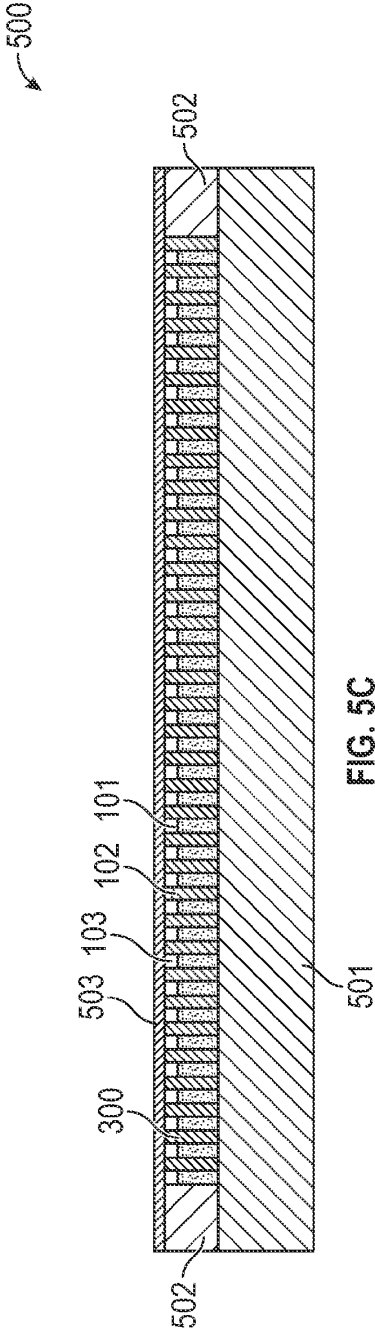


FIG. 5C

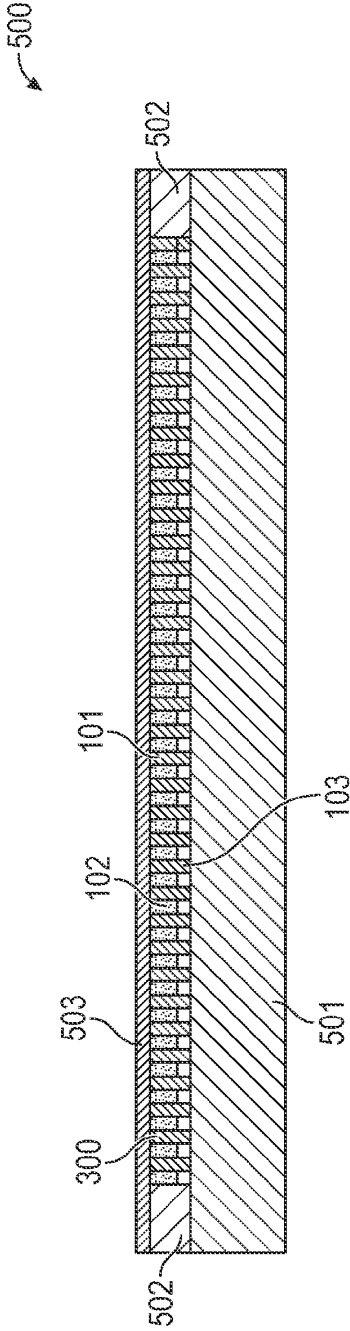


FIG. 5D

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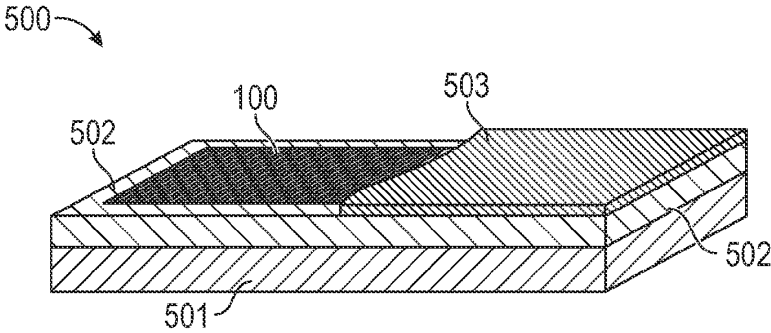


FIG. 6

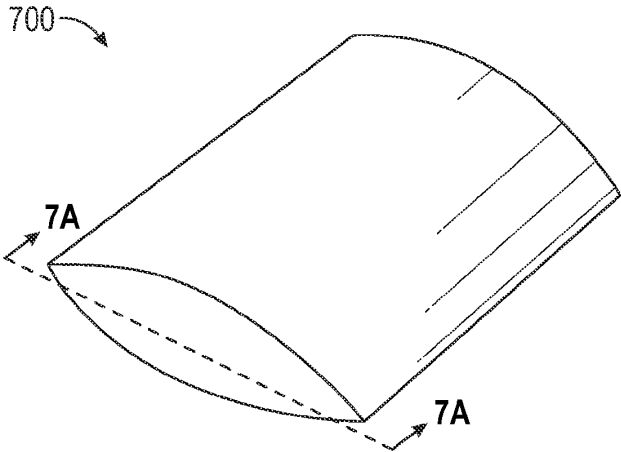


FIG. 7

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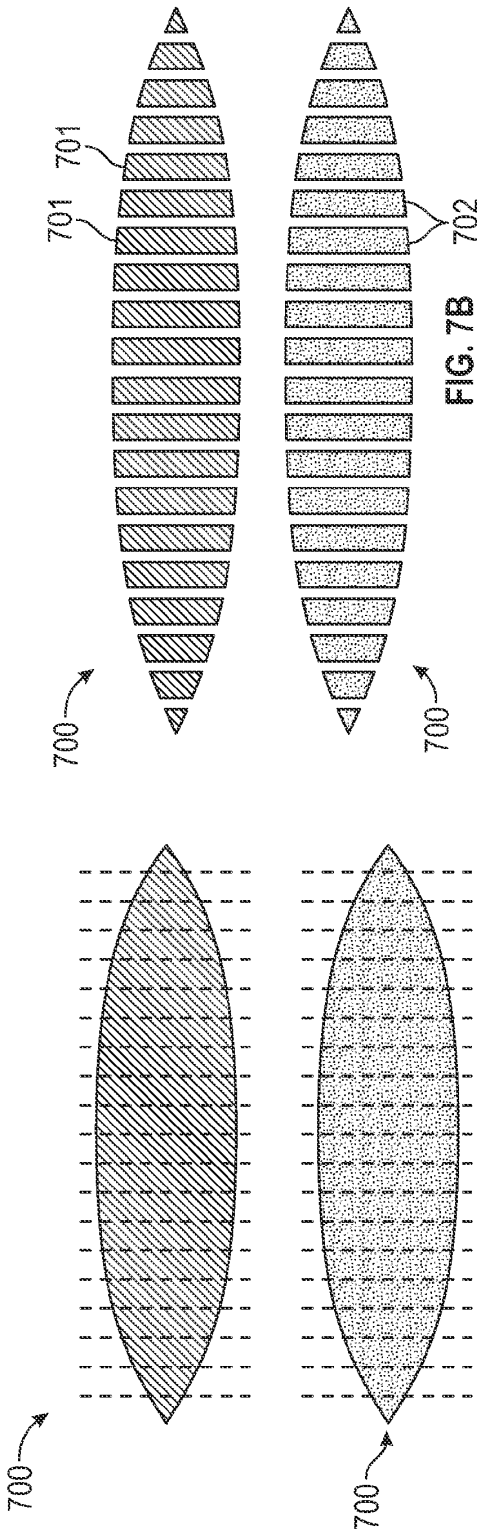


FIG. 7A

FIG. 7B

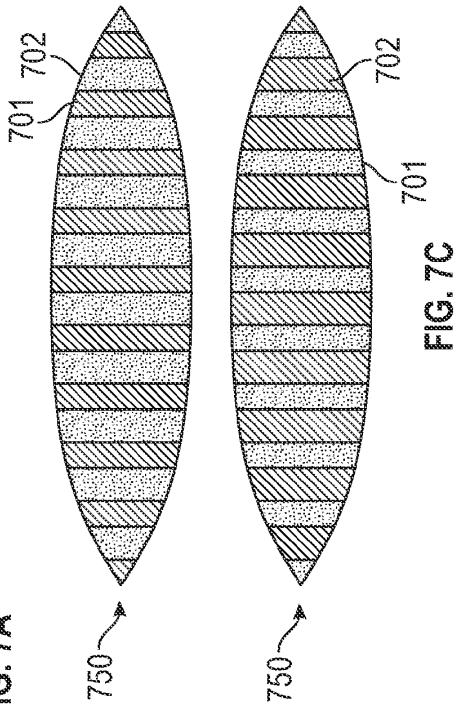


FIG. 7C

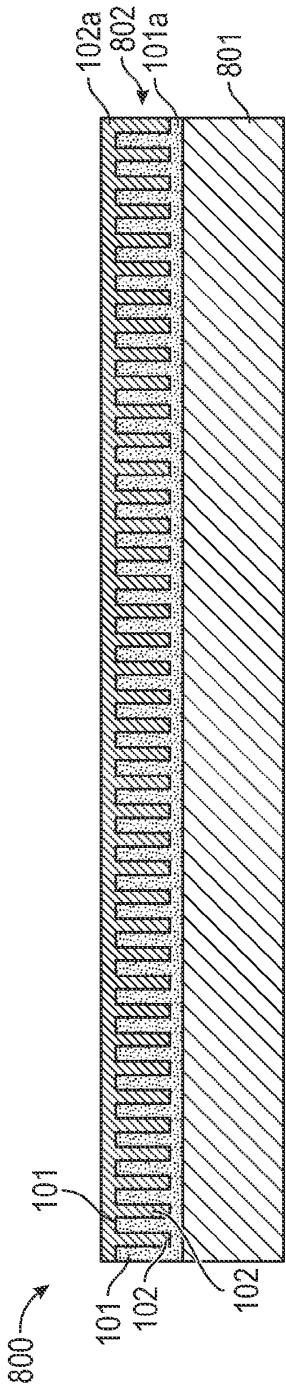


FIG. 8

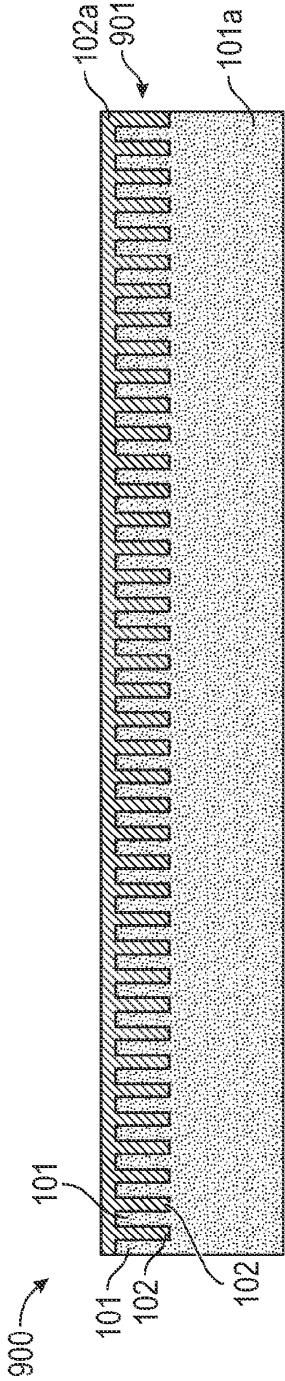
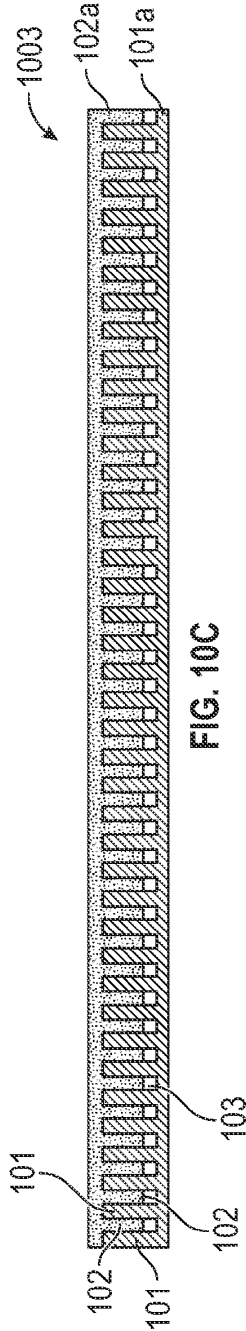
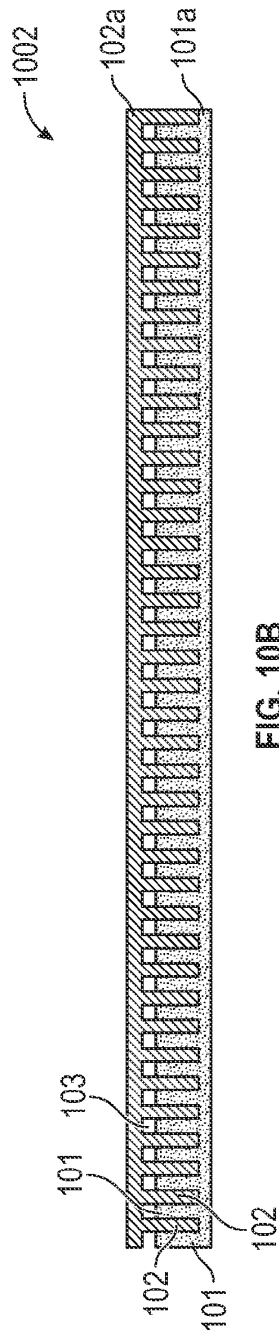
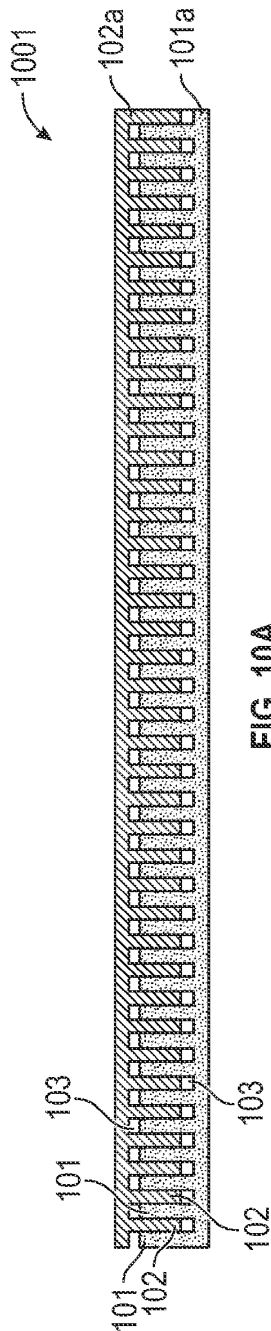


FIG. 9



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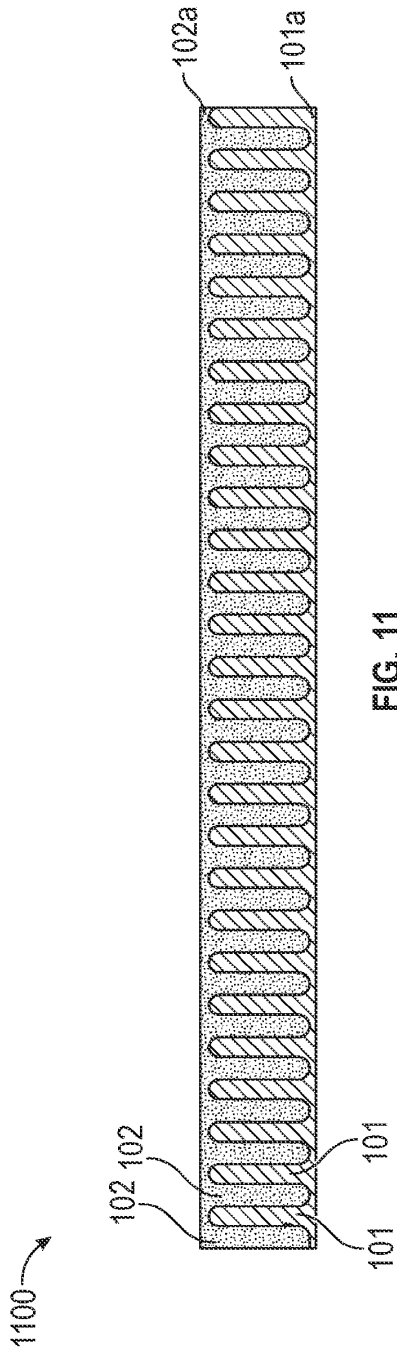


FIG. 11

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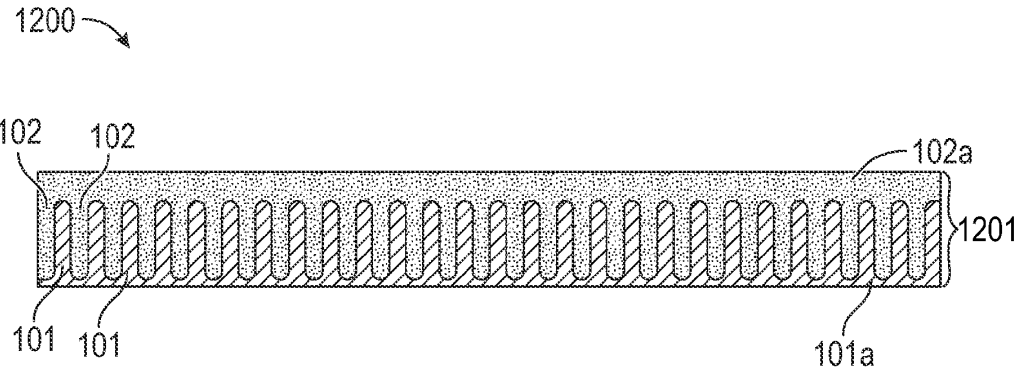


FIG. 12A

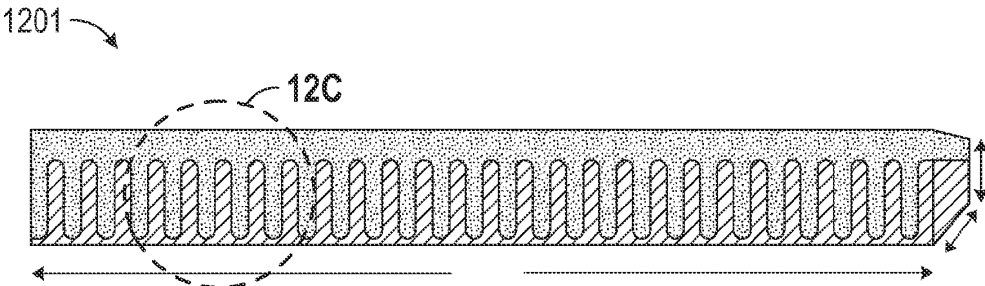


FIG. 12B

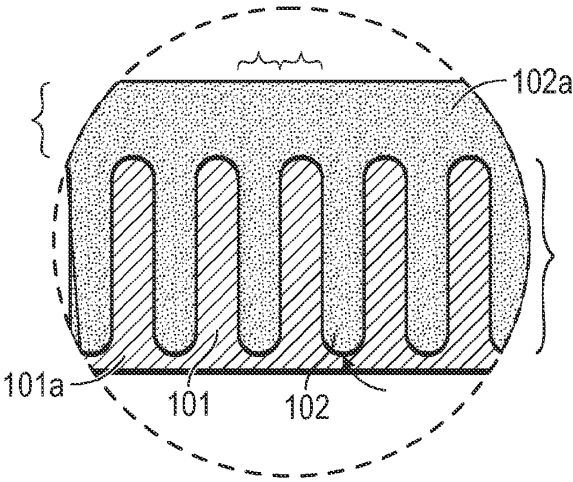


FIG. 12C

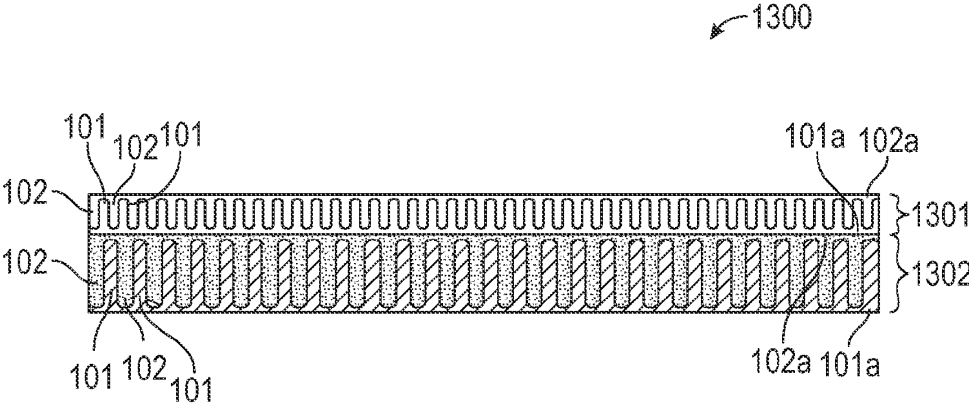


FIG. 13A

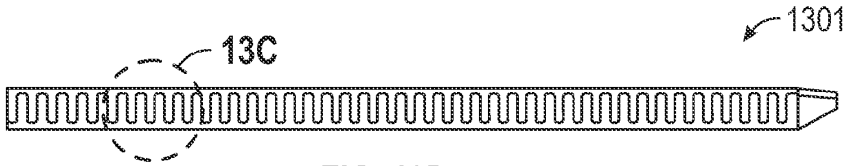


FIG. 13B

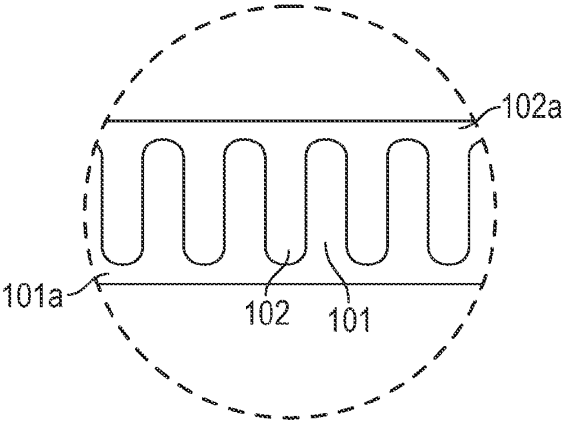


FIG. 13C

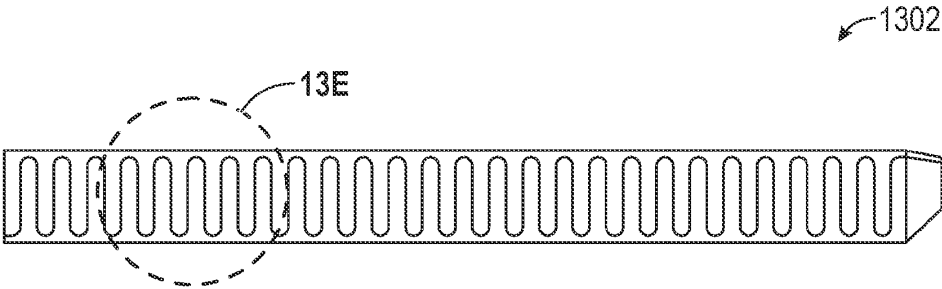


FIG. 13D

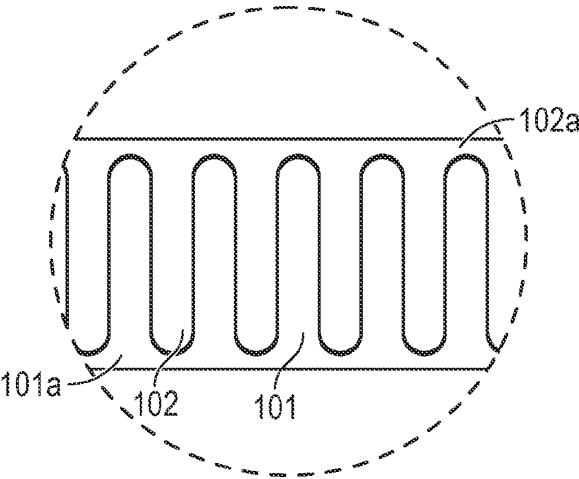


FIG. 13E

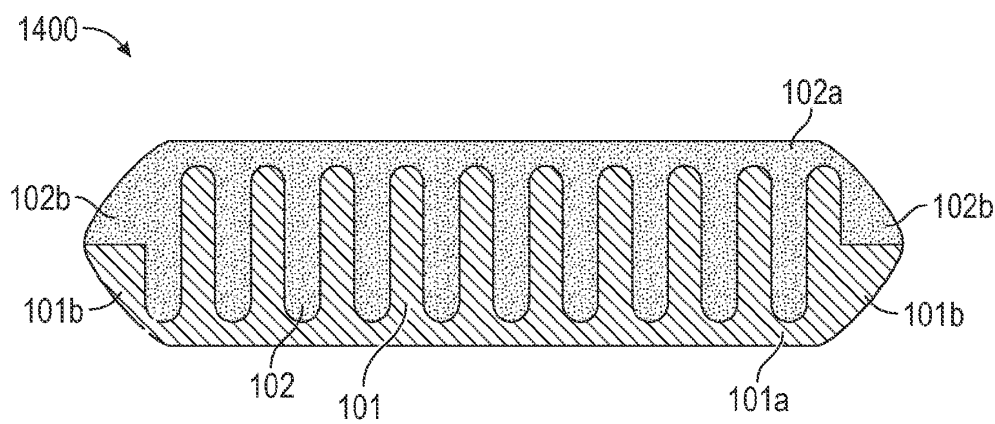


FIG. 14

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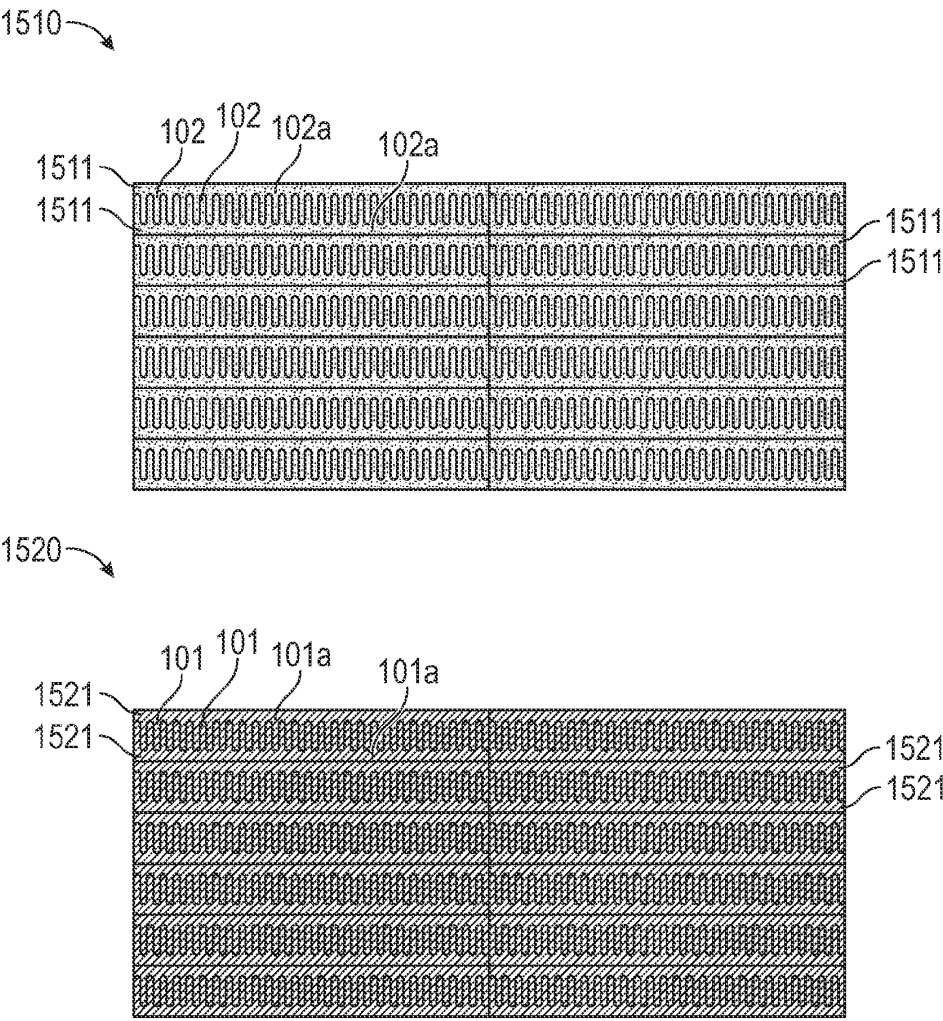


FIG. 15A

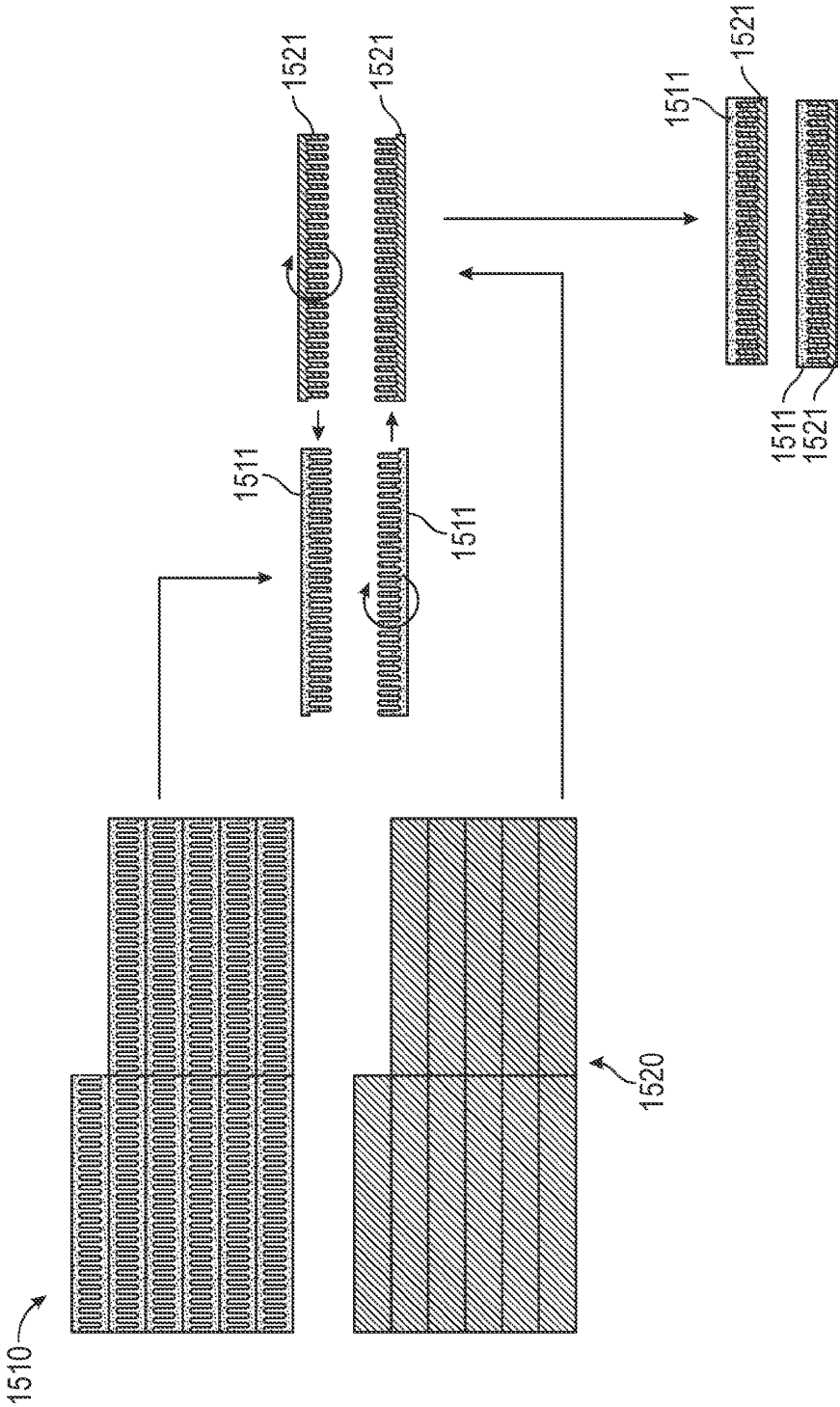


FIG. 15B

Test #	L _H	L _T	L _W /L _T	Overall Size	Foam A (Bottom)	Foam B (Top)	Base
1	3"	1"	3	60" x 80" x 3"	18 ILD, 1.8 lb/ft ³ density conventional PU foam	10 ILD, 4.0 lb/ft ³ memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
2	3"	1"	3	60" x 80" x 3"	24 ILD, 1.8 lb/ft ³ density conventional PU foam	10 ILD, 4.0 lb/ft ³ memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
3	3"	1"	3	60" x 80" x 3"	32 ILD, 1.8 lb/ft ³ density conventional PU foam	10 ILD, 4.0 lb/ft ³ memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
4	3"	1"	3	60" x 80" x 3"	18 ILD, 1.8 lb/ft ³ density conventional PU foam	15 ILD, 2.5 lb/ft ³ density Energex	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
5	3"	1"	3	60" x 80" x 3"	24 ILD, 1.8 lb/ft ³ density conventional PU foam	15 ILD, 2.5 lb/ft ³ density Energex	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
6	3"	1"	3	60" x 80" x 3"	32 ILD, 1.8 lb/ft ³ density conventional PU foam	15 ILD, 2.5 lb/ft ³ density Energex	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
7	3"	1"	3	60" x 80" x 3"	19 ILD Talalay latex foam	23 ILD, 6.3 lb/ft ³ density memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
8	3"	1"	3	60" x 80" x 3"	15 ILD, 2.5 lb/ft ³ density Energex	10 ILD, 4.0 lb/ft ³ memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
9	4"	1"	3	60" x 80" x 4"	15 ILD, 2.5 lb/ft ³ density Energex	10 ILD, 4.0 lb/ft ³ memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
10	3"	1"	3	60" x 80" x 3"	19 ILD Talalay latex foam	23 ILD, 6.3 lb/ft ³ density memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
11	4"	1"	4	60" x 80" x 4"	19 ILD Talalay latex foam	23 ILD, 6.3 lb/ft ³ density memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
12	3"	1"	3	60" x 80" x 3"	14 ILD Talalay latex foam	23 ILD, 6.3 lb/ft ³ density memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring
13	4"	1"	4	60" x 80" x 4"	14 ILD Talalay latex foam	23 ILD, 6.3 lb/ft ³ density memory foam	1" 32 ILD conventional PU foam atop 8" pocketed coil spring

FIG. 16

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Test #	Results
1	Insufficient back support. Immersion is too good, sink through to base, somewhat affecting pressure relief. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. The conventional foam maintains breathability while the memory foam molds to the body. Excellent motion dampening.
2	Excellent back support. Immersion is good without sinking through to base. Pressure relief good. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. The conventional foam maintains breathability while the memory foam molds to the body. Excellent motion dampening.
3	Excellent back support. Immersion is slightly less than desired, but pressure relief good. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. The conventional foam maintains breathability while the memory foam molds to the body. Excellent motion dampening.
4	Insufficient back support. Immersion is too good, sink through to base, somewhat affecting pressure relief. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. Both foams maintain breathability while the Energex molds to the body. Good motion dampening.
5	Excellent back support. Immersion is good without sinking through to base. Pressure relief good. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. Both foams maintain breathability while the Energex molds to the body (quick rebound memory foam). Good motion dampening.
6	Excellent back support. Immersion is slightly less than desired, but pressure relief good. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. Both foams maintain breathability while the Energex molds to the body (quick-rebound memory foam). Good motion dampening.
7	Excellent back support. Excellent immersion and pressure relief. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. The latex breathes and also gives a more lively feel than those in the test group that do not include latex while the memory foam molds to the body. The interplay between liveliness in the latex and motion dampening in the memory foam gives a synergistic blend with some properties of each.
8	Excellent back support. Superior immersion and pressure relief. All properties improved over Foam Type A and Foam Type B as 2.0" slabs one atop another. Excellent motion dampening. The energex maintains breathability.
9	Good back support. Good immersion and pressure relief. All properties improved over Foam Type A and Foam Type B as 2.0" slabs one atop another. Excellent motion dampening. The energex maintains breathability.
10	Excellent back support. Excellent immersion and pressure relief. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. Good motion dampening from the memory foam without killing the liveliness from the latex foam.
11	Excellent back support. Excellent immersion and pressure relief. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. Good motion dampening from the memory foam without killing the liveliness from the latex foam.
12	Excellent back support. Superior immersion and pressure relief. All properties improved over Foam Type A and Foam Type B as 1.5" slabs one atop another. Good motion dampening from the memory foam without killing the liveliness from the latex foam.
13	Excellent back support. Superior immersion and pressure relief. All properties improved over Foam Type A and Foam Type B as 2.0" slabs one atop another. Good motion dampening from the memory foam without killing the liveliness from the latex foam.

FIG. 16
(Continued)

Test #	Height	L _H	L _T	L _H /L _T	Overall Size	Foam A (bottom)	Foam B (top)	Base
14	10"	5.5"	1.5"	3.7	60" x 80" x 10"	55 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 1.25" .	18 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 3.25" .	None. (Tested as the entire mattress)
15	10"	5.5"	1.5"	3.7	60" x 80" x 10"	55 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 1.25" .	22 ILD, 2.5 lb/ft ³ density Energex. B _H is 3.25" .	None. (Tested as the entire mattress)
16	8"	6"	1.5"	4	60" x 80" x 8"	55 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 1" .	18 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 1" .	None. (Tested as a base)

FIG. 17

Test #	Results
14	As a whole mattress, excellent back support and excellent pressure relief. All foams breathe well. Good motion dampening.
15	As a whole mattress, excellent back support and excellent pressure relief, with a somewhat more plush feel than test 14 that has 18 ILD conventional PU foam in place of the Energex foam in this test. Good motion dampening and both foams breathe well.
16	Superior as a base to the pocketed coil springs topped by 1" foam in that used beneath any of a variety of mattress comfort layers, it increases (compared to the springs) pressure relief and elevates back support. Also very superior to a single homogeneous base foam layer with an ILD that is an average of the ILDs . In this case, the average of the 55 and 18 ILD foams average to 36.5 ILD, and so the 55/18-ILD base was compared to a homogeneous 36-ILD base under various mattress cushioning layers. The homogeneous base felt hard and uncomfortable, with increased pressure at the hip and shoulder of the user and decreased back support because the non-immersion of the hip and shoulder caused the torso to sag in order to reach needed support. Good motion dampening. Both foams breathe well.

FIG. 17
(Continued)

Test #	Height	L _H	L _T	L _T /L _T	Overall Size	Foam A (Bottom)	Foam B (Top)	Base
17	4"	3"	1"	3	60" x 80" x 4"	15 ILD, 2.5 lb/ft ³ density Energex. B _H is 0.5".	24 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 0.5".	Cushion from Test 16
18	4"	3"	1"	3	60" x 80" x 4"	4 lb/ft ³ extra-doughy-feel custom memory foam. B _H is 0.5".	24 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 0.5".	Cushion from Test 16
19	5"	4"	1"	4	60" x 80" x 5"	15 ILD, 2.5 lb/ft ³ density Energex. B _H is 0.5".	32 ILD, 1.8 lb/ft ³ density conventional PU foam. B _H is 0.5".	Cushion from Test 16
20	5"	4"	1"	4	60" x 80" x 5"	4 lb/ft ³ extra-doughy-feel custom memory foam. B _H is 0.5".	22 ILD, 2.5 lb/ft ³ density Energex. B _H is 0.5".	Cushion from Test 16 except with foam B being 22 ILD, 2.5 lb/ft ³ density Energex
21	5"	4"	1"	4	60" x 80" x 5"	22 ILD, 2.5 lb/ft ³ density Energex. B _H is 0.5".	24 ILD Talalay latex foam. B _H is 0.5".	Cushion from Test 16 except with foam B being 22 ILD, 2.5 lb/ft ³ density Energex
22	5"	4"	1"	4	60" x 80" x 5"	4 lb/ft ³ extra-doughy-feel custom memory foam. B _H is 0.5".	24 ILD Talalay latex foam. B _H is 0.5".	Cushion from Test 16 except with foam B being 22 ILD, 2.5 lb/ft ³ density Energex

FIG. 18

Test #	Results
17	Excellent pressure relief and back support. Excellent immersion. Remarkably softer than a mattress made of homogeneous horizontal slabs of the same foams atop one another. Even though very soft, it has firm and even pressure support under the torso. Very good motion dampening. All foams in this test breathe well.
18	Excellent pressure relief and back support. Excellent immersion. Remarkably softer than a mattress made of homogeneous horizontal slabs of the same foams atop one another. Even though very soft, it has firm and even pressure support under the torso. Conventional foam maintains breathability (the mattress demonstrates nearly no heat trapping) while the memory foam molds to the body over time without losing back support due to the conventional foam maintaining that support. Excellent motion dampening.
19	Superior pressure relief and back support. Superior immersion. Remarkably softer than a mattress made of homogeneous horizontal slabs of the same foams atop one another. Even though very soft, it has firm and even pressure support under the torso. All of the foams used maintains breathability. Excellent motion dampening.
20	Superior pressure relief and back support. Superior immersion. Remarkably softer than a mattress made of homogeneous horizontal slabs of the same foams atop one another. Even though very soft, it has firm and even pressure support under the torso. Conventional foam maintains breathability while the memory foam molds to the body over time without losing back support due to the Energex foam maintaining that support.
21	Superior pressure relief and back support. Superior immersion. Remarkably softer than a mattress made of homogeneous horizontal slabs of the same foams atop one another. Even though very soft, it has firm and even pressure support under the torso. All the foams in this mattress breathe. The latex gives a more lively feel than those in the test group that do not include latex (some users prefer liveliness to dampening of motion). Fair motion dampening.
22	Superior pressure relief and back support. Superior immersion. Remarkably softer than a mattress made of homogeneous horizontal slabs of the same foams atop one another. Even though very soft, it has firm and even pressure support under the torso. The latex foam (along with the Energex and conventional foam) maintains breathability while the memory foam molds to the body over time without losing back support due to the Energex foam maintaining that support. Good motion dampening considering the inclusion of lively latex.

FIG. 18
(Continued)

Test #	Height	L _H	L _T	L _H /L _T	Overall Size	Foam A (bottom)	Foam B (top)
23	4.5"	3.5"	1"	3.5	24" x 16" x 4.5"	8 ILD, 1.8 lb/ft ³ density conventional PU foam	10 ILD, 2.5 lb/ft ³ density Enerflex
24	6"	4.5"	1"	4.5	24" x 16" x 6"	8 ILD, 1.8 lb/ft ³ density conventional PU foam	10 ILD, 2.5 lb/ft ³ density Enerflex
25	4.5"	3.5"	1"	3.5	24" x 16" x 4.5"	9 ILD Talalay latex foam	10 ILD, 2.5 lb/ft ³ density Enerflex
26	6"	4.5"	1"	4.5	24" x 16" x 6"	9 ILD Talalay latex foam	10 ILD, 2.5 lb/ft ³ density Enerflex

FIG. 19

Test #	Results
23	Soft and very pressure relieving, but also very supportive, with enough immersion to lower overall average pressure but not so much as to bear on sensitive areas such as the eye of the user when side sleeping. Each side gives a slightly different feel so that user can choose, perhaps even flipping it during the night if wanted. Both sides breathe well. These described properties are very different from a pillow that had solid slabs of Foam A and Foam B (one on each side), which instead would feel like the pillow is made all of the material of the upward half. For users preferring a medium-thickness pillow.
24	Soft and very pressure relieving, but also very supportive, with enough immersion to lower overall average pressure but not so much as to bear on sensitive areas such as the eye of the user when side sleeping. Each side gives a slightly different feel so that user can choose, perhaps even flipping it during the night if wanted. Both sides breathe well. These described properties are very different from a pillow that had solid slabs of Foam A and Foam B (one on each side), which instead would feel like the pillow is made all of the material of the upward half. For users preferring a thick pillow.
25	Very soft and exceptionally pressure relieving, but also very supportive, with enough immersion to lower overall average pressure but not so much as to bear on sensitive areas such as the eye of the user when side sleeping. Each side gives a slightly different feel so that user can choose, perhaps even flipping it during the night if wanted. Both sides breathe well. These described properties are very different from a pillow that had solid slabs of Foam A and Foam B (one on each side), which instead would feel like the pillow is made all of the material of the upward half. For users preferring a medium-thickness pillow.
26	Very soft and exceptionally pressure relieving, but also very supportive, with enough immersion to lower overall average pressure but not so much as to bear on sensitive areas such as the eye of the user when side sleeping. Each side gives a slightly different feel so that user can choose, perhaps even flipping it during the night if wanted. Both sides breathe well. These described properties are very different from a pillow that had solid slabs of Foam A and Foam B (one on each side), which instead would feel like the pillow is made all of the material of the upward half. For users preferring a thick pillow.

FIG. 19
(Continued)