

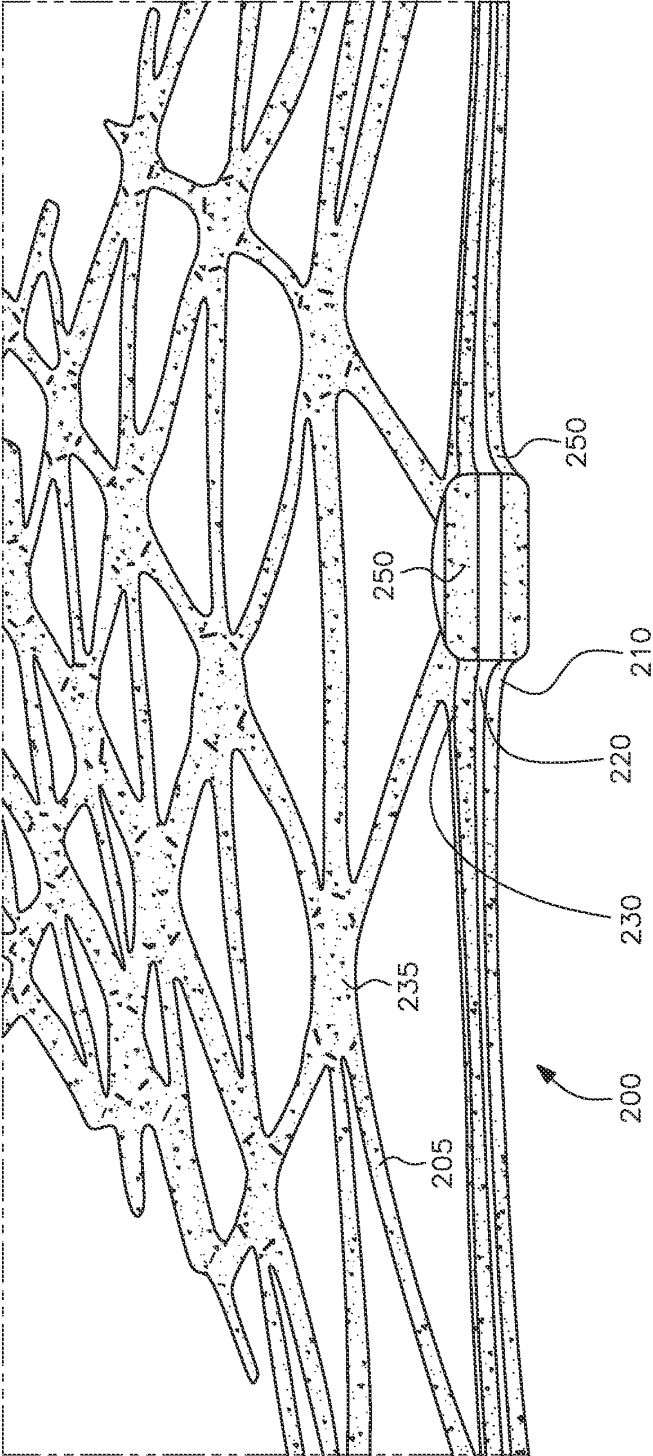


FIG. 1

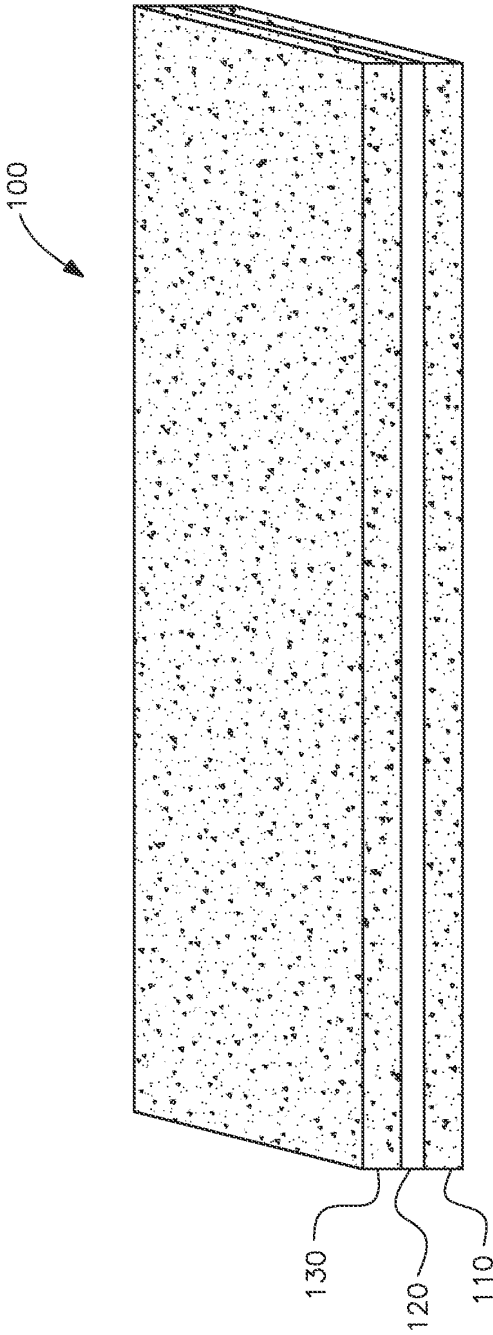


FIG. 2

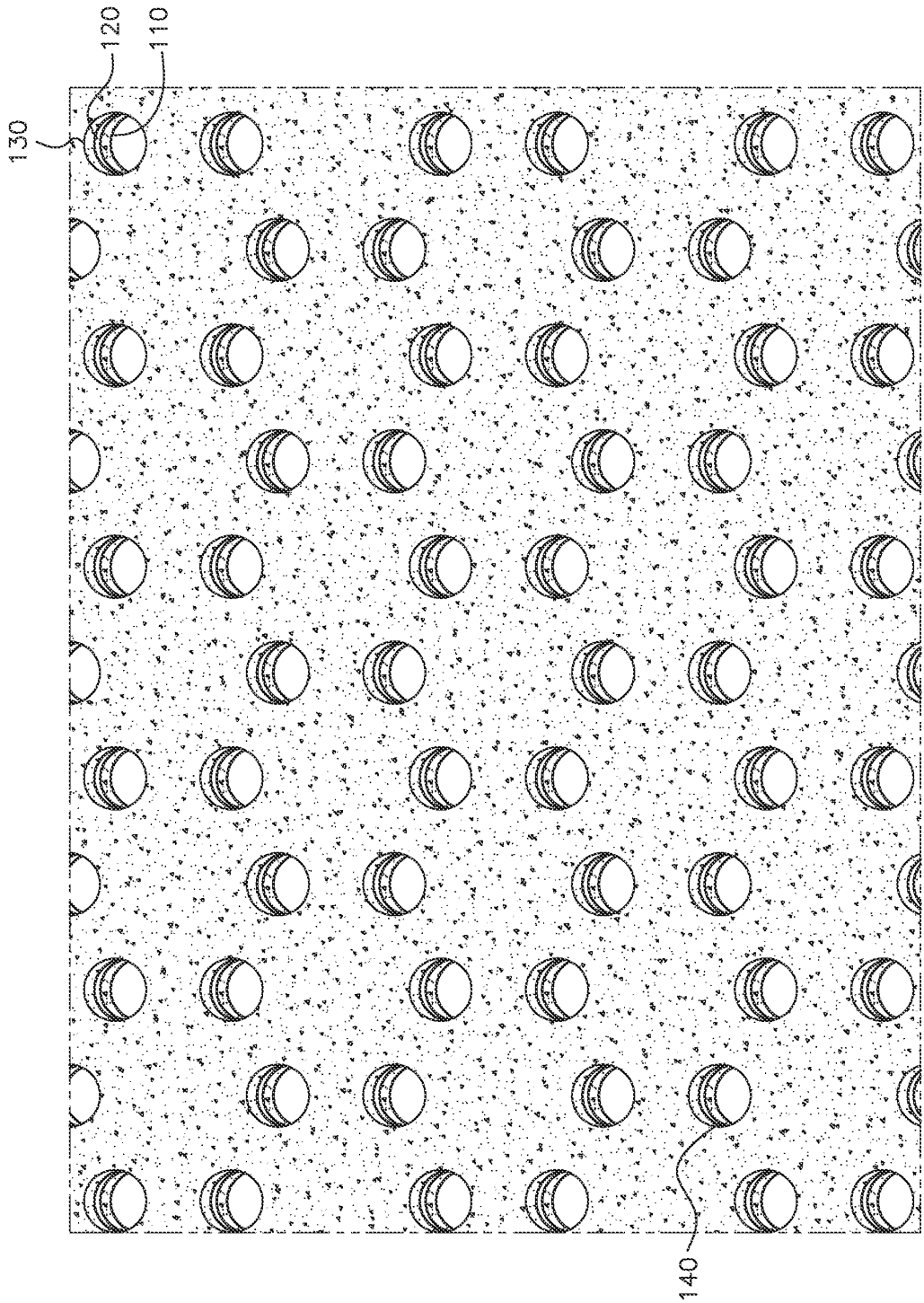


FIG. 3

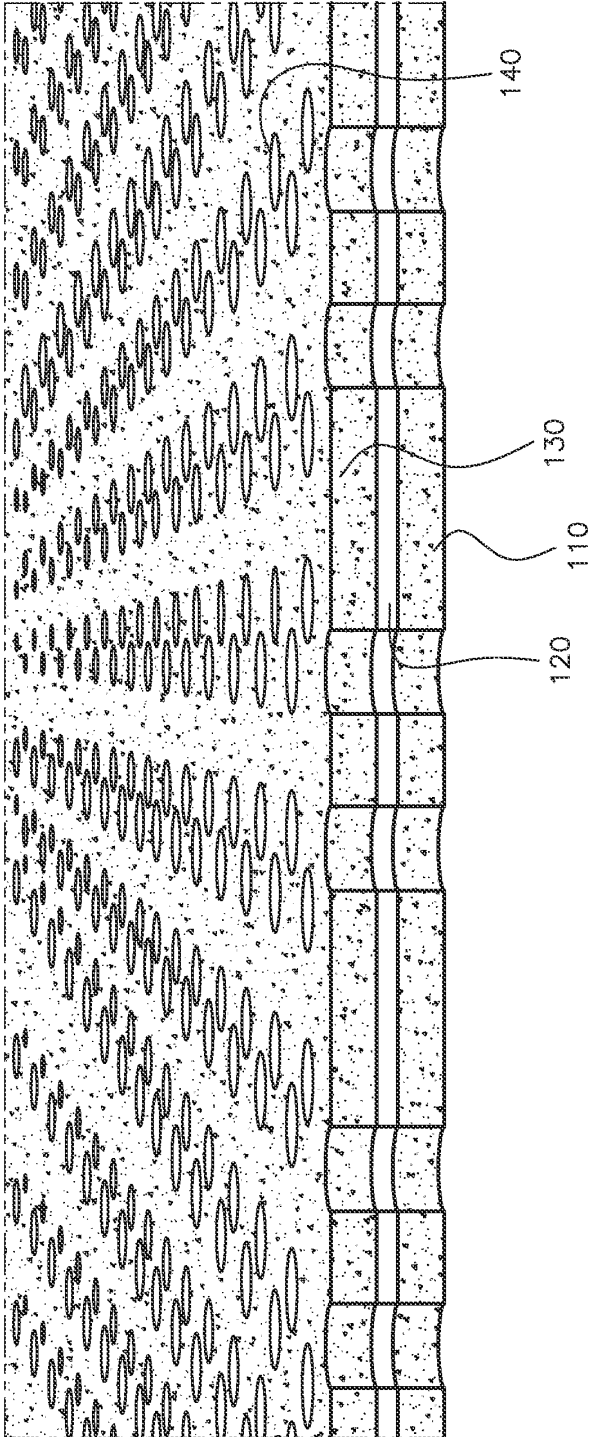


FIG. 4

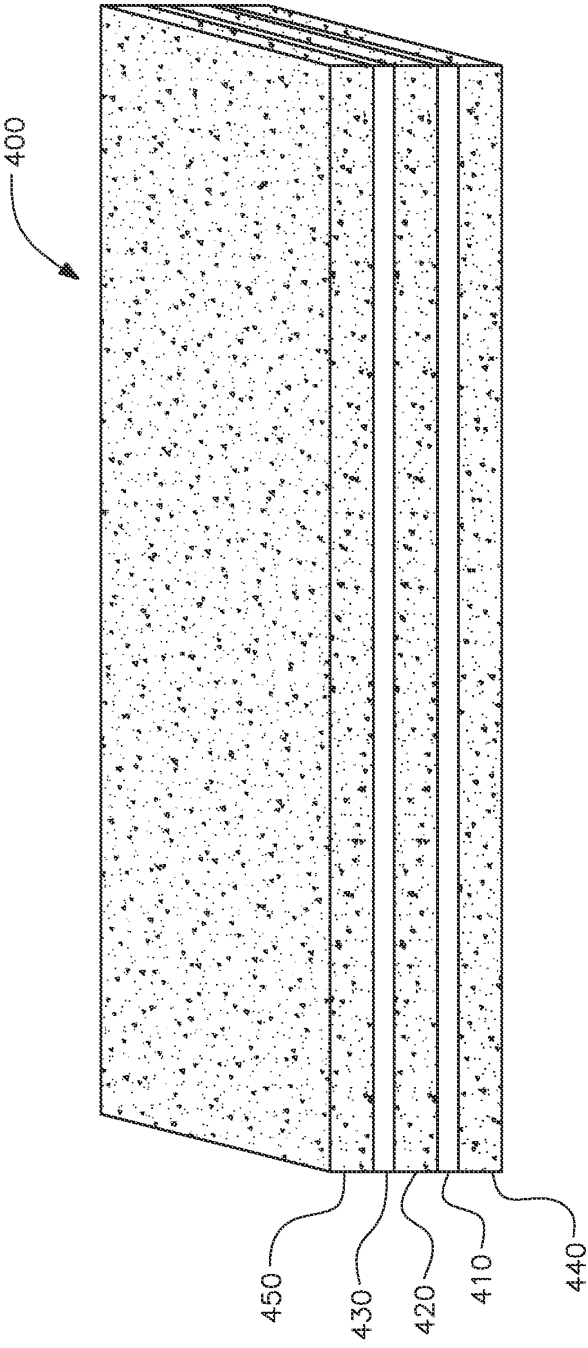


FIG. 5

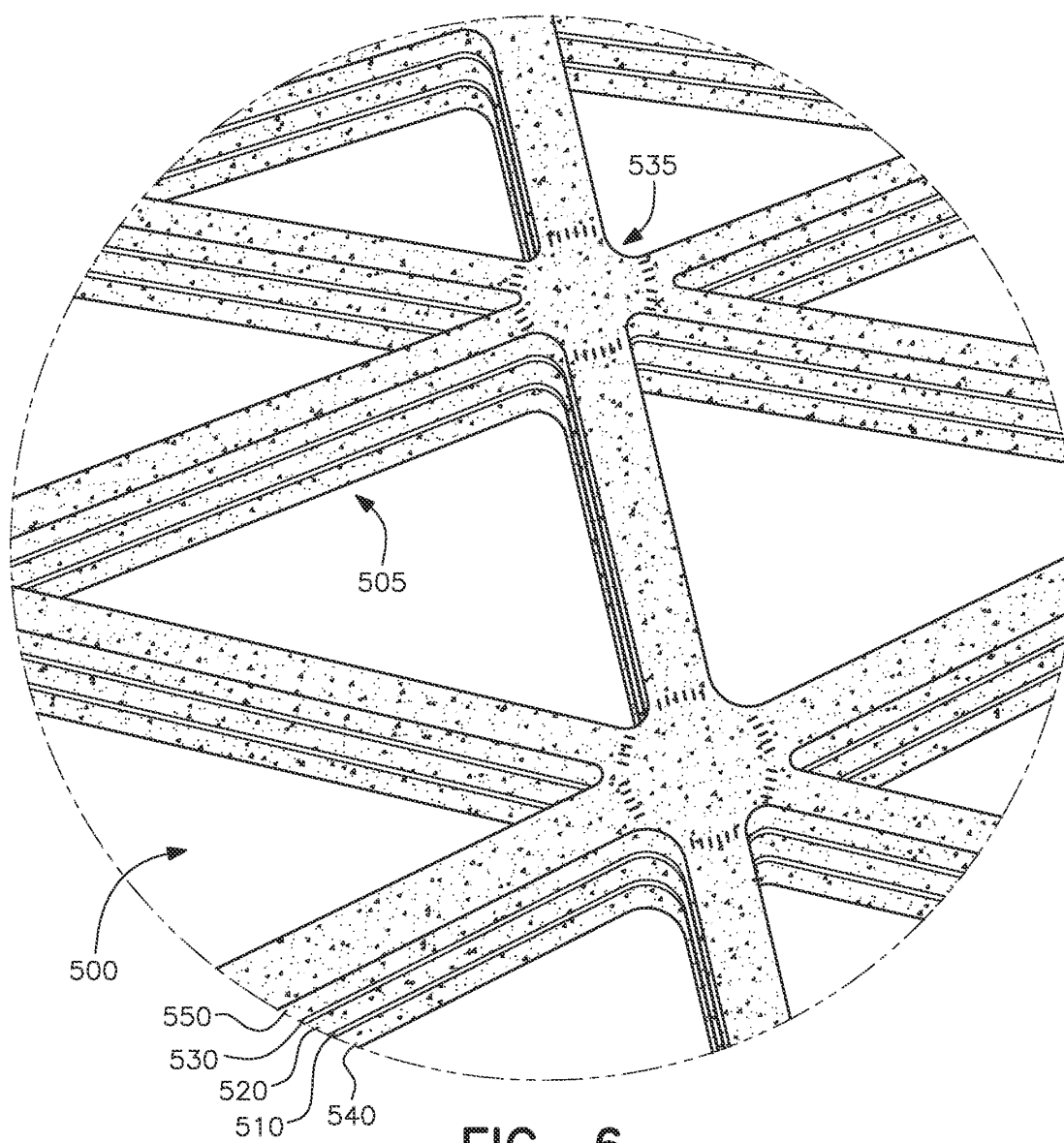


FIG. 6

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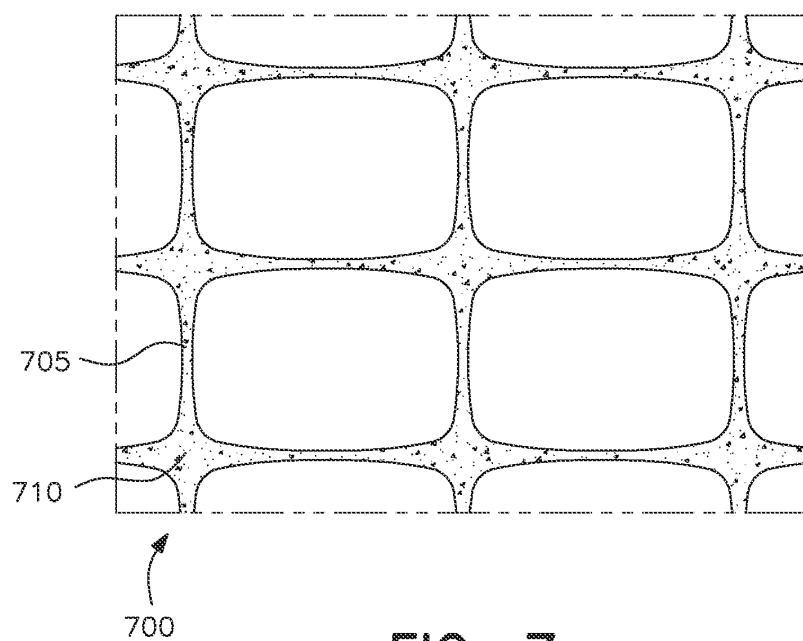


FIG. 7

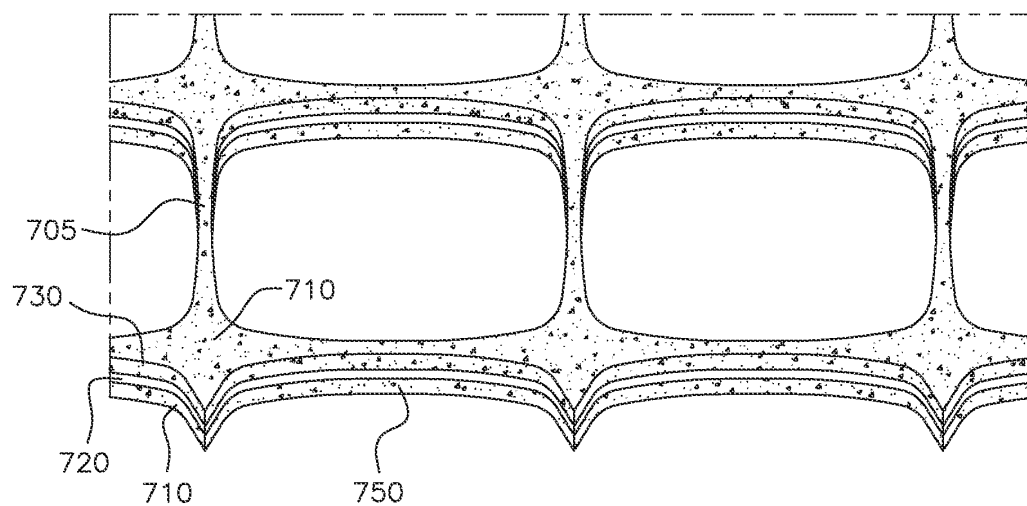


FIG. 8

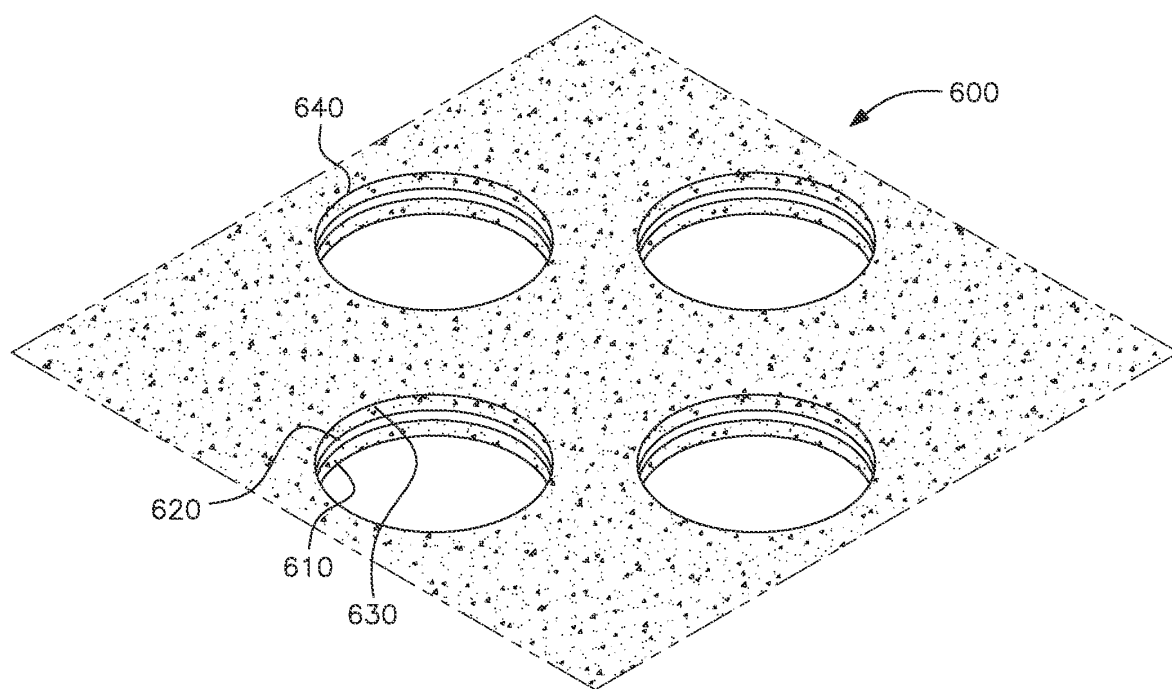
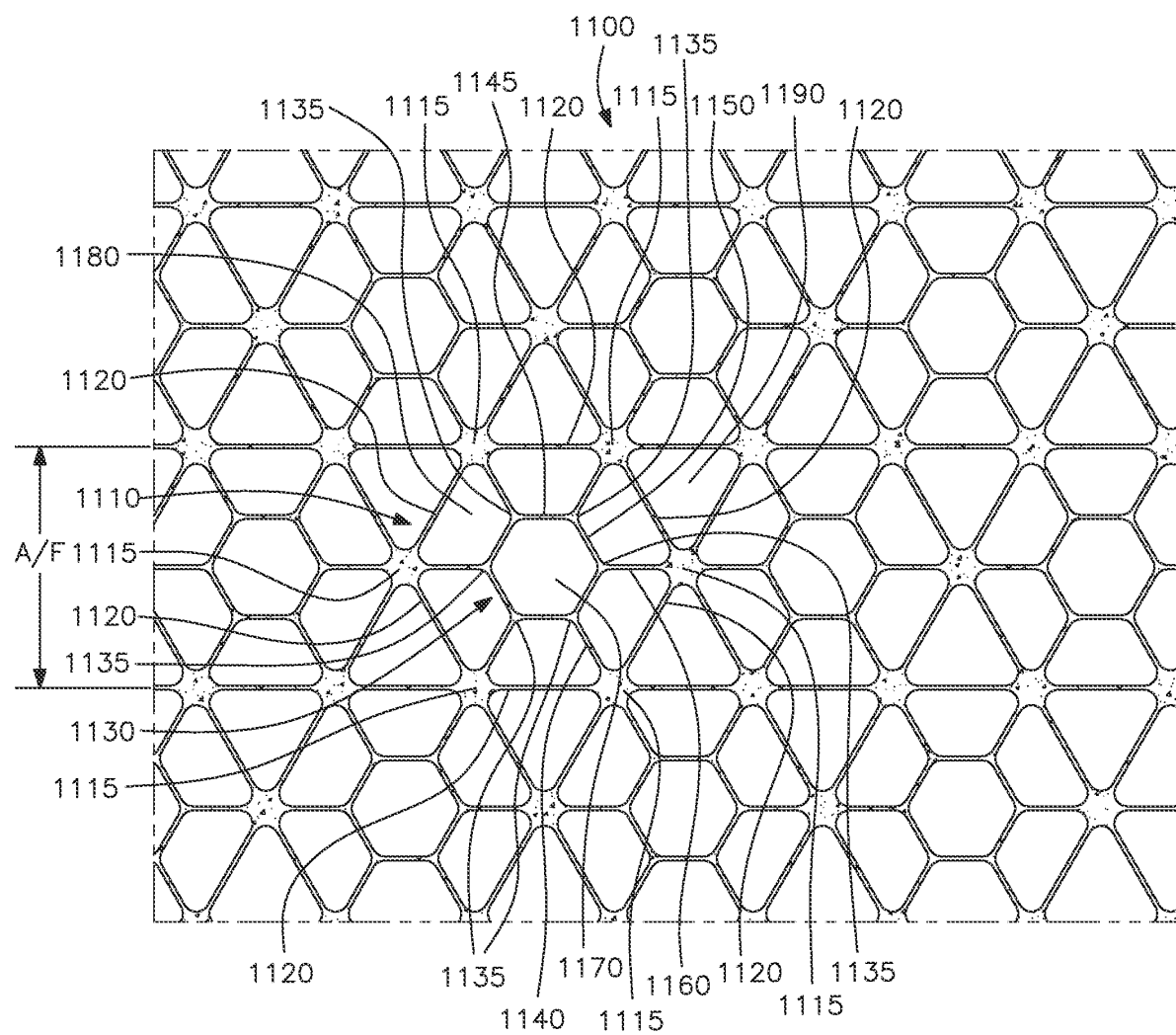
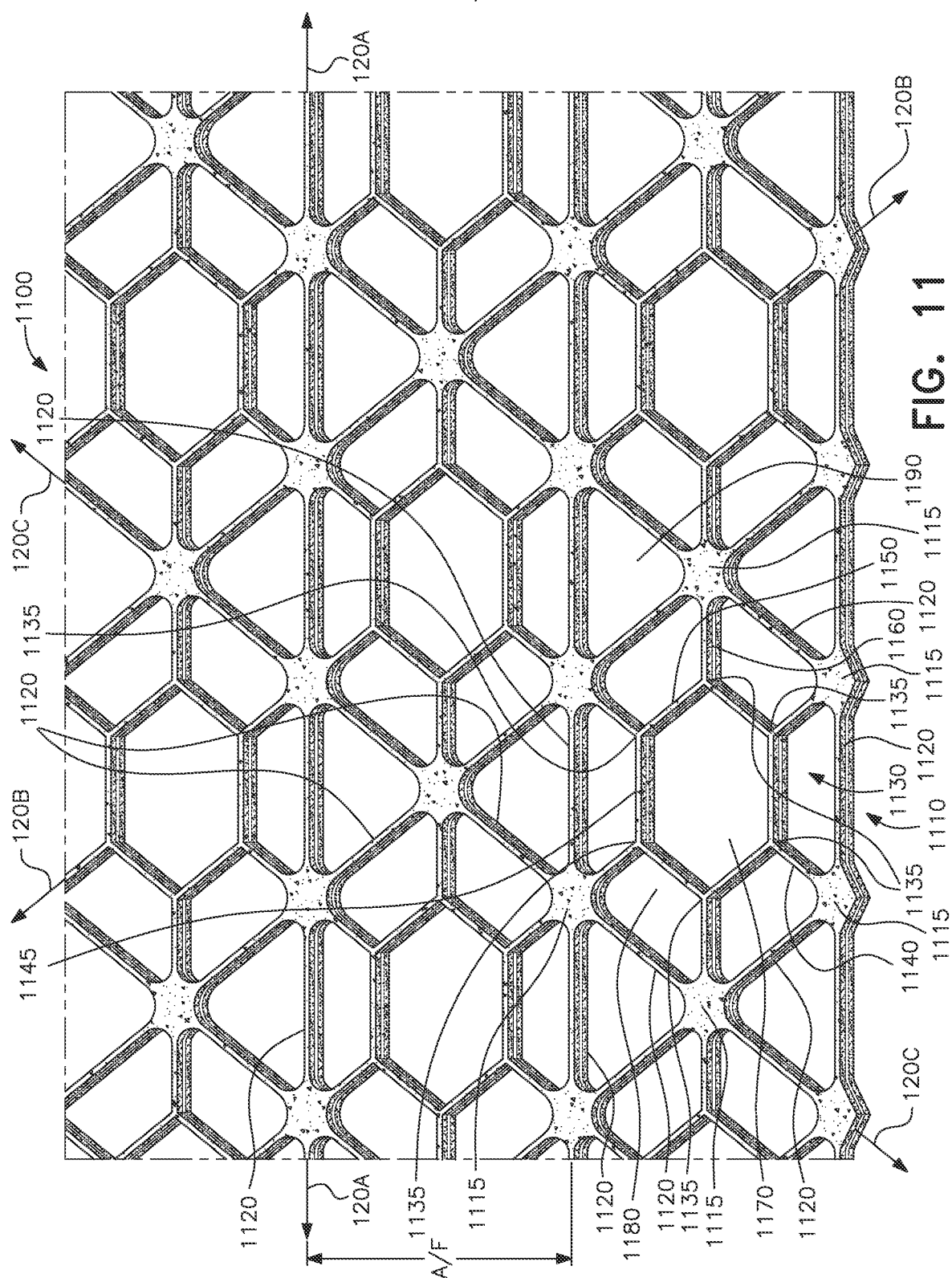


FIG. 9

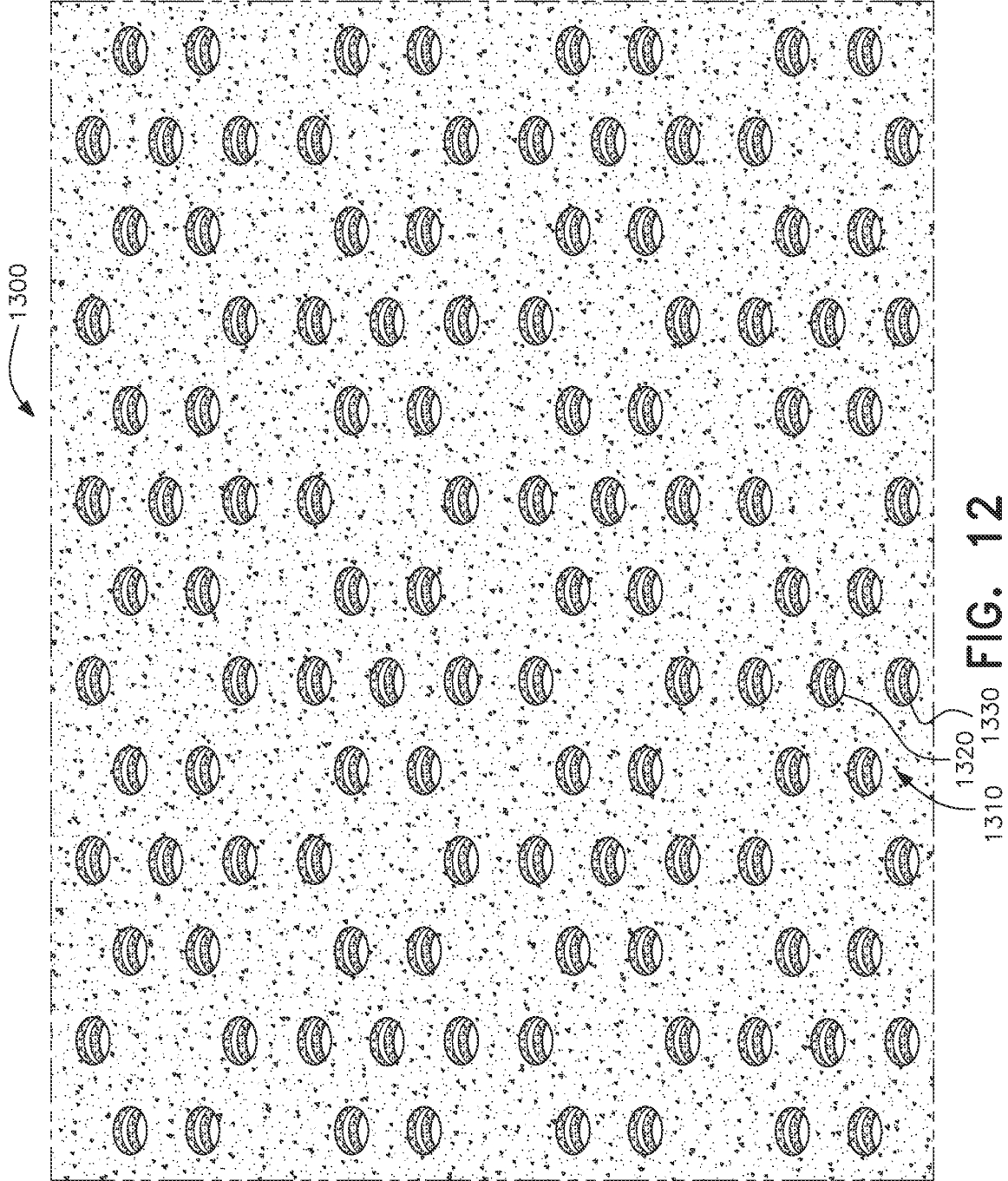
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**FIG. 10**

SUBSTITUTE SHEET (RULE 26)



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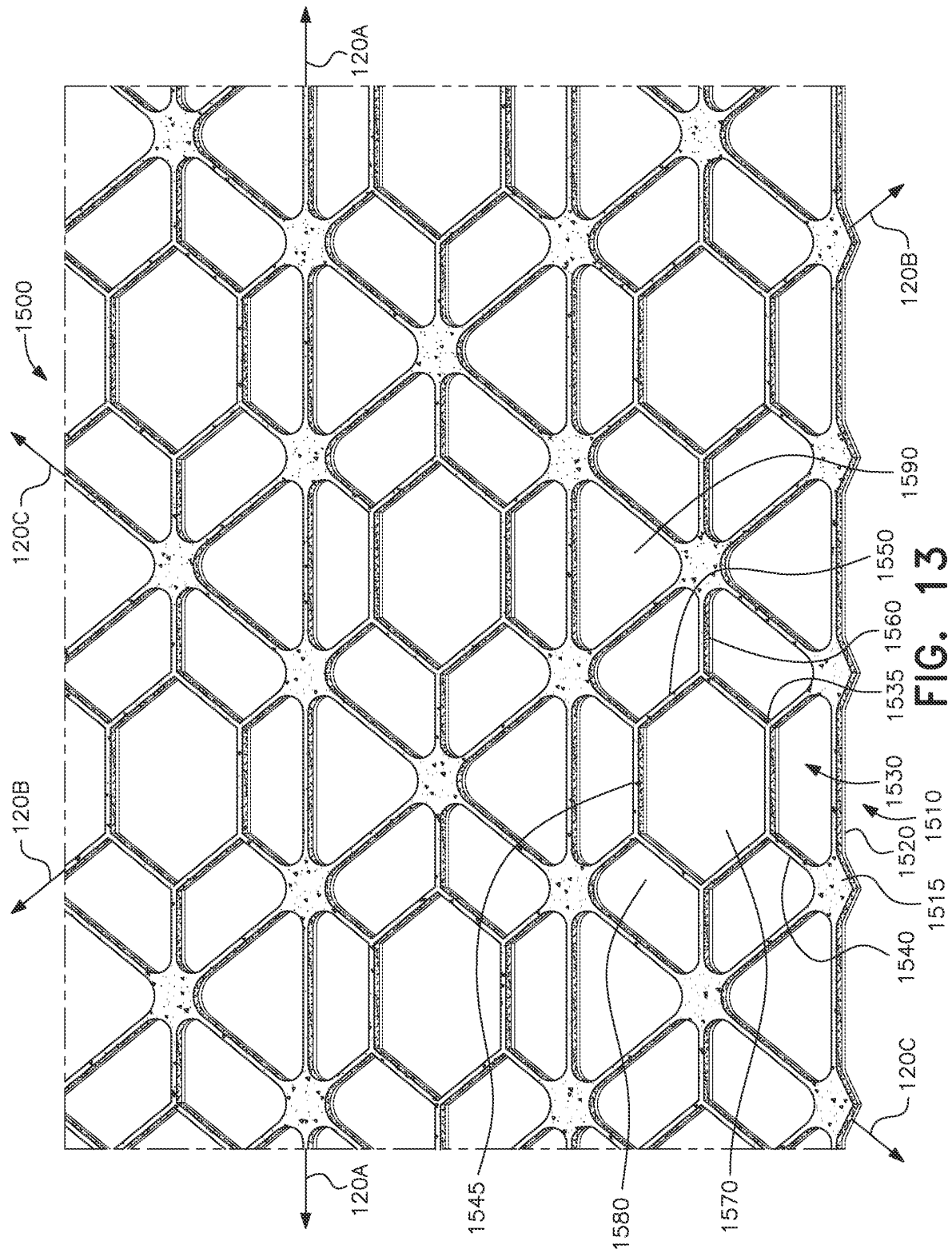


FIG. 13

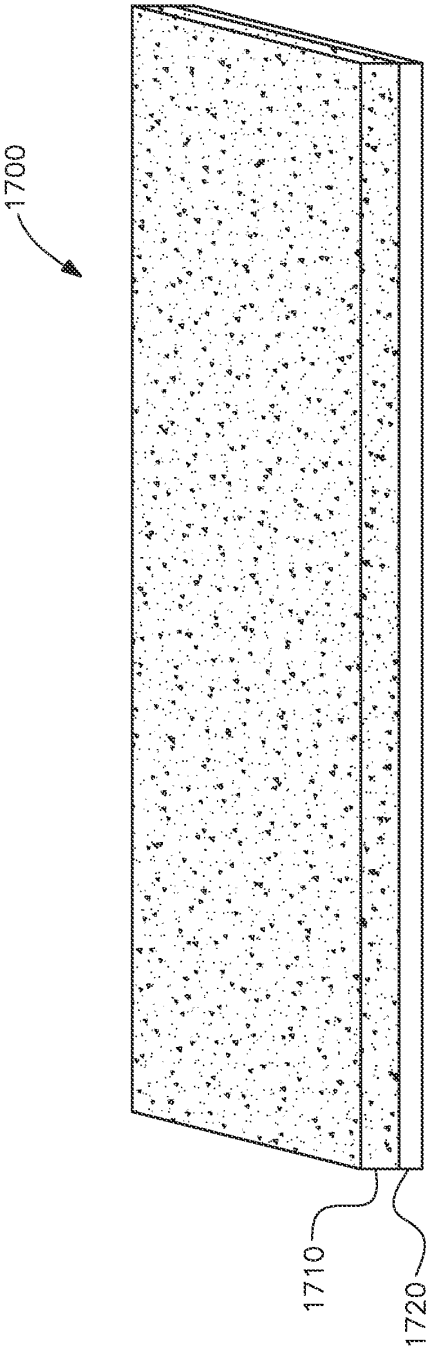
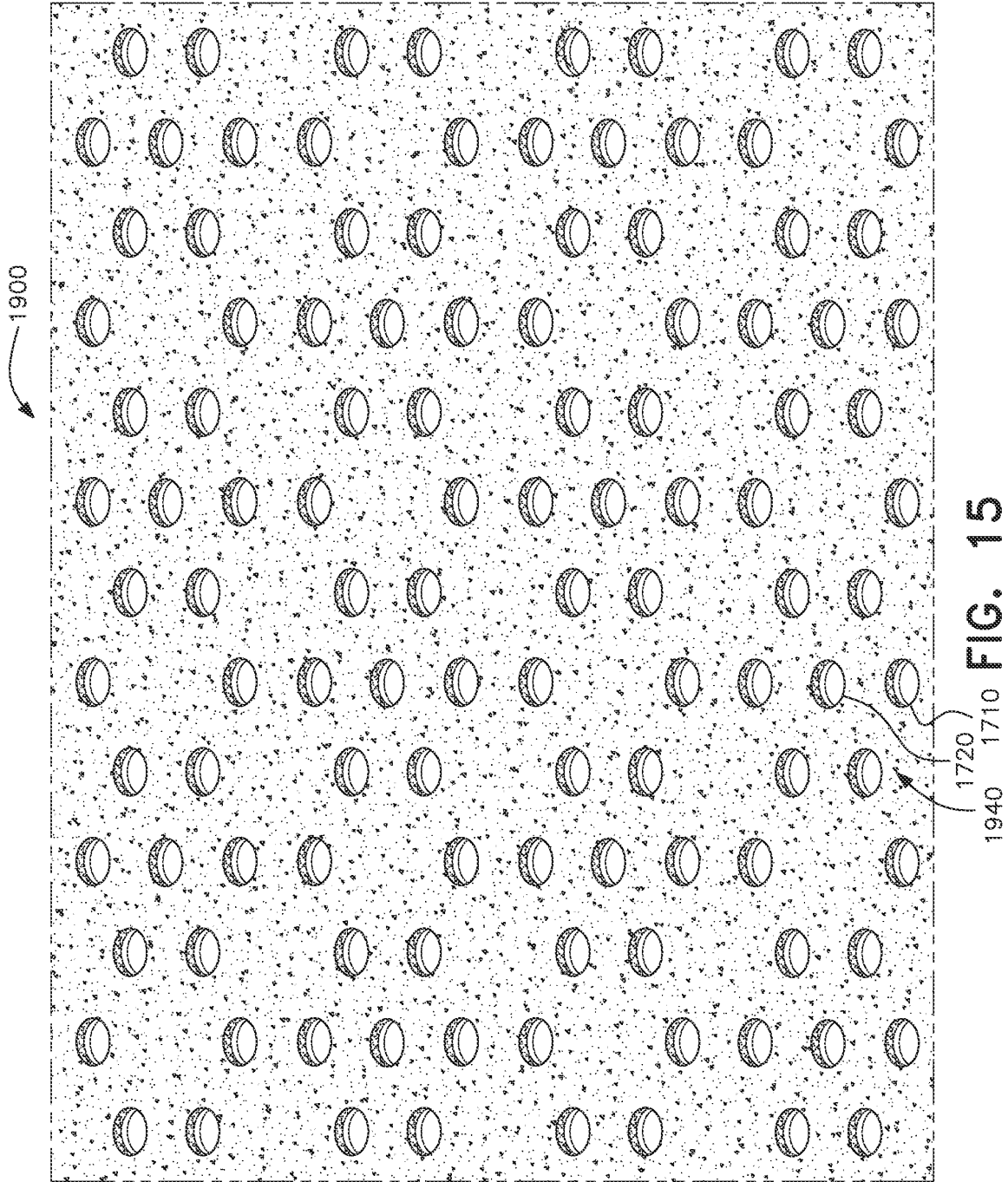


FIG. 14



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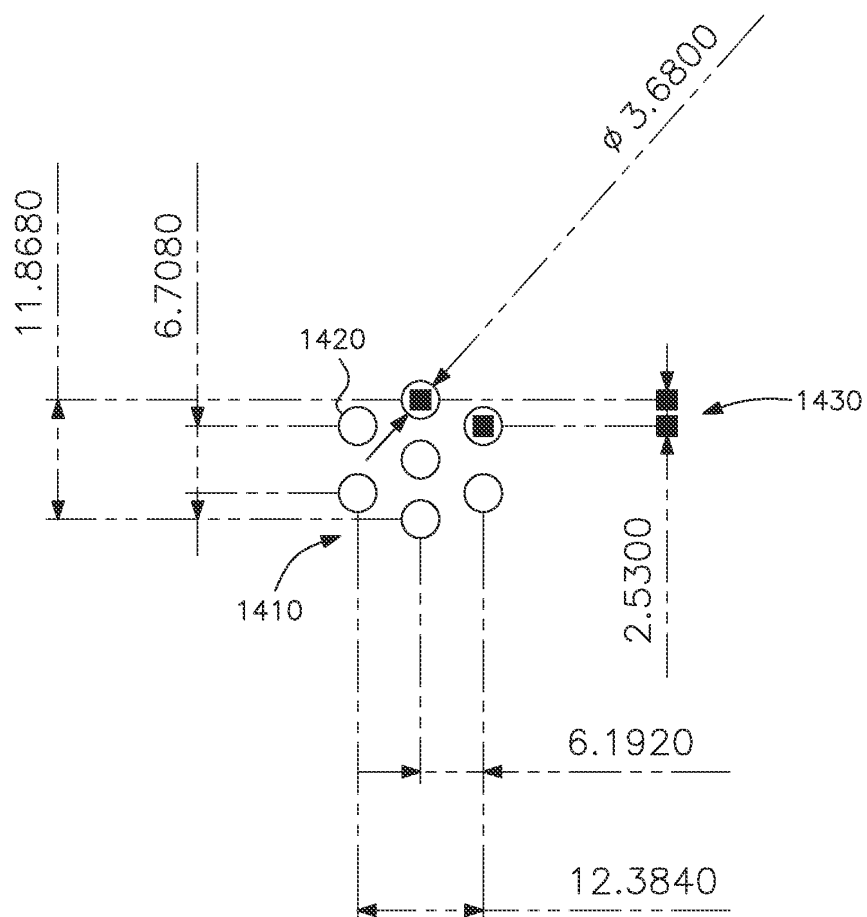


FIG. 16

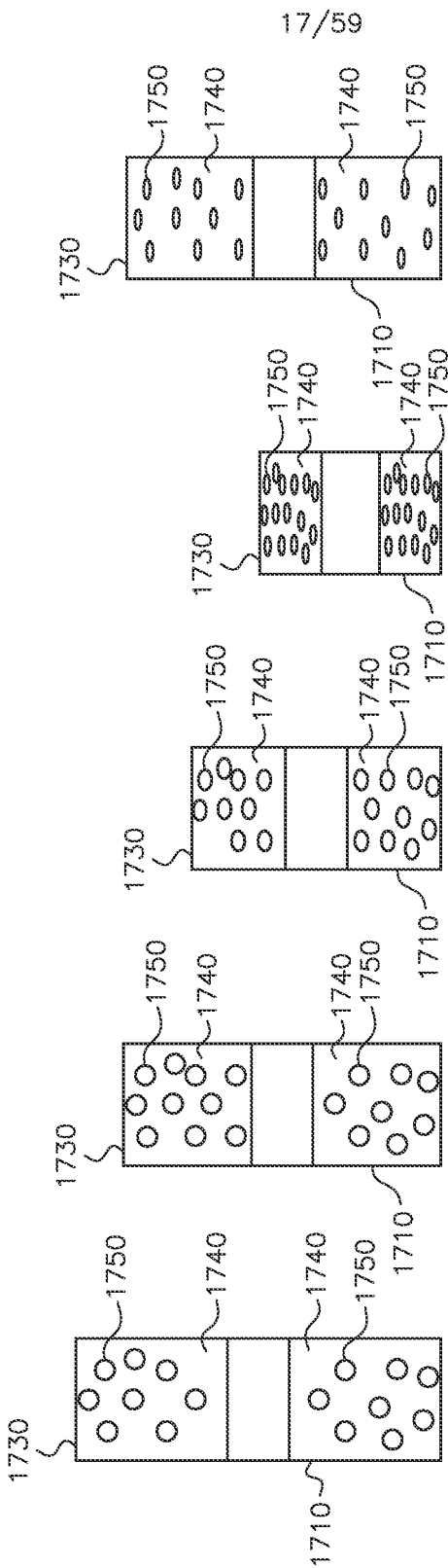
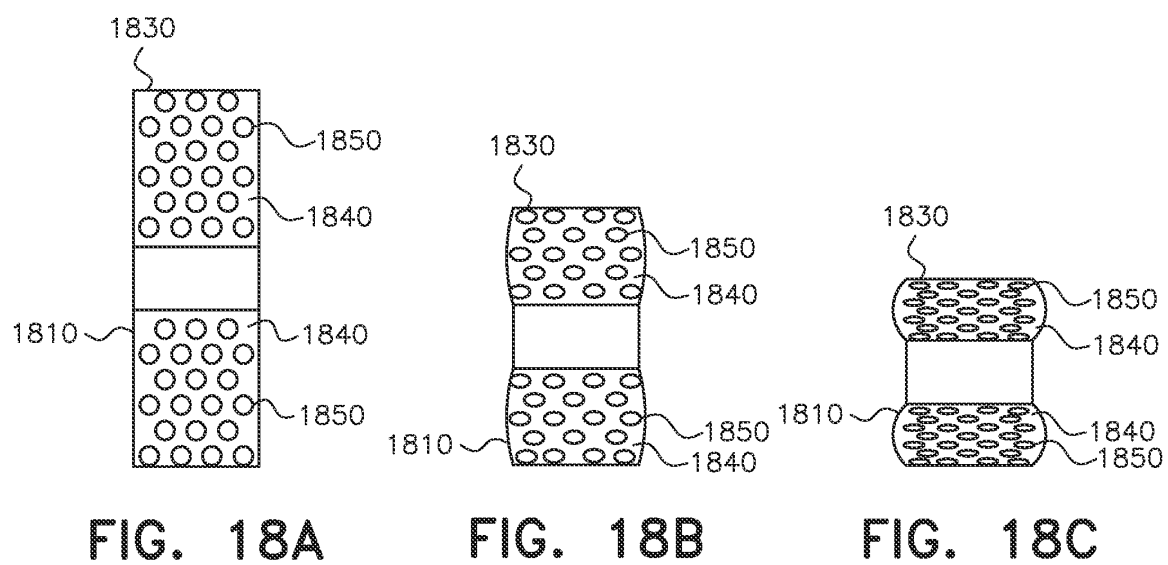


FIG. 17A FIG. 17B FIG. 17C FIG. 17D FIG. 17E



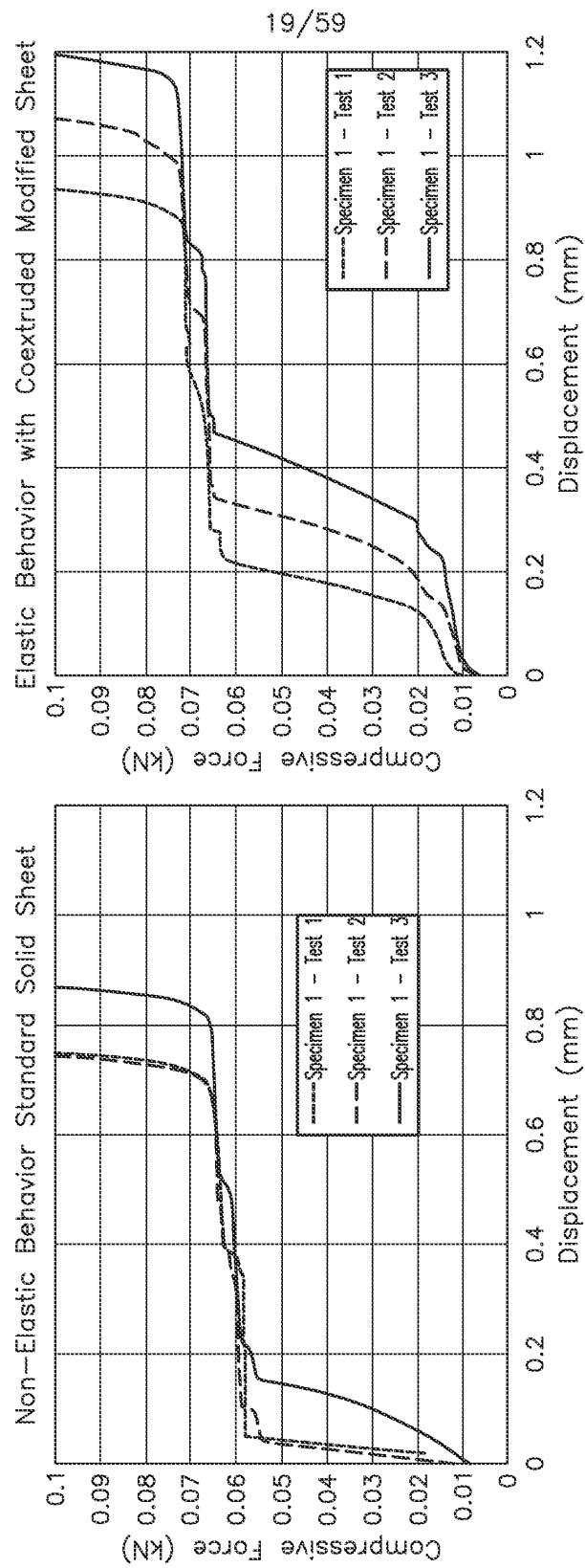


FIG. 19

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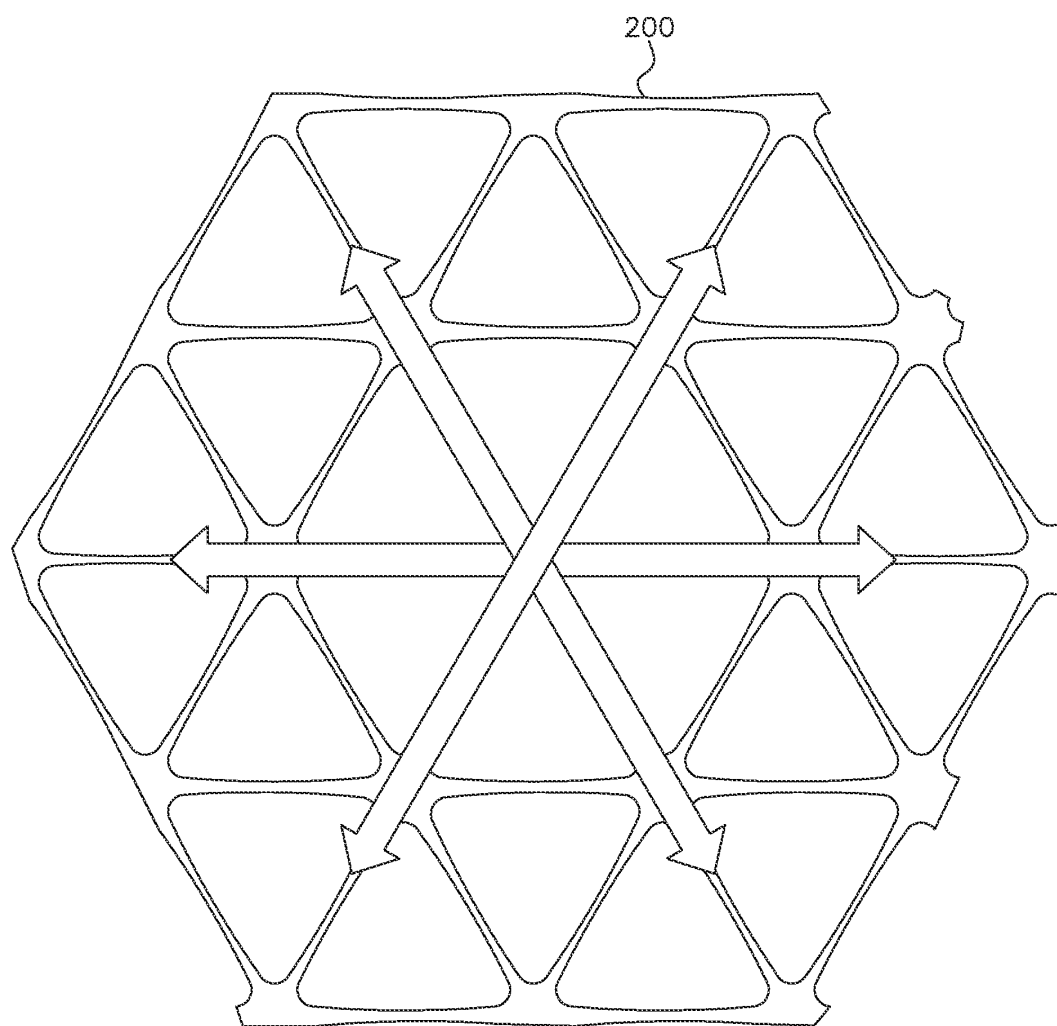


FIG. 20

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1100

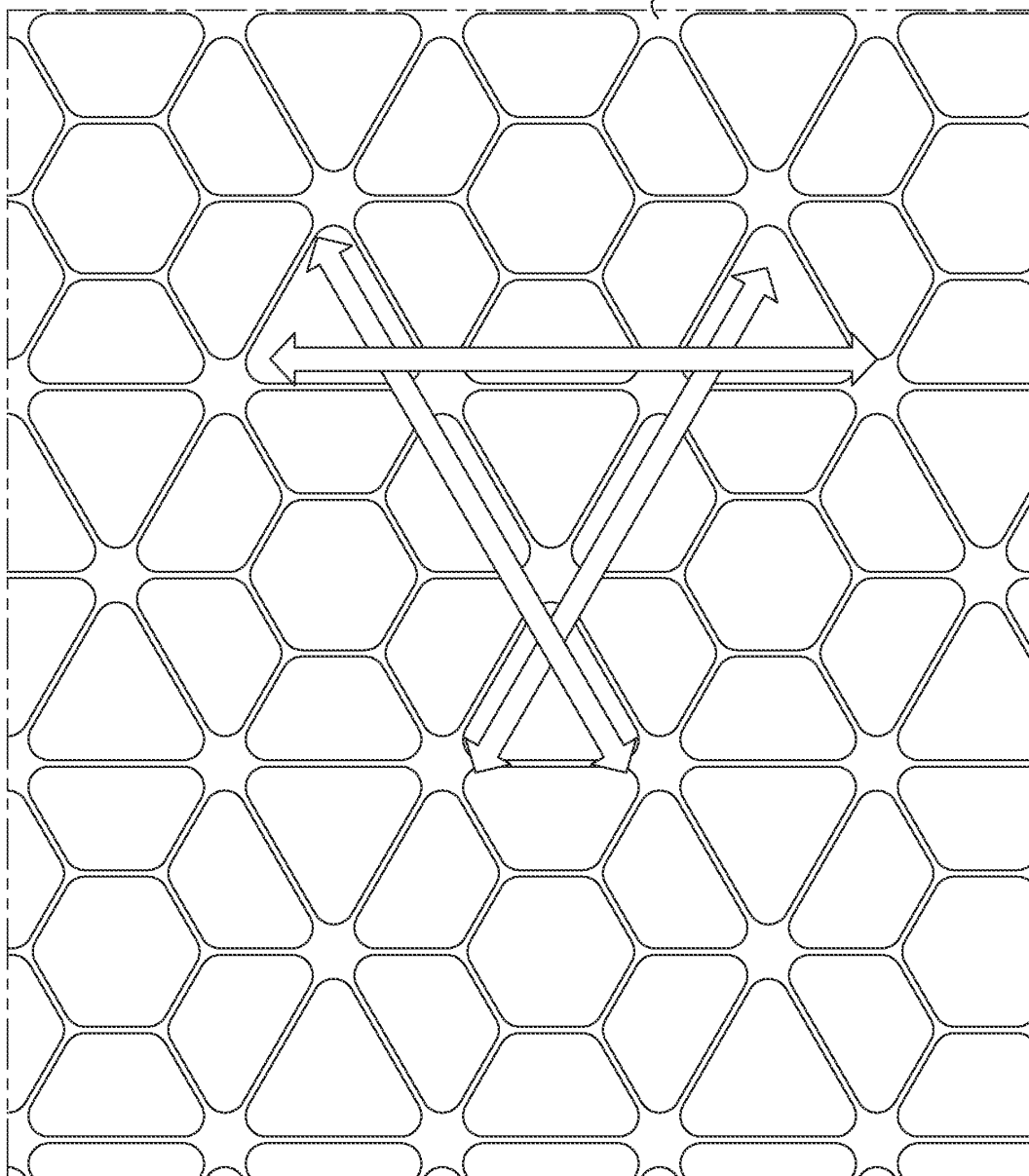


FIG. 21

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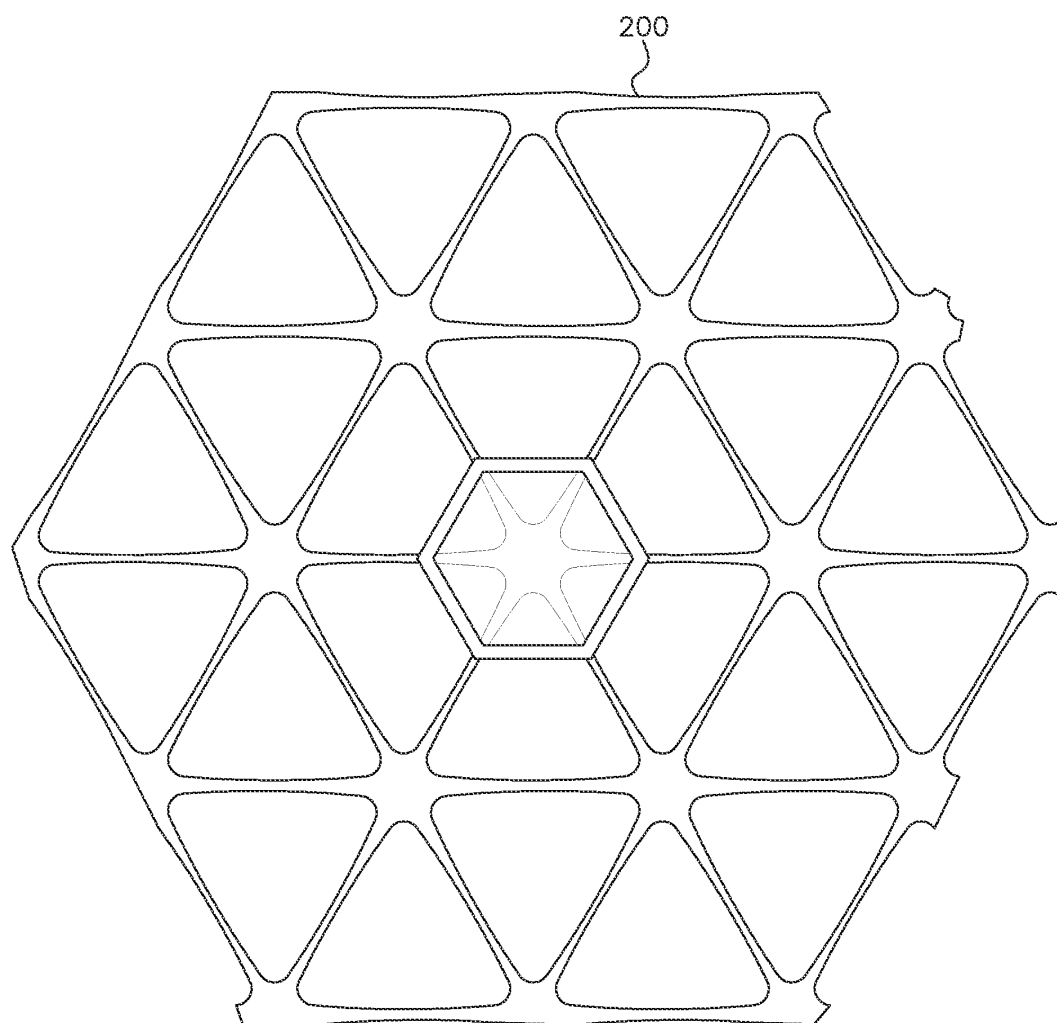


FIG. 22

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1100

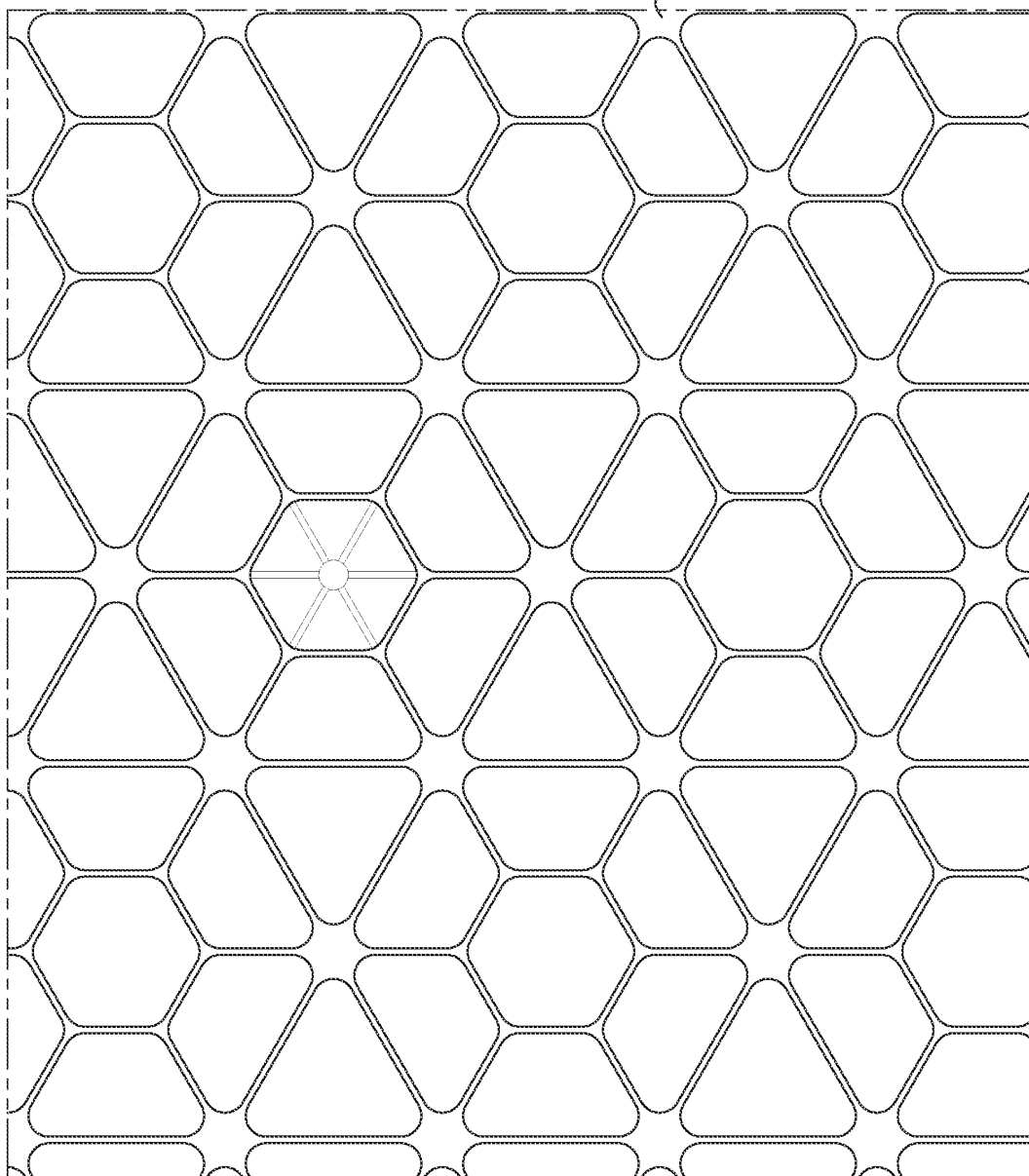


FIG. 23

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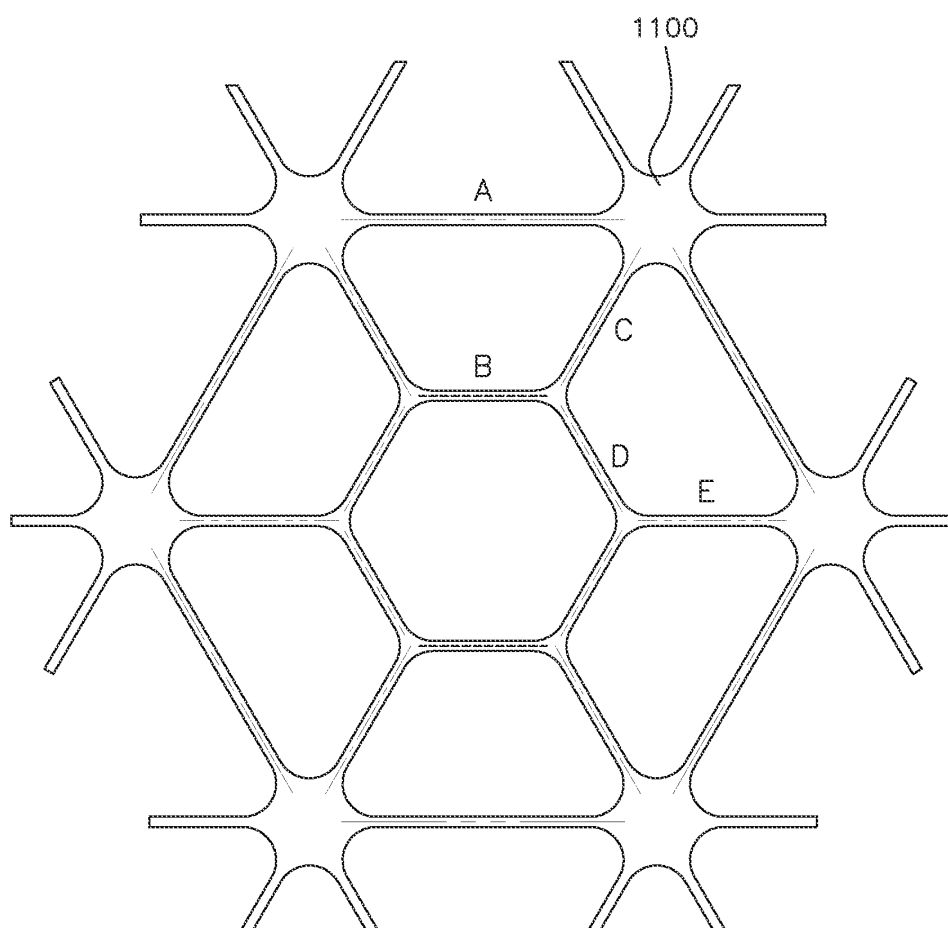


FIG. 24

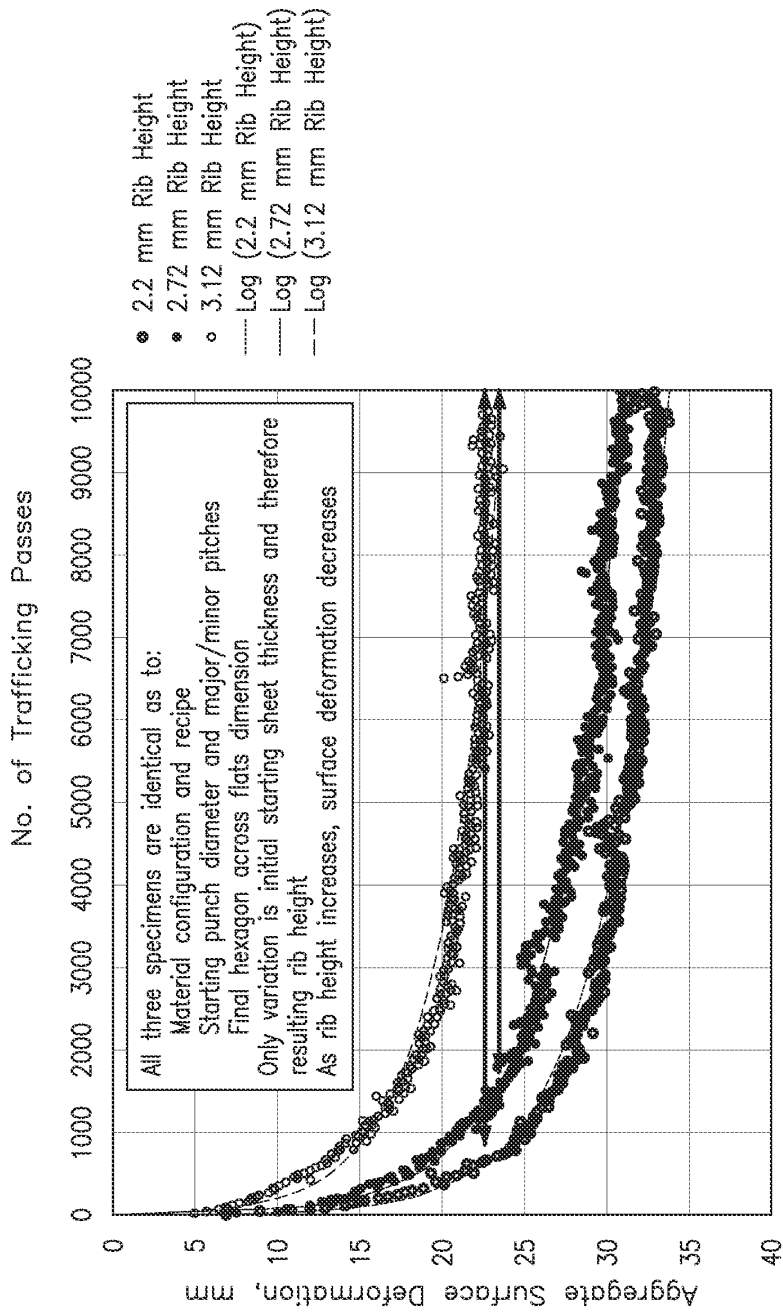


FIG. 25

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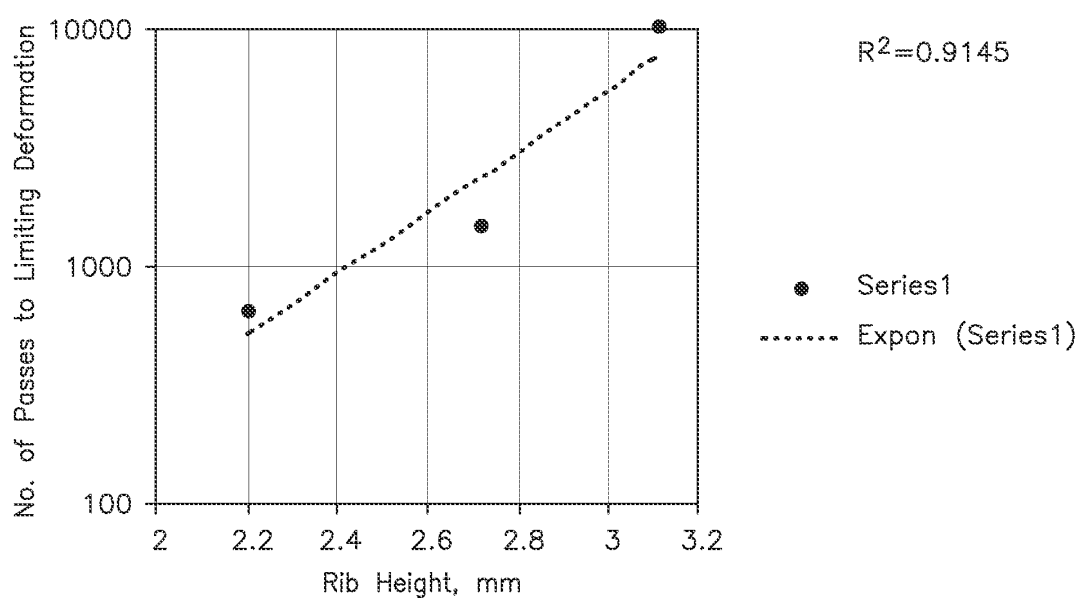


FIG. 26

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	Recipe	Nominal Sheet thickness, mm	Nominal Hexagon A/F, mm	Approx. Geogrid Weight, kg/m ²	Average Rib Height, mm	Average Rib Width, mm	Average Rib Aspect Ratio
Invention	CaCO ₃ 2X Caps	5.5	80	0.294	2.2	1.4	1.6
Invention	CaCO ₃ 2X Caps	6.2	80	0.351	2.7	1.4	2.0
Invention	CaCO ₃ 2X Caps	7.5	80	0.425	3.1	1.4	2.4

FIG. 27

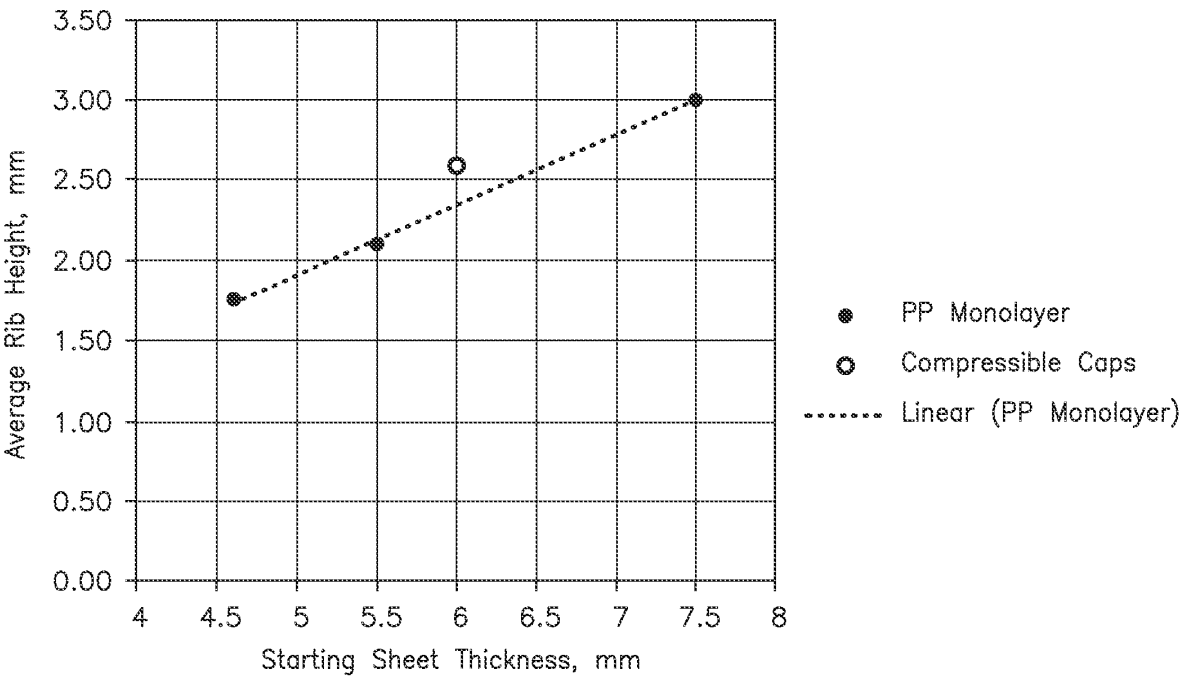
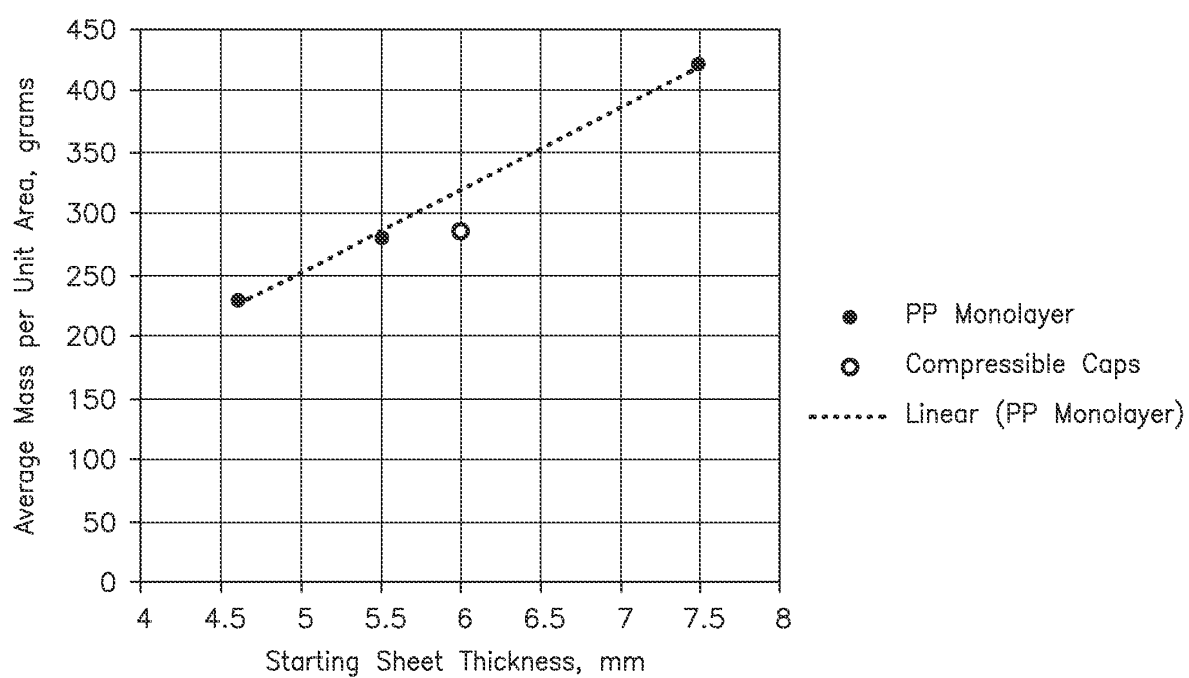


FIG. 28

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**FIG. 29**

SUBSTITUTE SHEET (RULE 26)

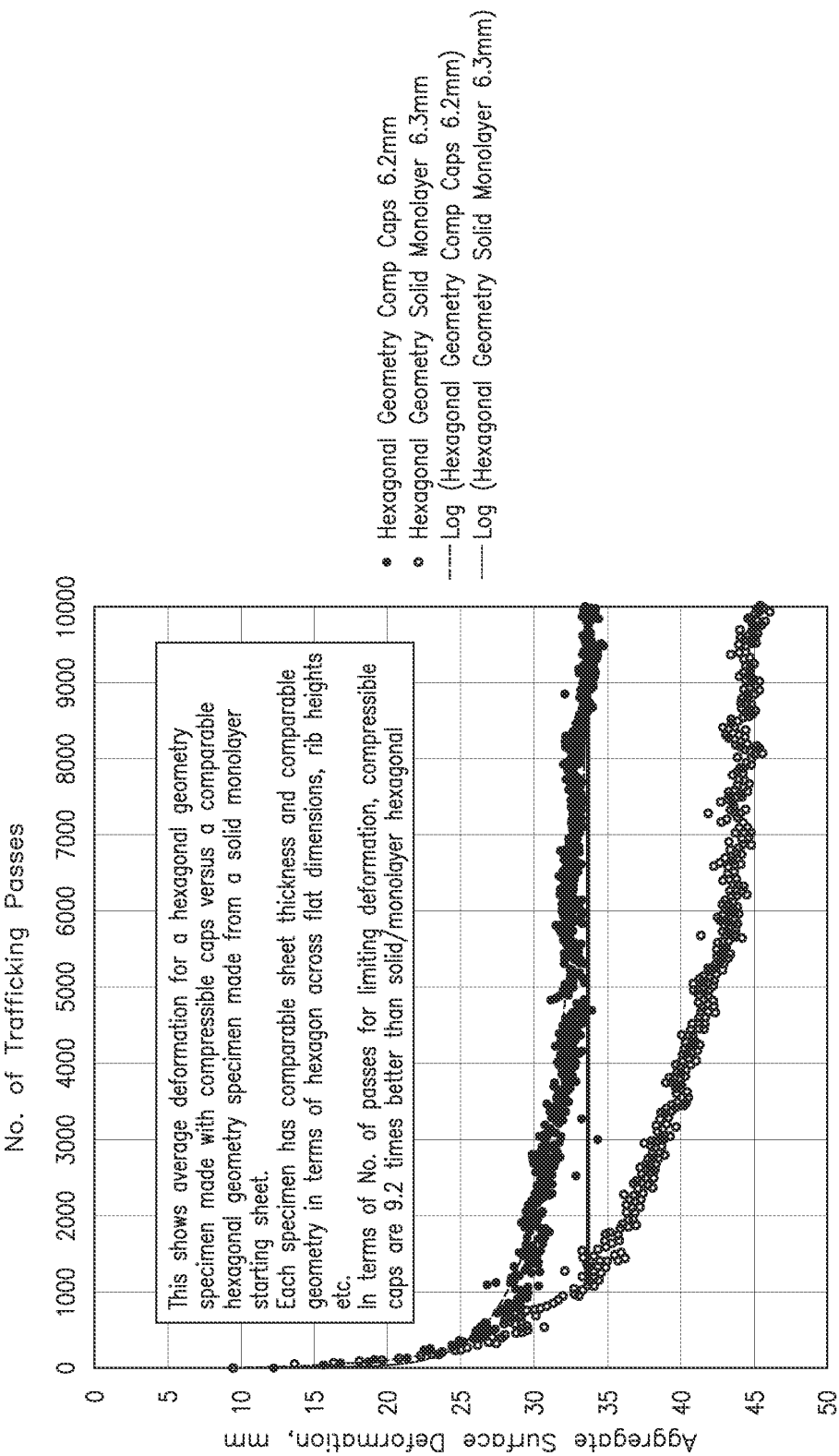


FIG. 30

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	Recipe	Nominal Sheet thickness, mm	Nominal Hexagon A/F, mm	Approx. Geogrid Weight, kg/m ²	Average Rib Height, mm
Invention— Hexagonal	CaCO ₃ 2X Caps	6.2	80	0.294	2.7
Solid/Mono— Hexagonal	Solid/Mono	6.3	80	0.285	2.8

FIG. 31

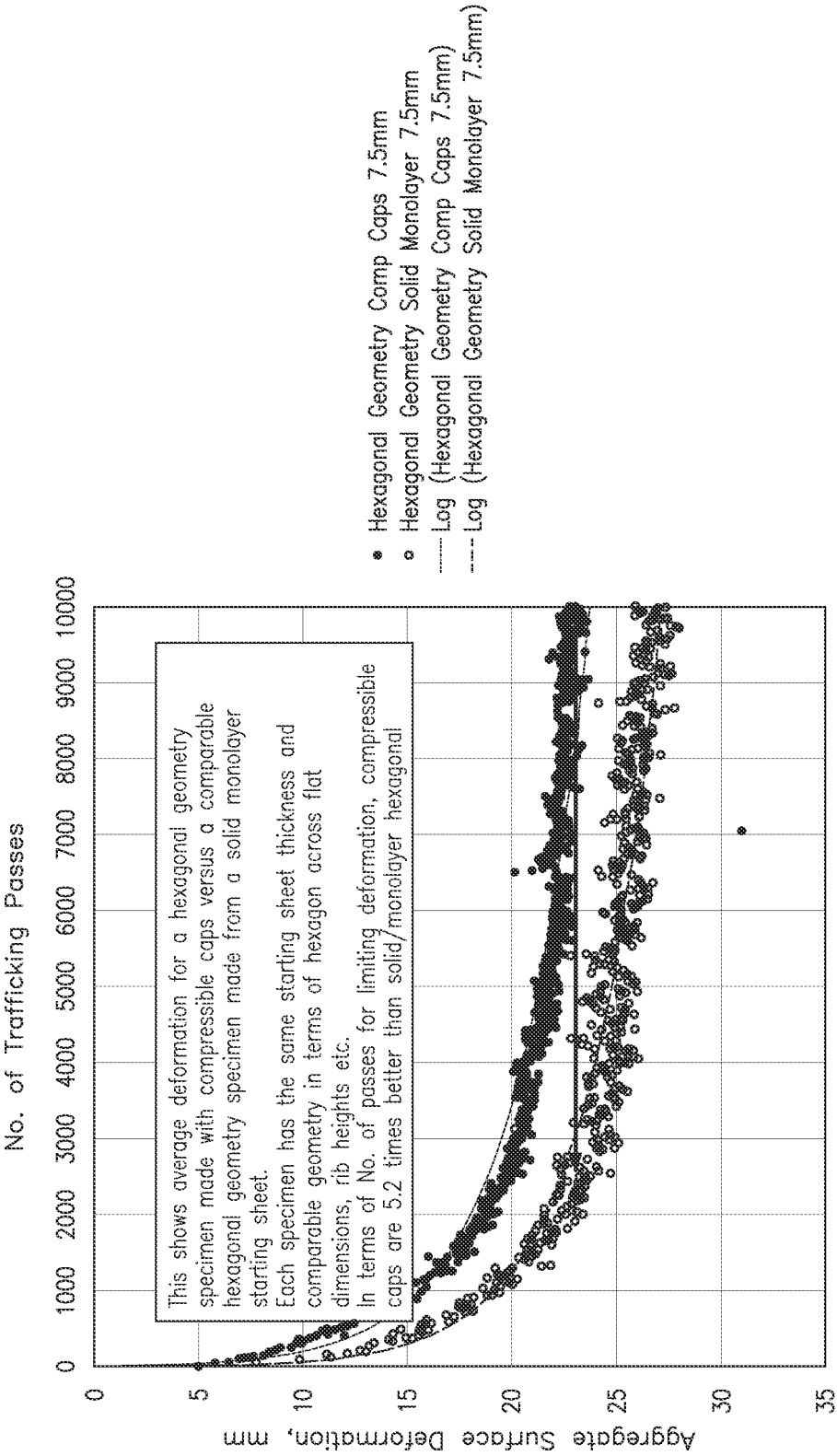


FIG. 32

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	Recipe	Nominal Sheet thickness, mm	Nominal Hexagon A/F, mm	Approx. Geogrid Weight, kg/m ²	Average Rib Height, mm
Invention— Hexagonal	CaCO ₃ 2X Caps	7.5	80	0.425	3.1
Solid/Mono— Hexagonal	Solid/Mono	7.5	80	0.413	3.0

FIG. 33

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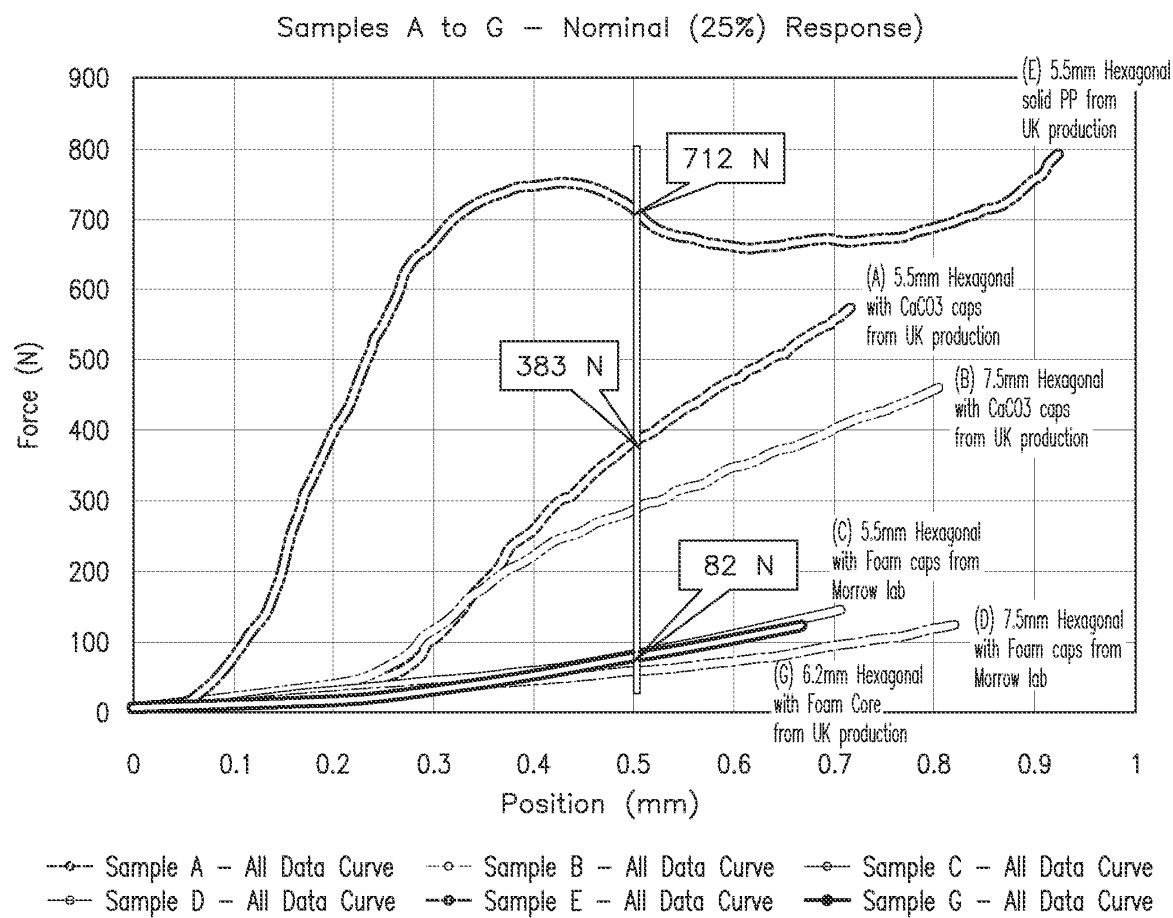


FIG. 34

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Nominal Test	
Sample	Force at 0.5mm (N)
A	383
C	82
E	712

FIG. 35

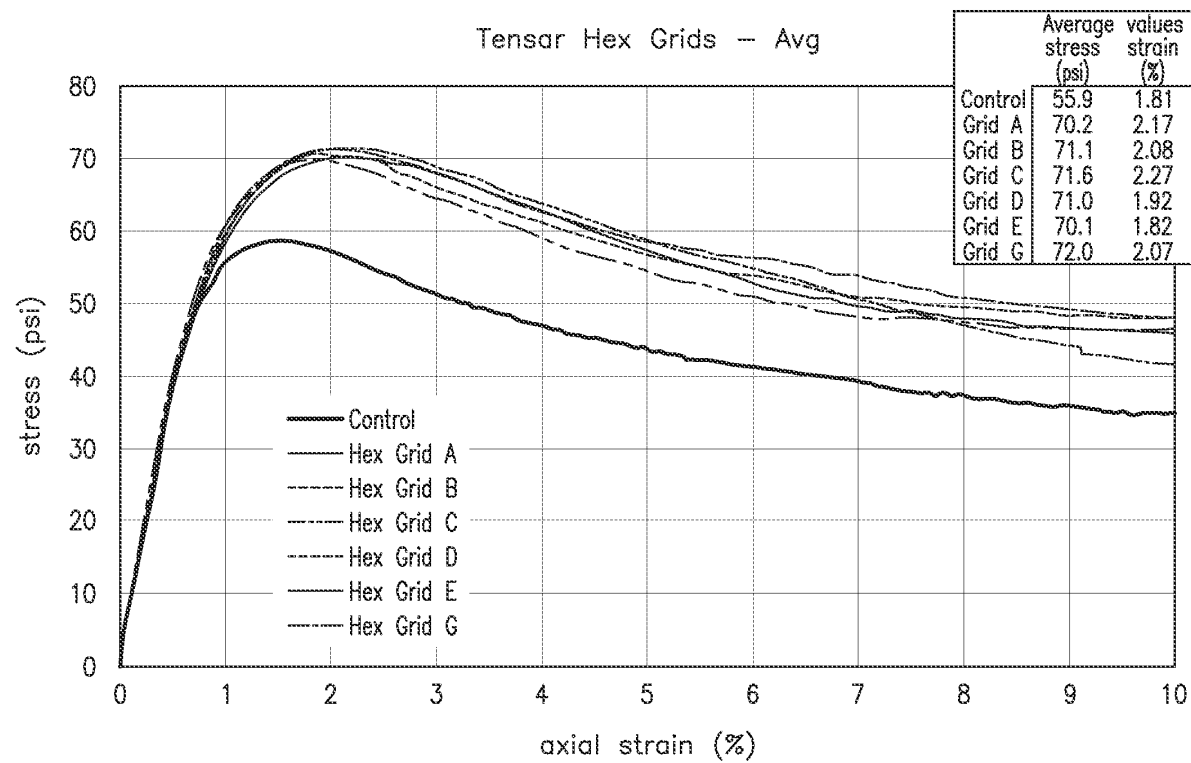


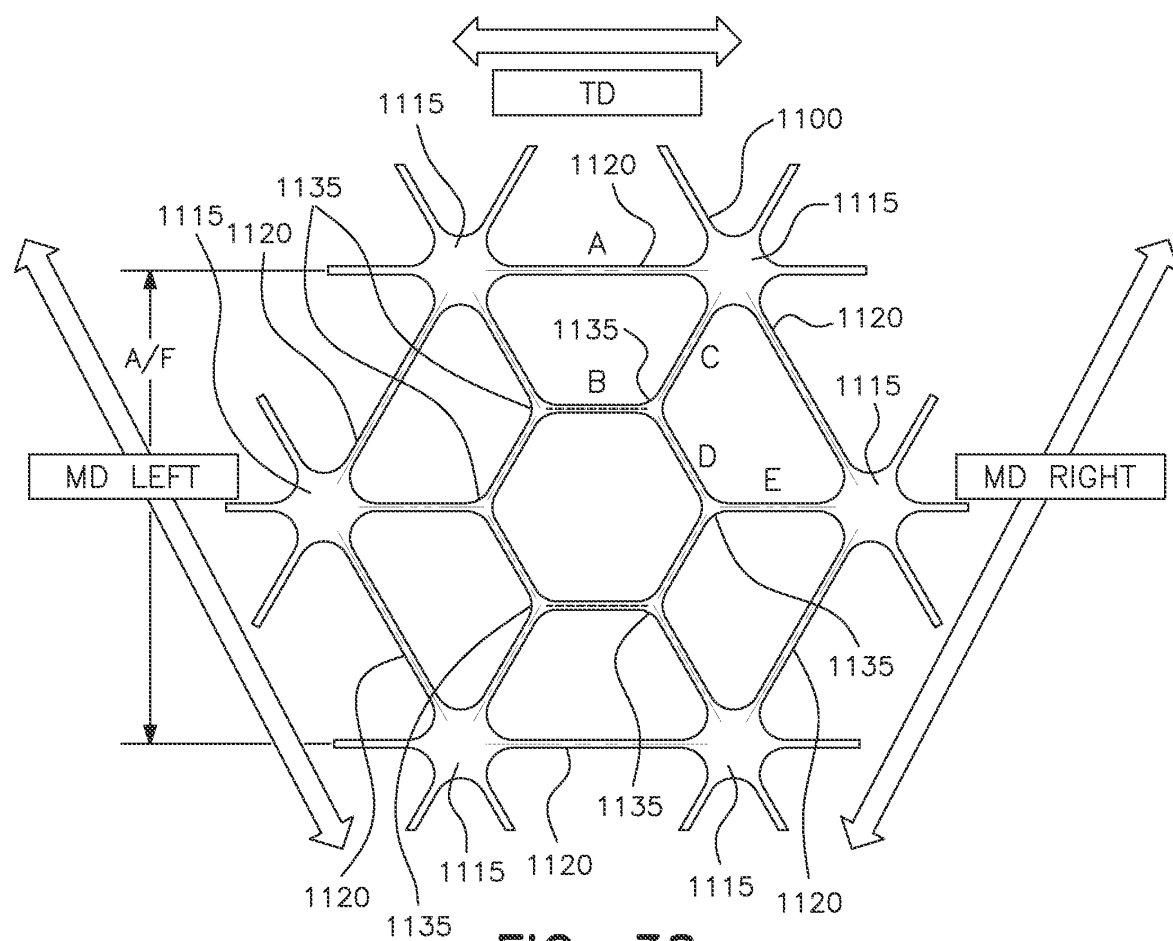
FIG. 36

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<u>Average values</u>		
	Peak stress	strain at peak stress
	(psi)	(%)
Control	55.9	1.81
Grid A	70.2	2.17
Grid B	71.1	2.08
Grid C	71.6	2.27
Grid D	71.0	1.92
Grid E	70.1	1.82
Grid G	72.0	2.07

FIG. 37

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**FIG. 38**

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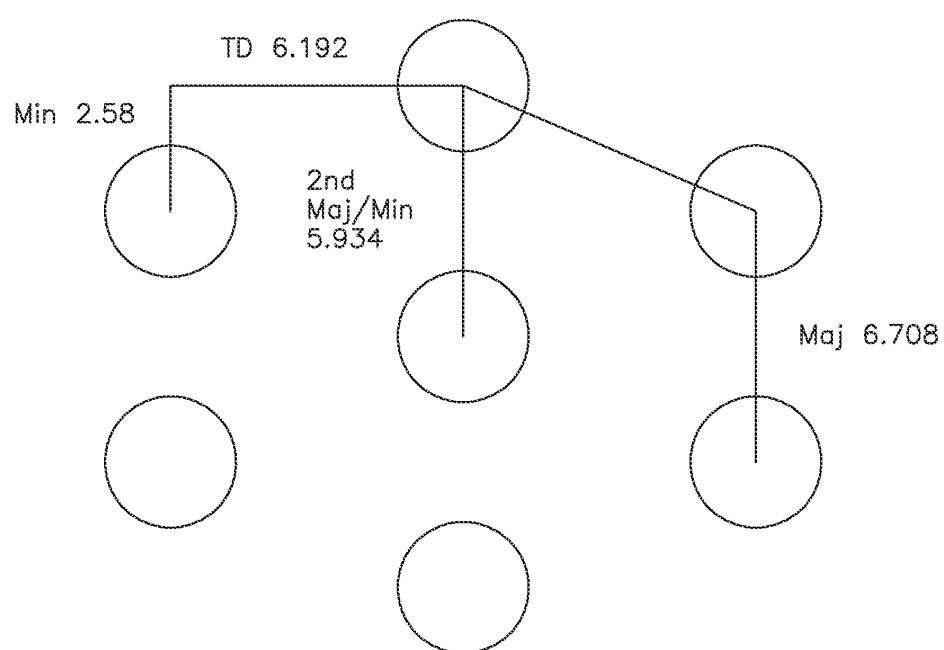


FIG. 39

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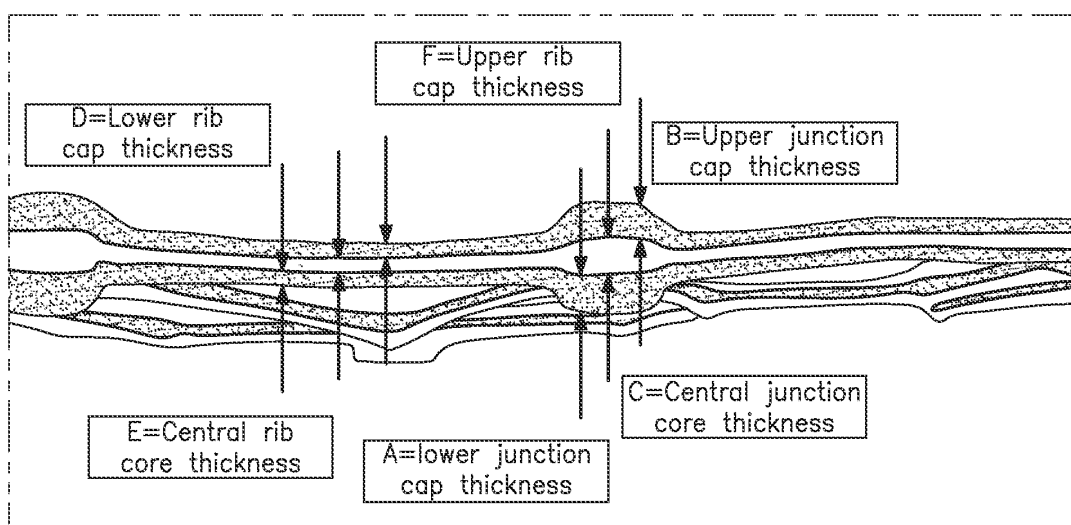


FIG. 40

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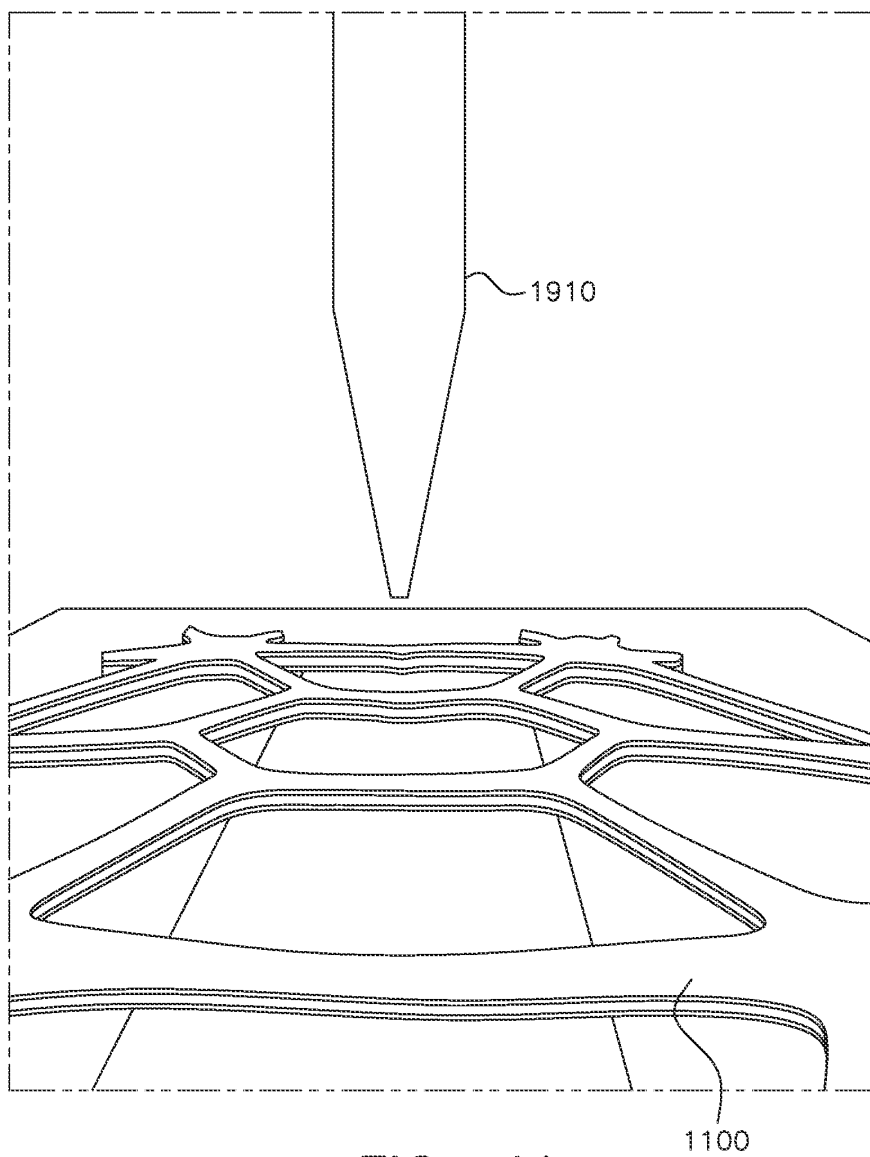


FIG. 41

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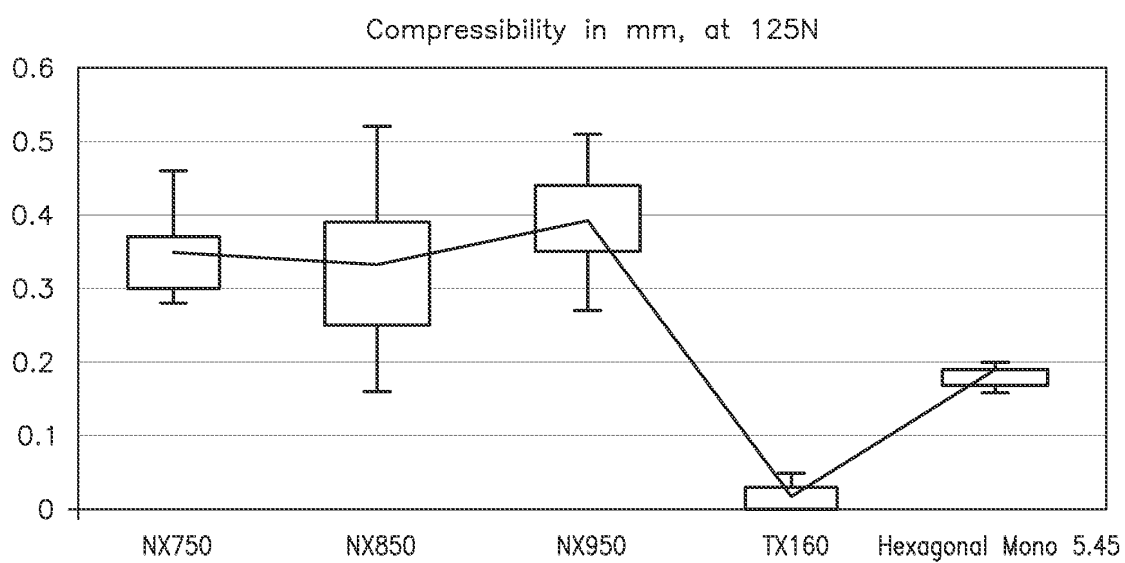


FIG. 42

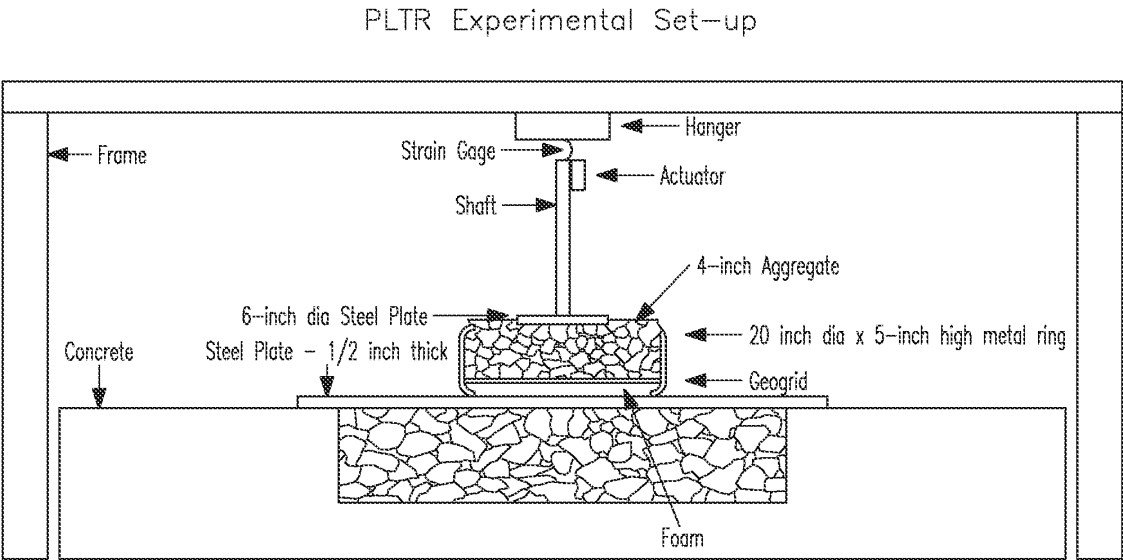


FIG. 44

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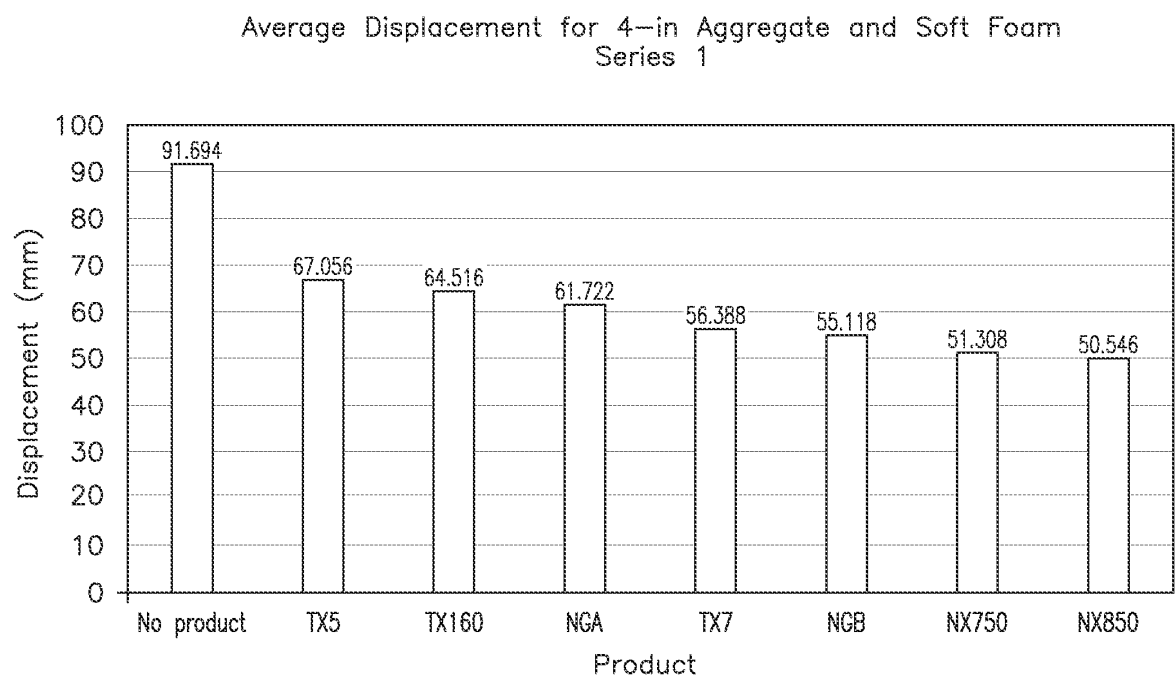
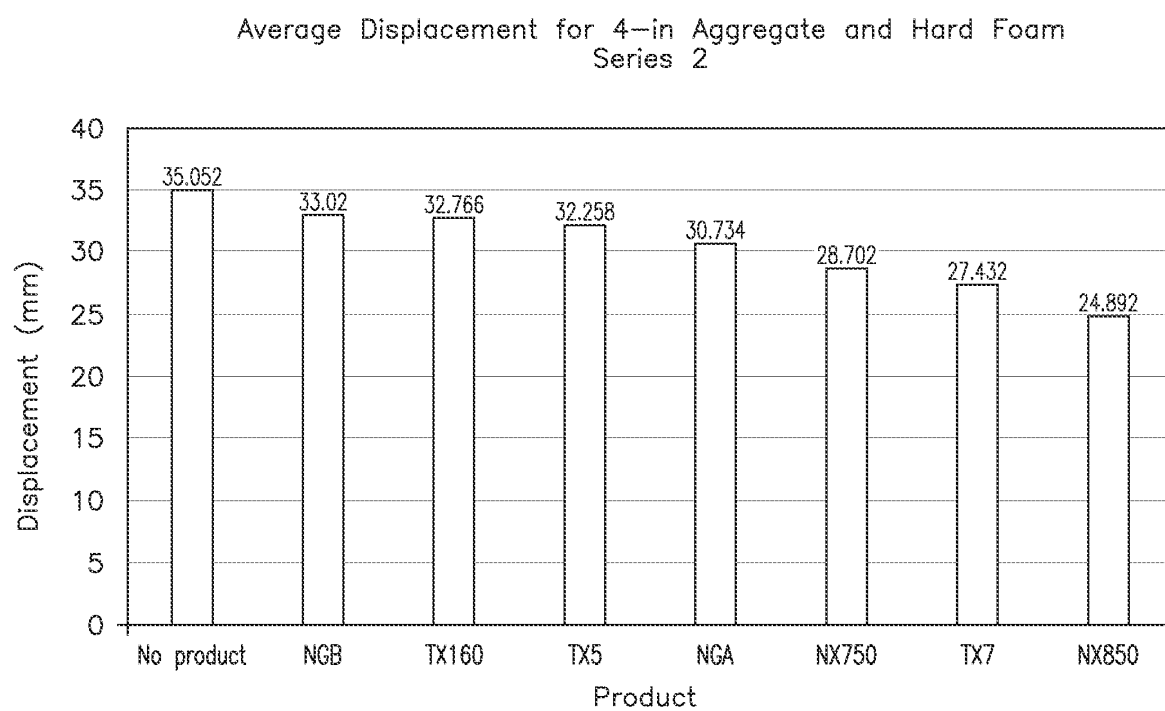
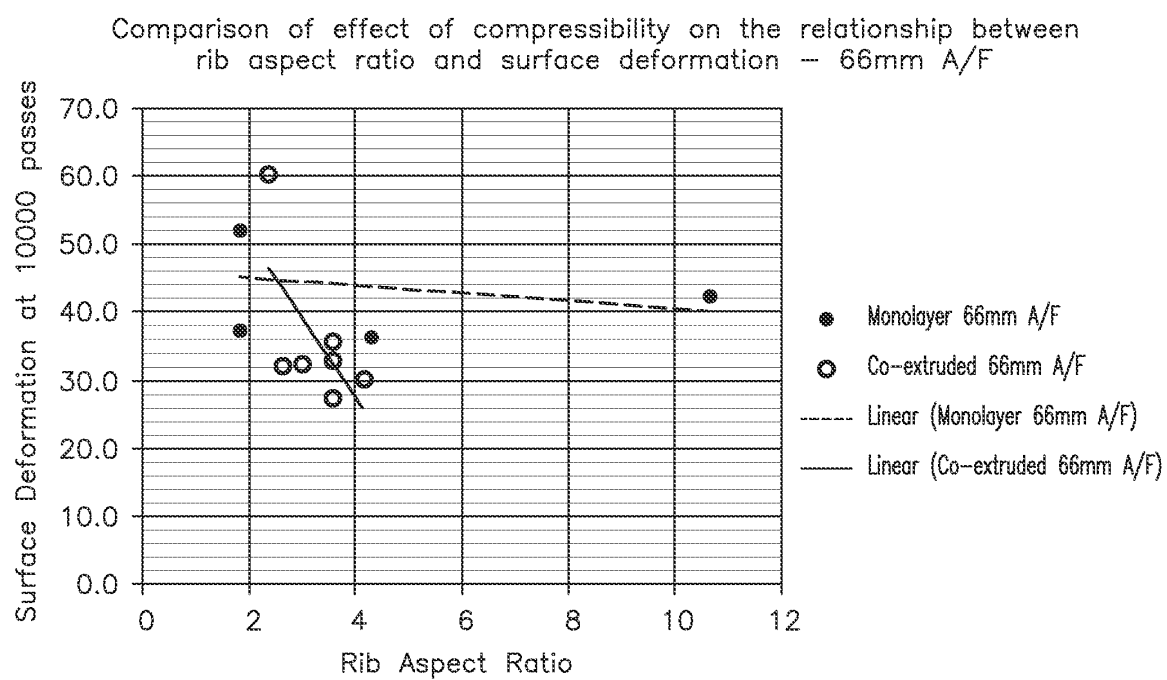


FIG. 45

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**FIG. 46**

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**FIG. 47**

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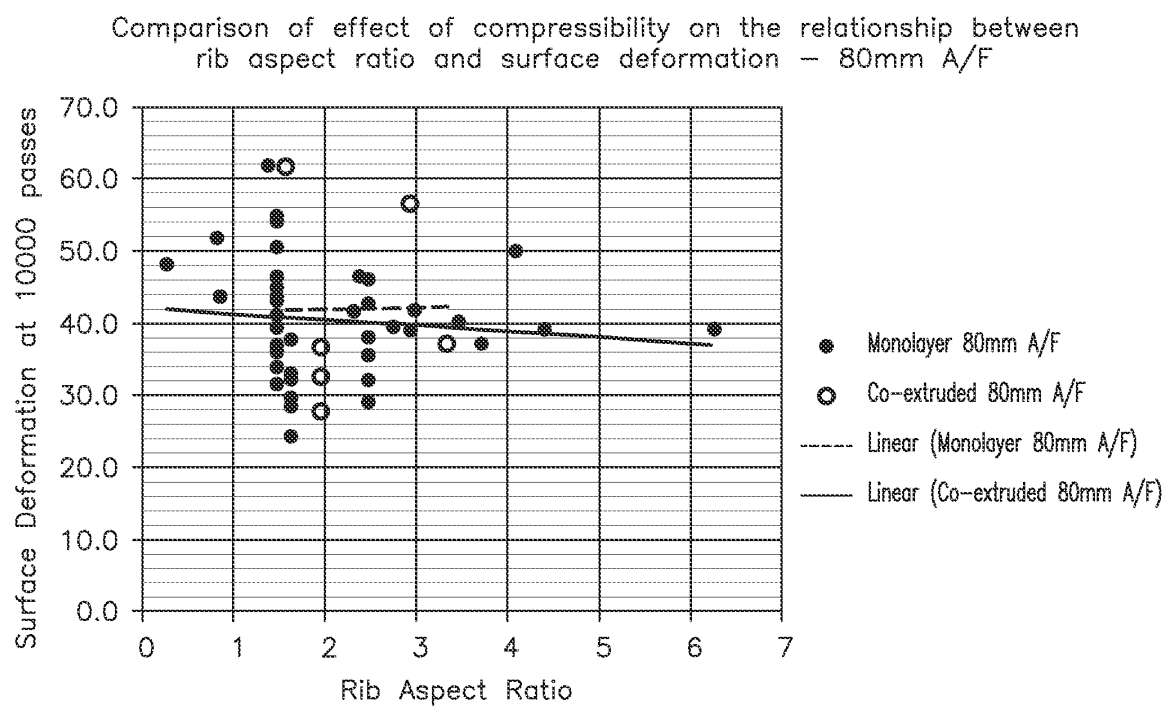


FIG. 48

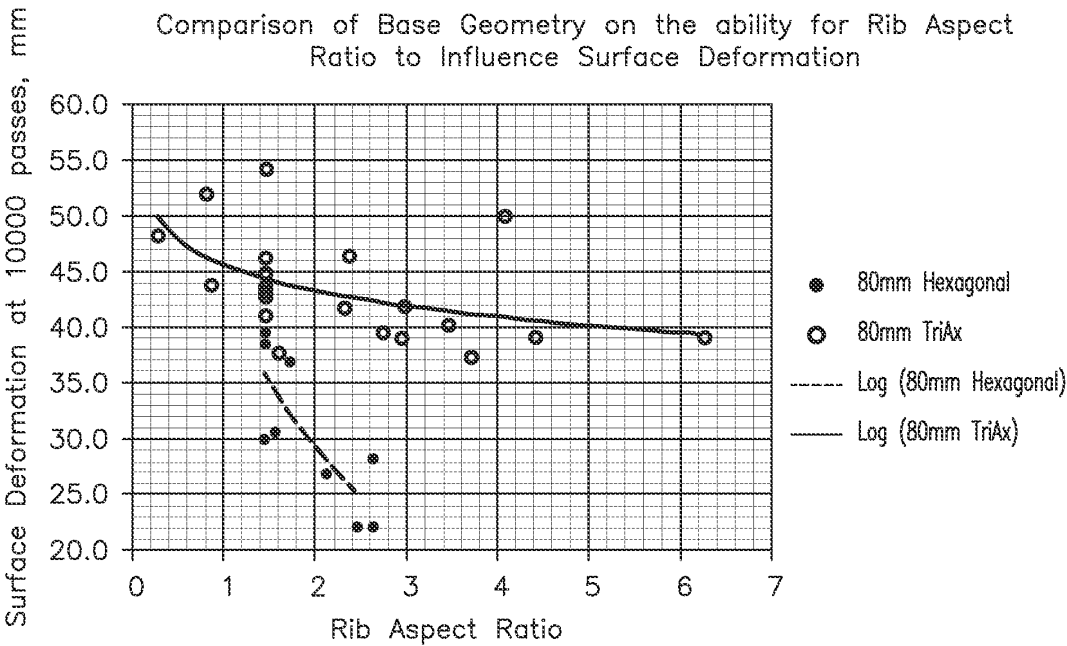


FIG. 49

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Trafficking test No.	Material	Sheet Configuration	Final pattern description	Punch Diameter (L for laser) (mm)	Final Aperture size (mm AF)	Sheet thickness (mm)	Rib aspect ratio	Av. surface defm. For last 500 passes (mm)	Overall Average Surface Deformation last 500 passes (mm)
0200504A	PP-25% CaCO ₃ Masterbatch 75 PP-PP	1mm/3.7mm/1mm	TX	3.68	76	5.7	1.94	27.7	32.3
0200605A	PP-25% CaCO ₃ Masterbatch 75 PP-PP	1mm/3.7mm/1mm	TX	3.68	76	5.7	1.94	32.7	
0200622A	PP-25% CaCO ₃ Masterbatch 75 PP-PP	1mm/3.7mm/1mm	TX	3.68	76	5.7	1.94	36.6	
0200617A	PP-25% CaCO ₃ Masterbatch 75 PP-PP	1mm/3.7mm/1mm	Hexagonal	3.68	79	5.7	1.76	22.8	24.6
0200520A	PP-25% CaCO ₃ Masterbatch 75 PP-PP	1mm/3.7mm/1mm	Hexagonal	3.68	79	5.7	1.76	24.2	
0200604A	PP-25% CaCO ₃ Masterbatch 75 PP-PP	1mm/3.7mm/1mm	Hexagonal	3.68	79	5.7	1.76	24.8	
0200612A	PP-25% CaCO ₃ Masterbatch 75 PP-PP	1mm/3.7mm/1mm	Hexagonal	3.68	79	5.7	1.76	26.4	

FIG. 50

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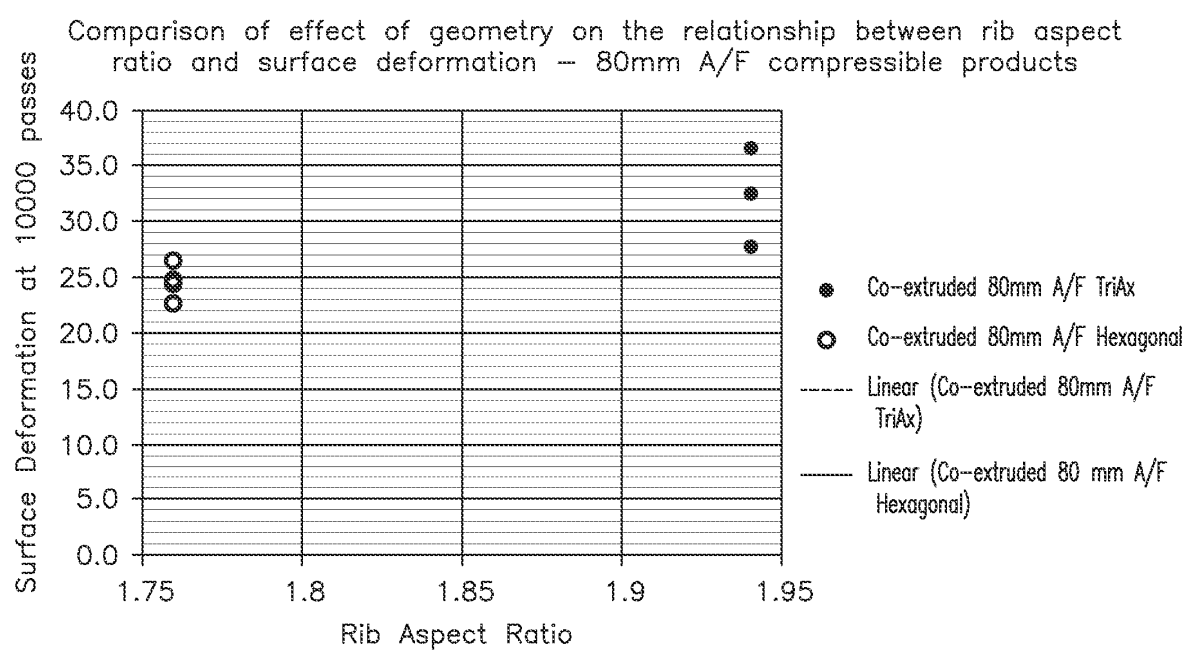


FIG. 51

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Trafficking test No.	Material	Sheet Configuration	Final pattern description	Punch Diameter (L for laser) (mm)	Final Aperture size (mm AF)	Sheet thickness (mm)	Rib aspect ratio	Av. surface defm. For last 500 passes (mm)	Overall Average Surface Deformation last 500 passes (mm)
0200729A	Foam PP (Microcell 544)-PP-Foam PP (Microcell 544)	2mm/2mm/2mm	Hexagonal	3.68	78	6	1.69	23.4	30.9
0200806A	Foam PP (Microcell 544)-PP-Foam PP (Microcell 544)	2mm/2mm/2mm	Hexagonal	3.68	78	6	1.69	33.5	
0200820A	Foam PP (Microcell 544)-PP-Foam PP (Microcell 544)	2mm/2mm/2mm	Hexagonal	3.68	78	6	1.69	35.9	
0200831A	PP-M544-PP	1mm/4.2mm/1mm	Hexagonal	3.68	77	6.2	1.69	33.9	34.8
0200826A	PP-M544-PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.48	29.2	
0200811A	PP-M544-PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.48	29.5	
0200825A	PP-M544-PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.48	30.5	
0200805A	PP-M544-PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.48	32.8	
0200827A	PP-M544-PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.48	34.4	
0200212A	PP-Foam PP (Microcell 544)-PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.85	36.2	
0200214A	PP-Foam PP (Microcell 544)-PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.85	51.6	

FIG. 52

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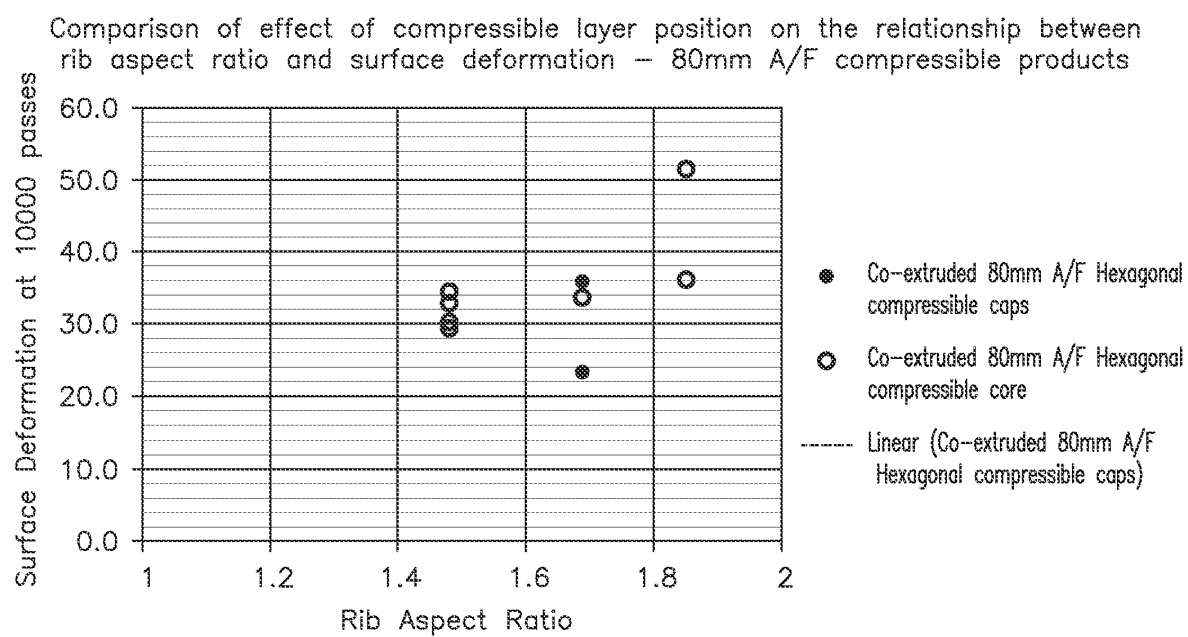


FIG. 53

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Trafficking test No.	Material	Sheet Configuration	Final pattern description	Punch Diameter (L for laser) (mm)	Final Aperture size (mm AF)	Sheet thickness (mm)	Rib aspect ratio	Av. surface defm. For last 500 passes (mm)	Overall Average Surface Deformation last 500 passes (mm)
0200921A	25% CaCO ₃ Masterbatch 75% PP-PP-25% CaCO ₃ Masterbatch 75% PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.83	24.6	29.8
0200929A	25% CaCO ₃ Masterbatch 75% PP-PP-25% CaCO ₃ Masterbatch 75% PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.83	31.0	
0200908A	25% CaCO ₃ Masterbatch 75% PP-PP-25% CaCO ₃ Masterbatch 75% PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.53	33.8	
0200916A	PP-M544-PP-M544-PP	0.2mm/1.5mm /2.8mm/1.5mm /0.2mm	Hexagonal	3.68	81	6.2	1.53	29.5	32.0
0200928A	PP-M544-PP-M544-PP	0.2mm/1.5mm /2.8mm/1.5mm /0.2mm	Hexagonal	3.68	81	6.2	1.53	30.1	
0200907A	PP-M544-PP-M544-PP	0.2mm/1.5mm /2.8mm/1.5mm /0.2mm	Hexagonal	3.68	81	6.2	1.53	36.5	
0190724A	PP	6.2mm	Hexagonal	3.68 L	80	6.2	2.66	45.8	45.4
0190711A	PP	6.3mm	Hexagonal	3.68 CNC	80	6.3	2.89	45.0	

FIG. 54

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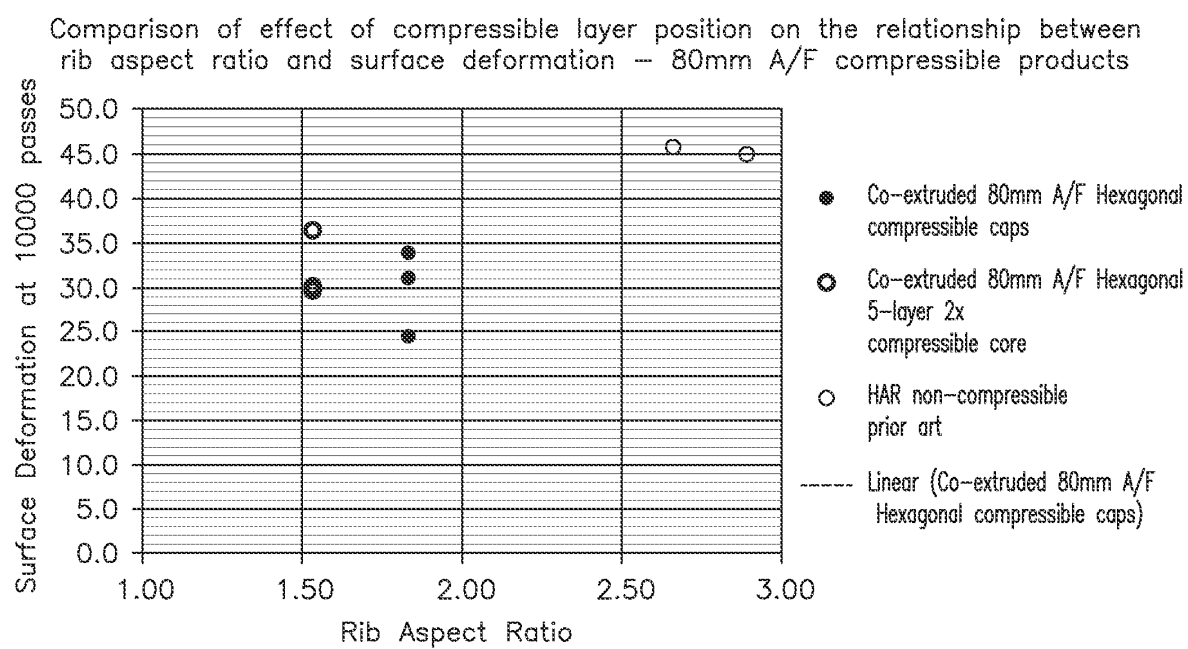


FIG. 55

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Trafficking test No.	Material	Sheet Configuration	Final pattern description	Punch Diameter (L for laser) (mm)	Final Aperture size (mm AF)	Sheet thickness (mm)	Rib aspect ratio	Av. surface defm. For last 500 passes (mm)	Overall Average Surface Deformation last 500 passes (mm)
0200921A	25% CaCO ₃ Masterbatch 75% PP- PP-25% CaCO ₃ Masterbatch 75% PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.83	24.6	29.6
0200929A	25% CaCO ₃ Masterbatch 75% PP- PP-25% CaCO ₃ Masterbatch 75% PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.83	31.0	
0200908A	25% CaCO ₃ Masterbatch 75% PP- PP-25% CaCO ₃ Masterbatch 75% PP	1mm/4.2mm/1mm	Hexagonal	3.68	79	6.2	1.83	33.8	
0201111A	25% CaCO ₃ Masterbatch 75% PP- PP-25% CaCO ₃ Masterbatch 75% PP	1.25mm/5mm /1.25mm	Hexagonal	3.68	79	7.5	1.92	22.8	
0201104A	25% CaCO ₃ Masterbatch 75% PP- PP-25% CaCO ₃ Masterbatch 75% PP	1.25mm/5mm /1.25mm	Hexagonal	3.68	79	7.5	1.92	32.5	
0201130A	25% CaCO ₃ Masterbatch 75% PP- PP-25% CaCO ₃ Masterbatch 75% PP	1.25mm/5mm /1.25mm	Hexagonal	3.68	79	7.5	1.92	33.2	
0180502A	PP	8.5mm	TX160 Mod	3.7	80	8.5	2.95	39.0	39.9
0180411A	PP	8.5mm	TX160 Mod	5.5	80	8.5	6.26	39.2	
0180510A	PP	8.5mm	TX160 Mod	3.68	80	8.5	2.75	39.5	
0180518A	PP	8.5mm	TX160 Mod	4	80	8.5	2.33	41.7	
0180417A	PP	8.5mm	TX160 Mod	4.7	82	8.5	3.46	40.2	

FIG. 56

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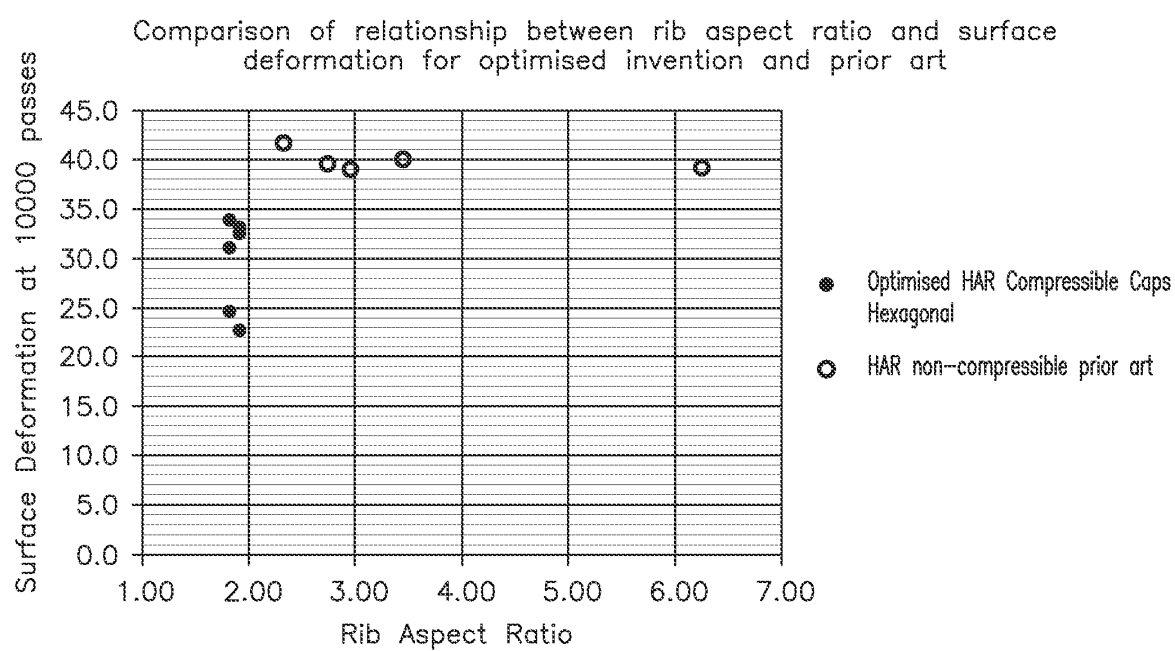
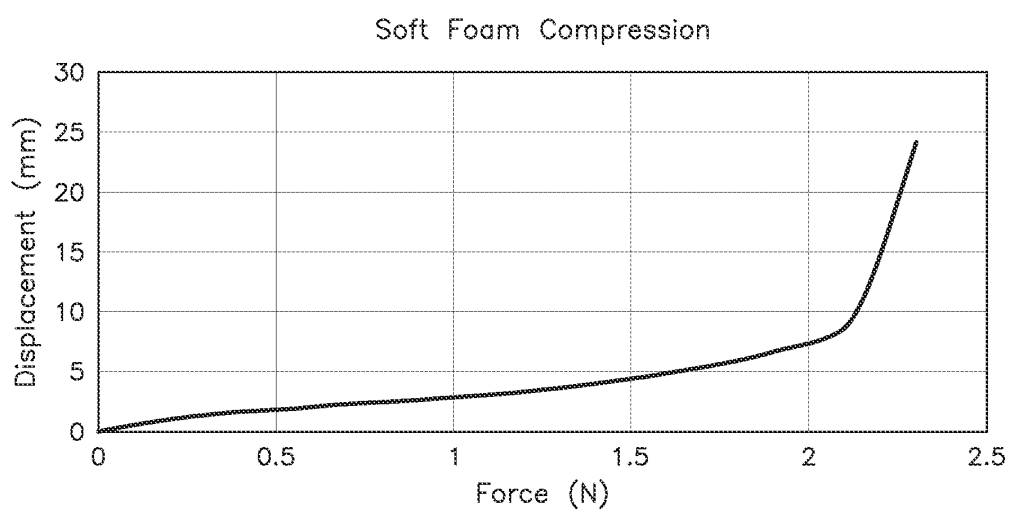
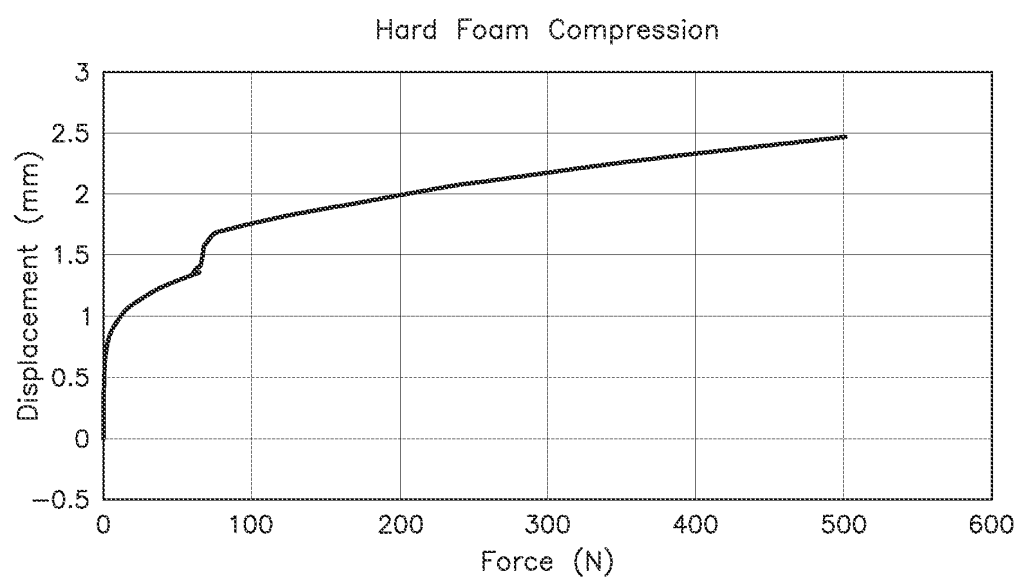


FIG. 57

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**FIG. 58**

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**FIG. 59**