

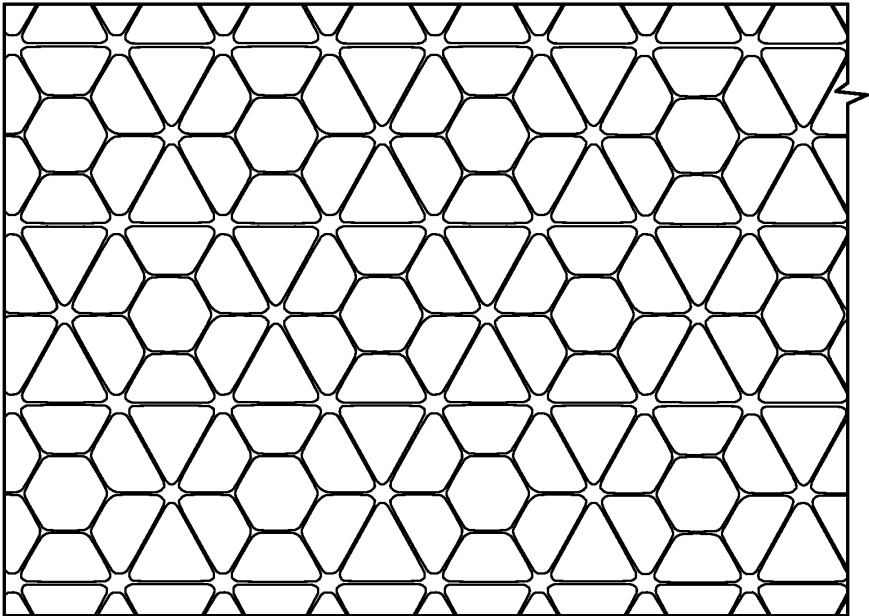


FIG.1A

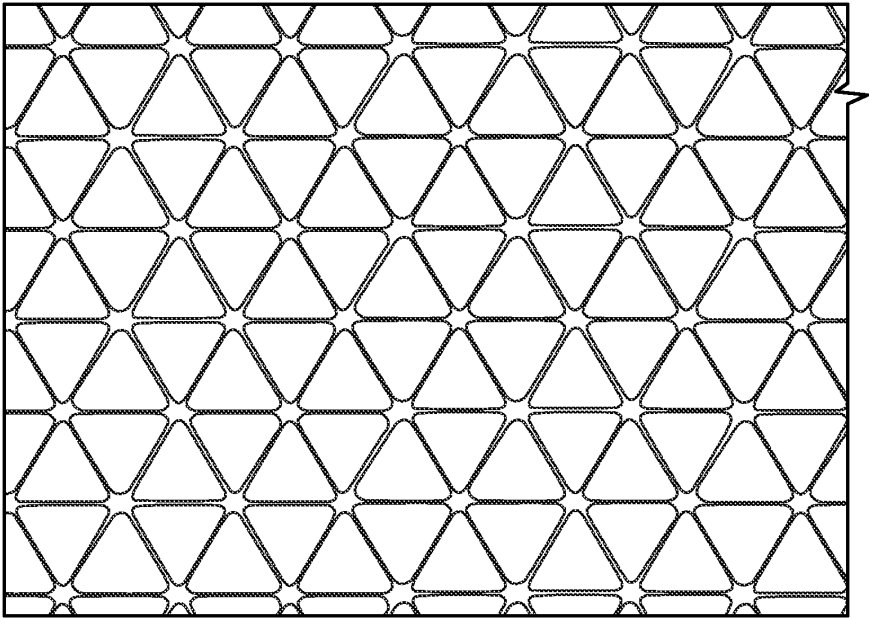


FIG.1B
PRIOR ART

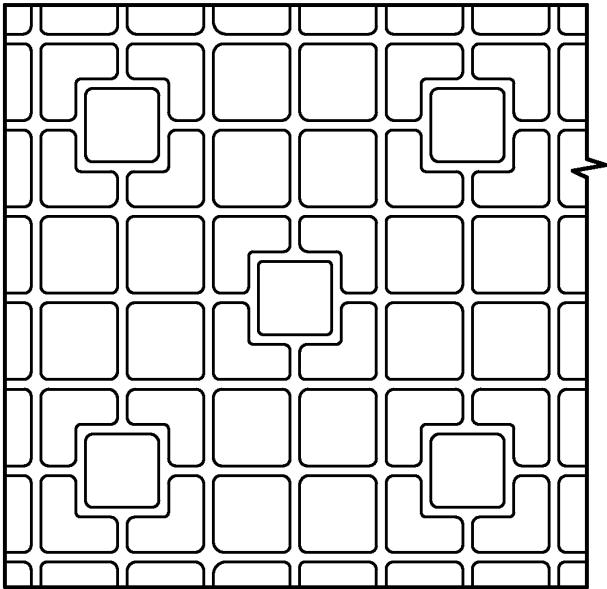


FIG. 1C

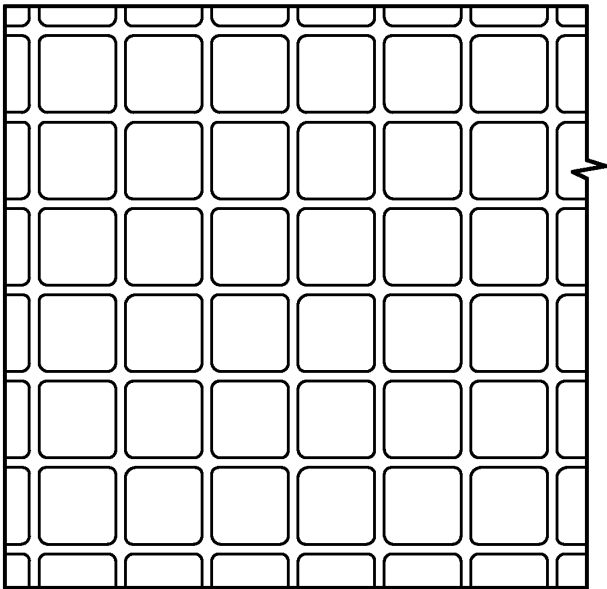


FIG. 1D
PRIOR ART

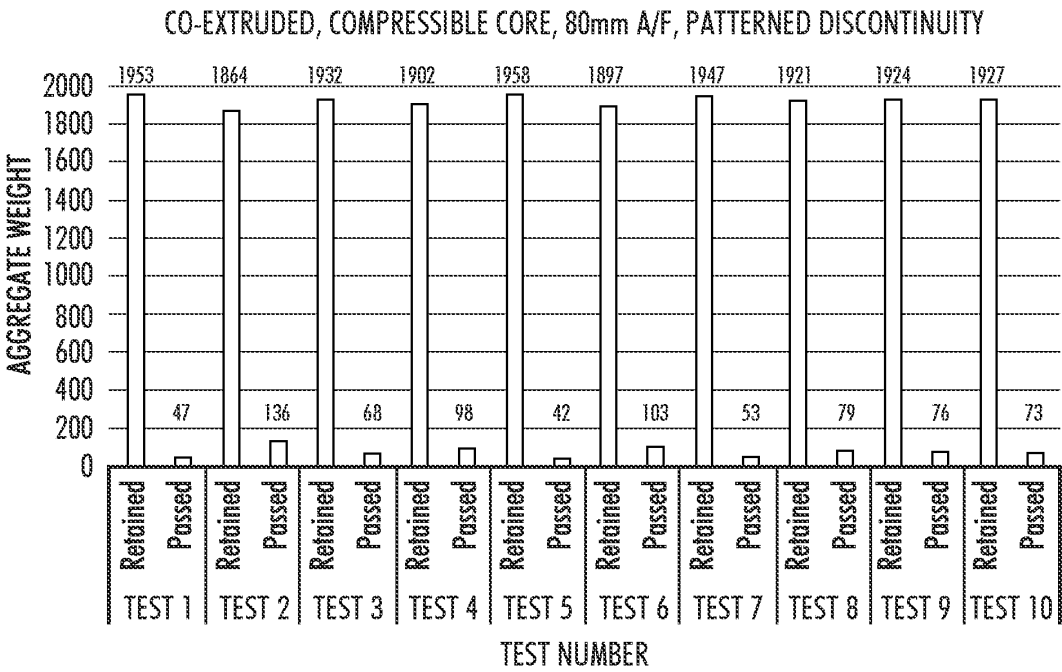


FIG.2A

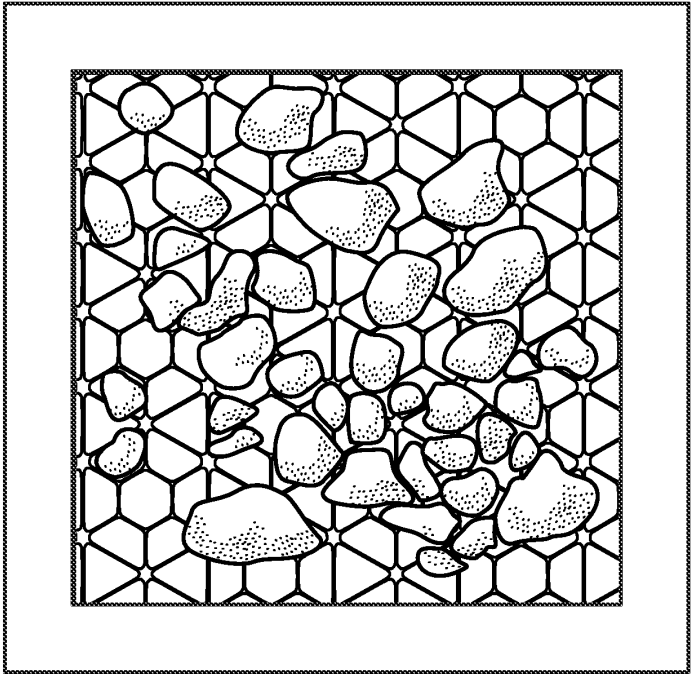


FIG.2B

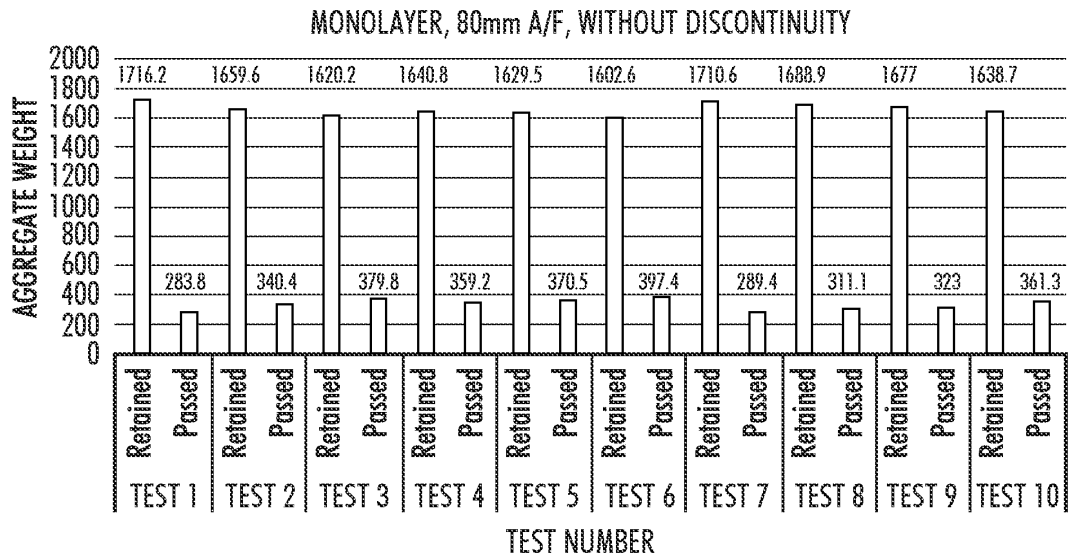


FIG.2C
PRIOR ART

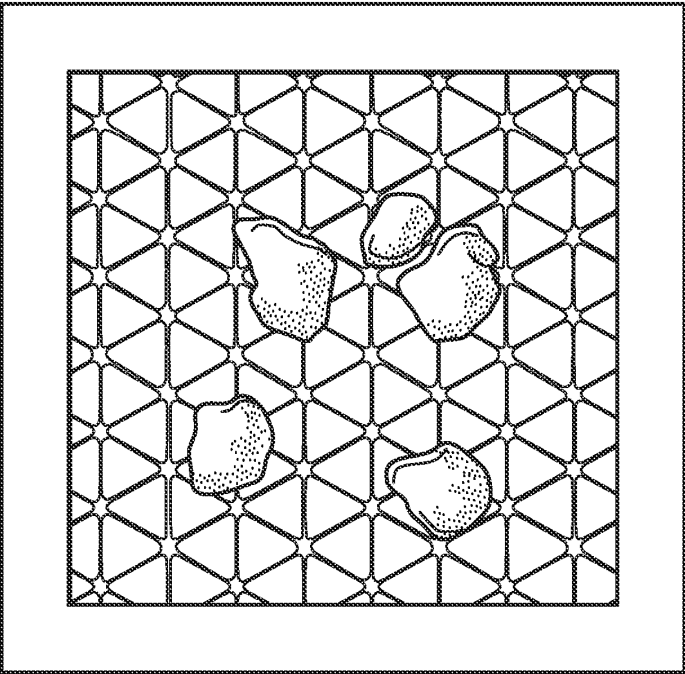


FIG.2D
PRIOR ART

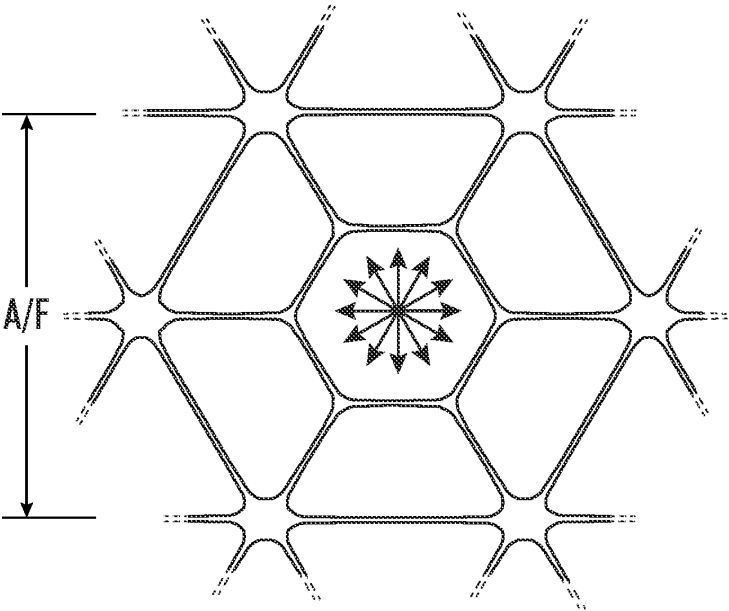


FIG.3A

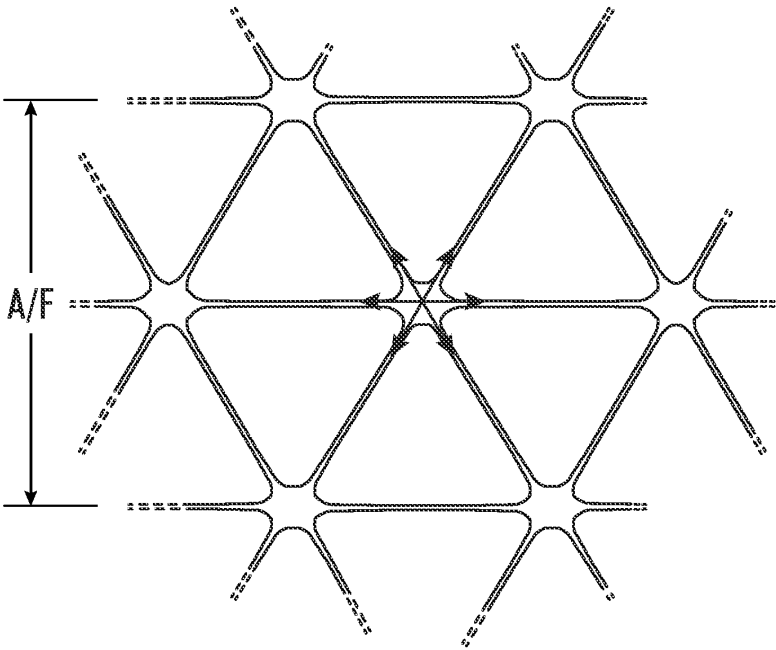


FIG.3B
PRIOR ART

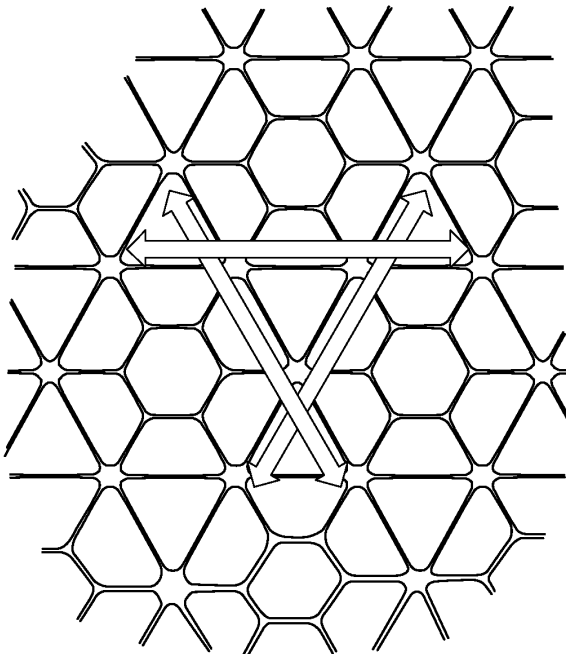


FIG. 4A

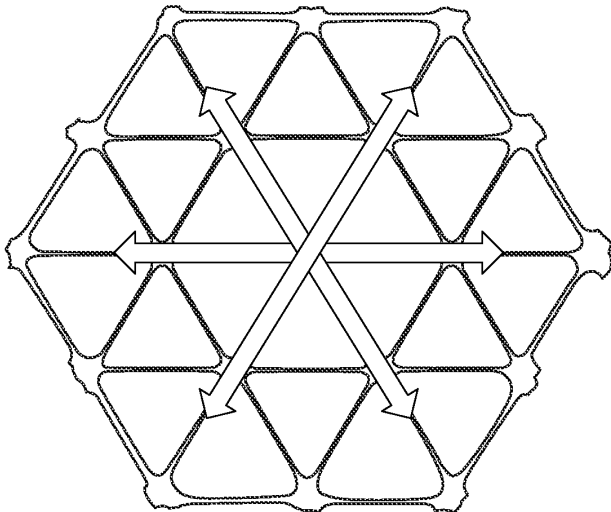


FIG. 4B
PRIOR ART

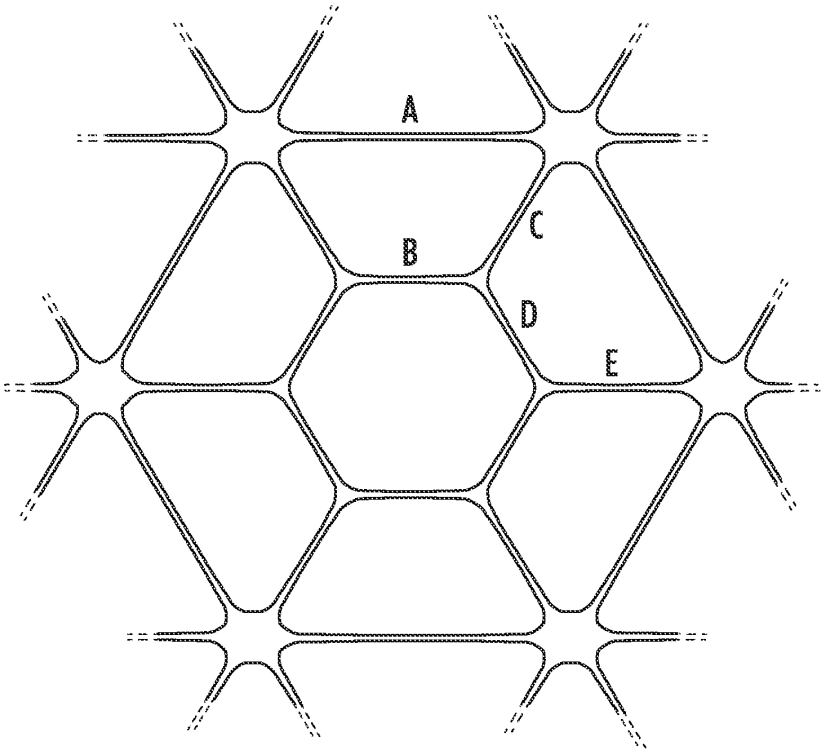
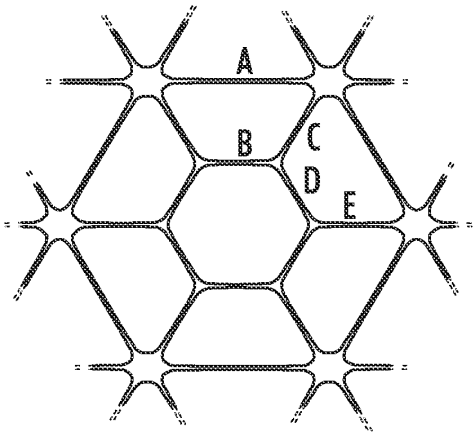


FIG.5



PATTERNED DISC.		MONOLAYER		
		4.45mm	5.45mm	6.45mm
A	2.86	1.47	1.62	1.85
B	2.12 (LOWEST)	-	-	-
C	2.90 (HIGHEST)	-	-	-
D	2.53	-	-	-
E	2.40	-	-	-
AVERAGE RIB ASPECT RATIO	2.66	1.47	1.62	1.85

FIG.6

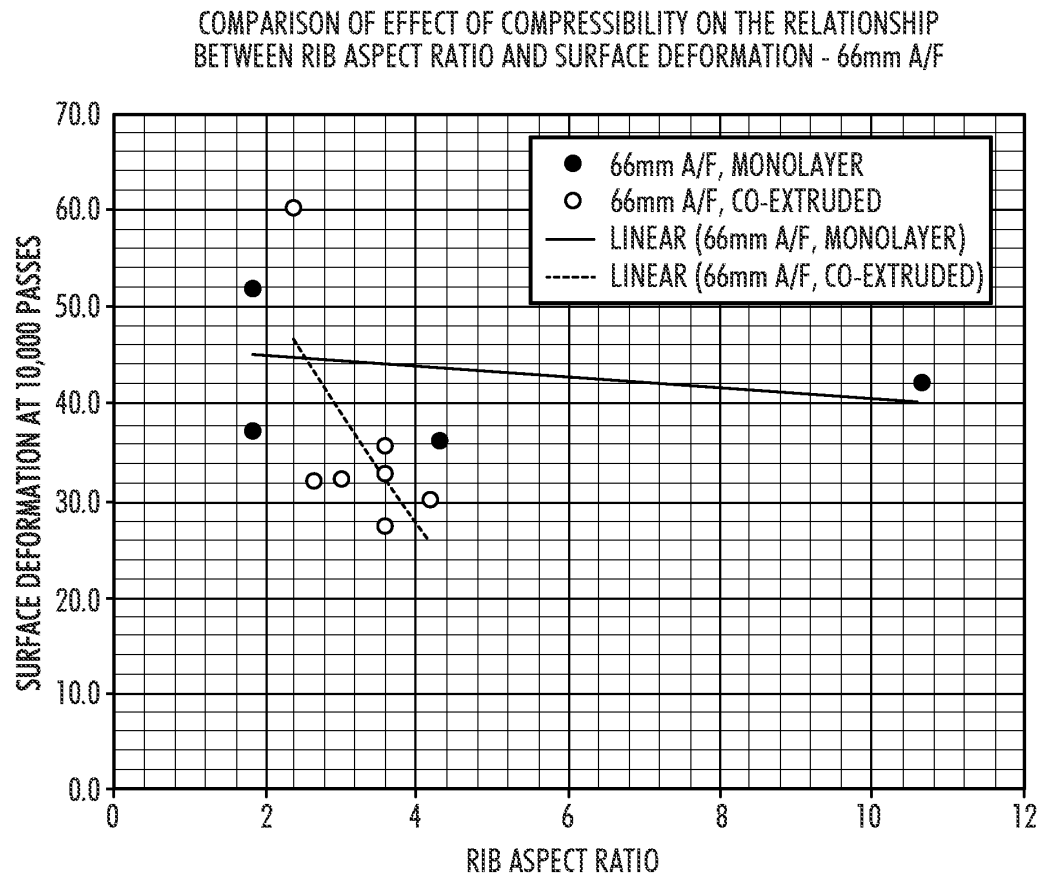


FIG.7

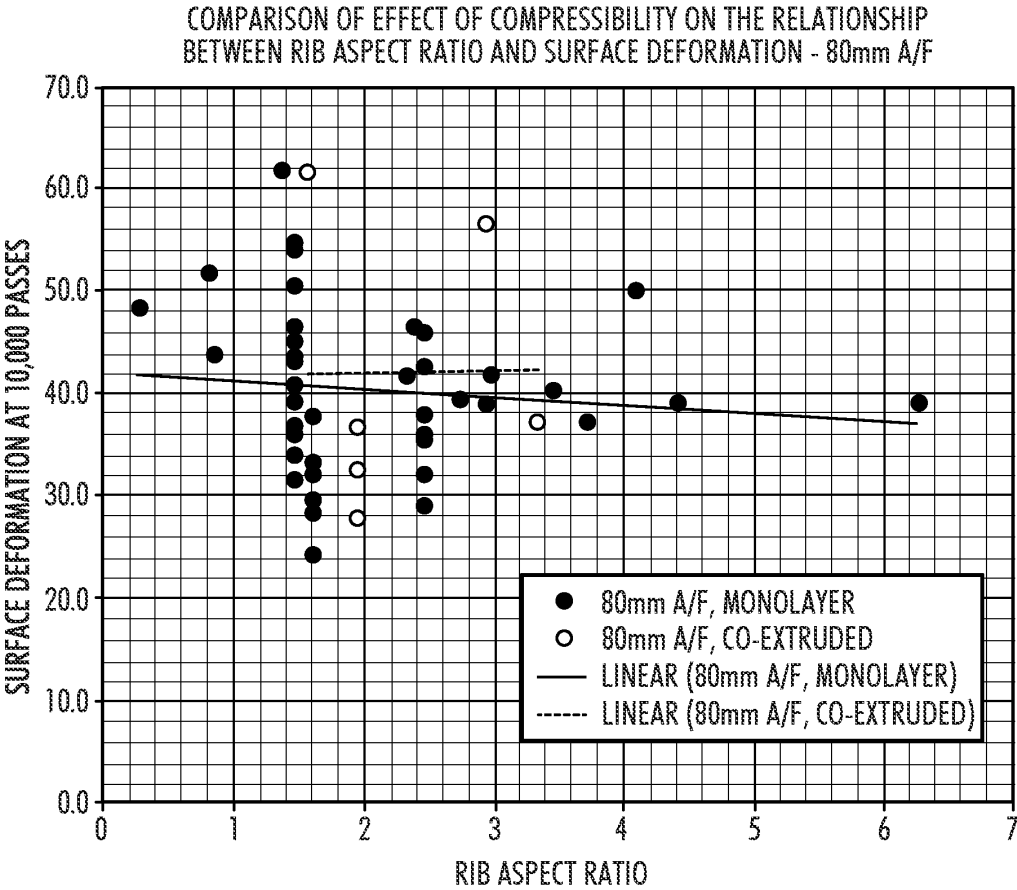


FIG.8

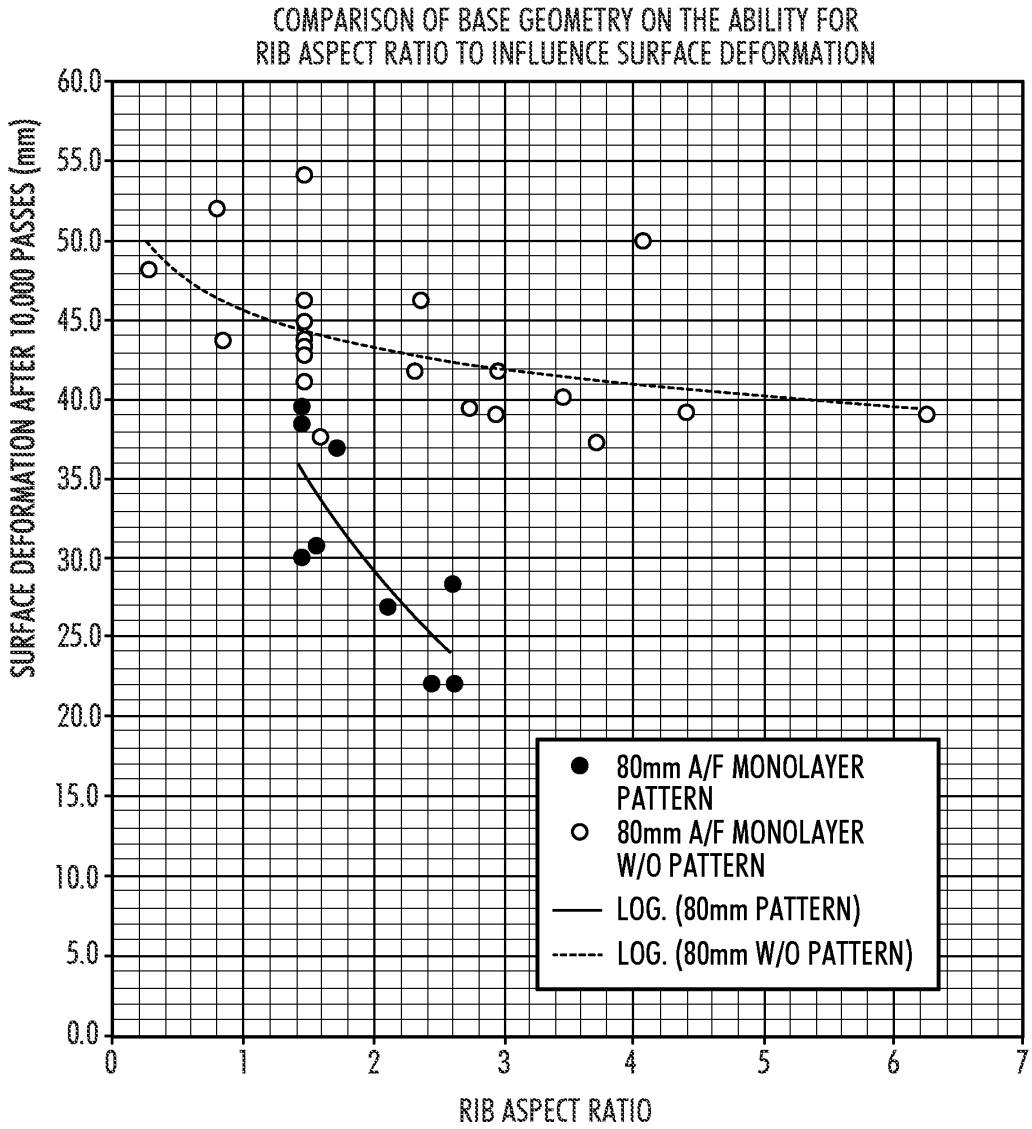


FIG.9

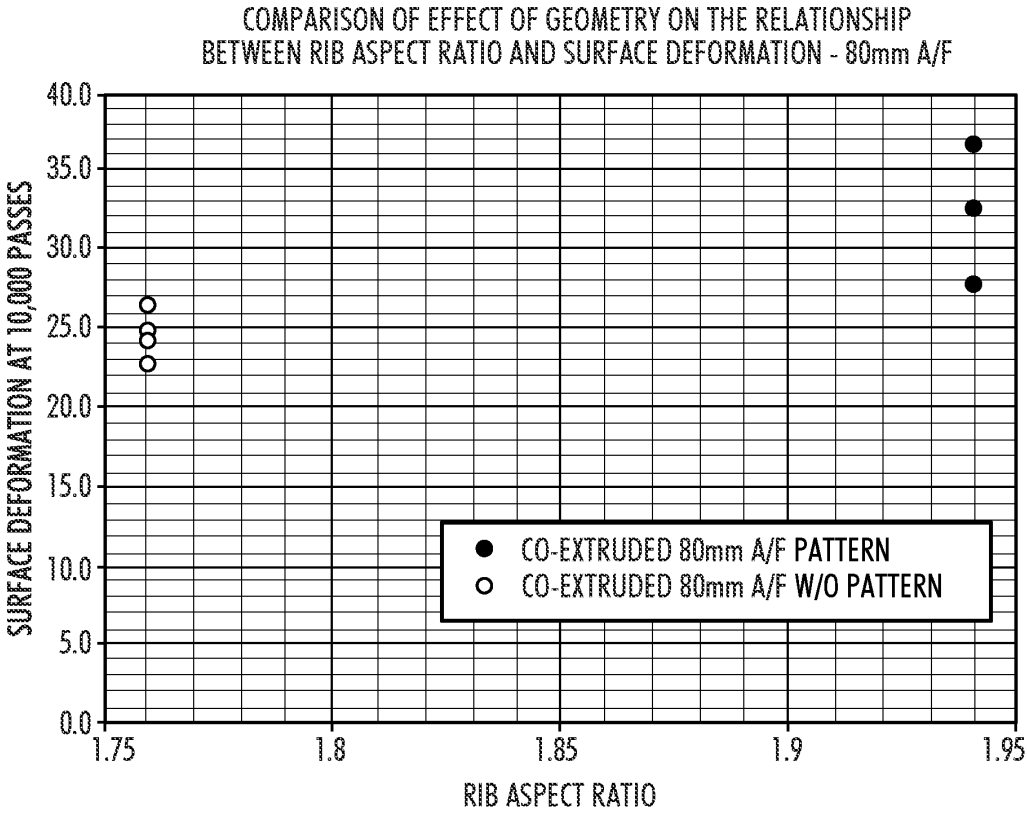


FIG.10

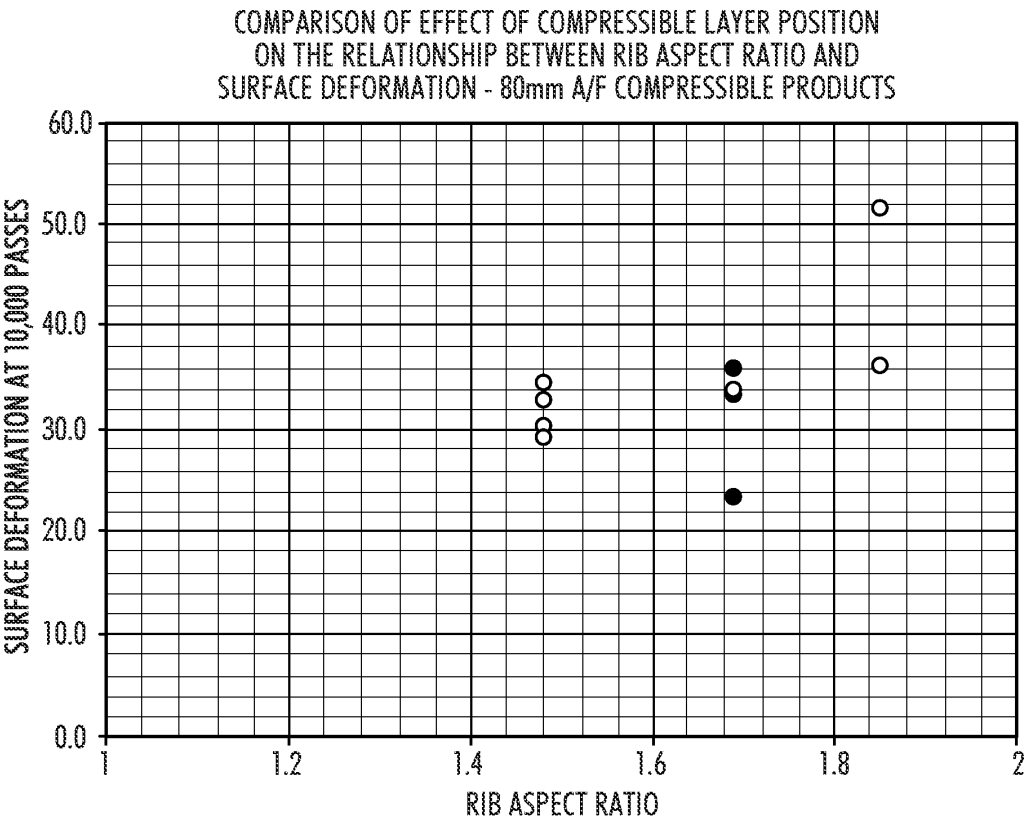
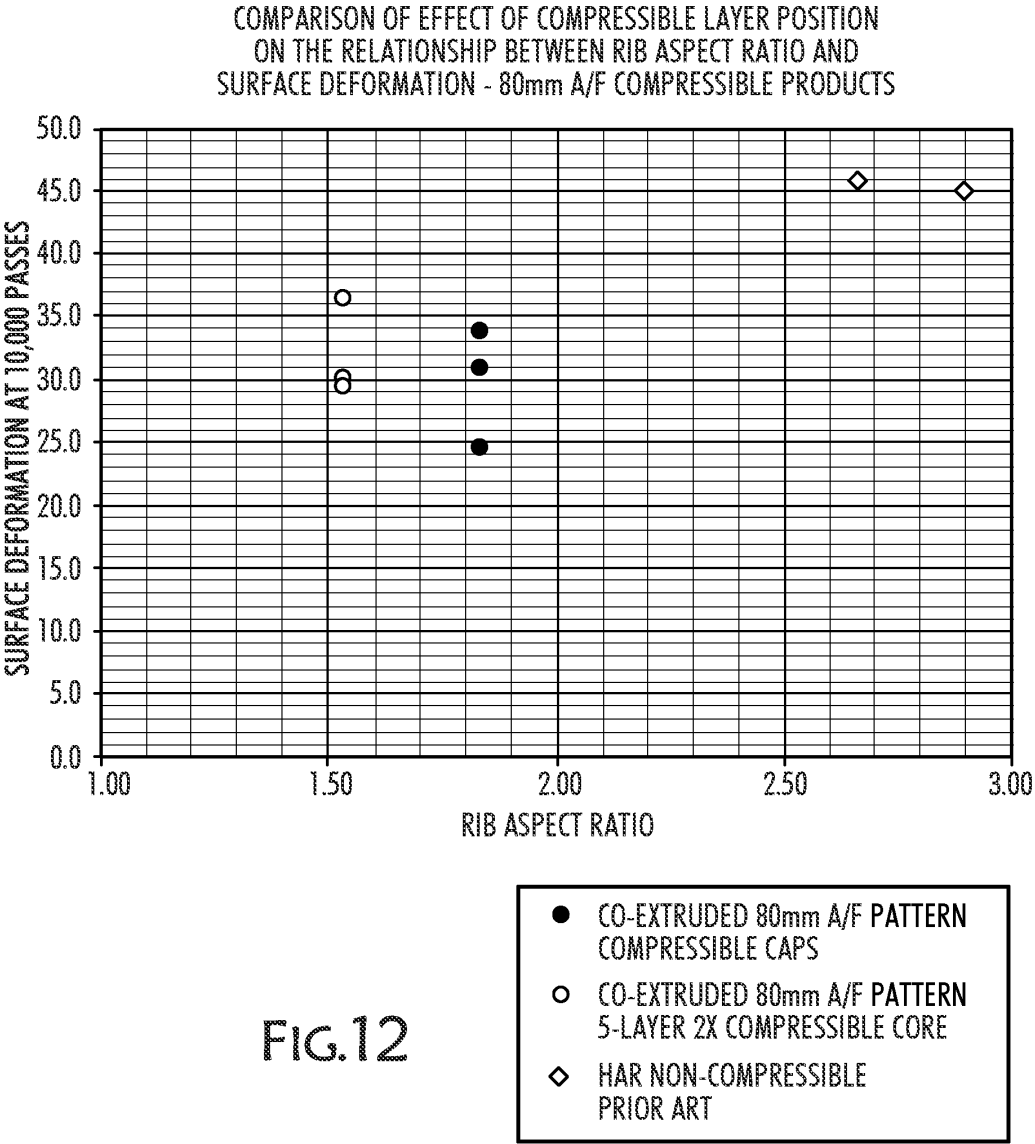


FIG.11

- CO-EXTRUDED 80mm A/F PATTERN COMPRESSIBLE CAPS
- CO-EXTRUDED 80mm A/F PATTERN COMPRESSIBLE CORE



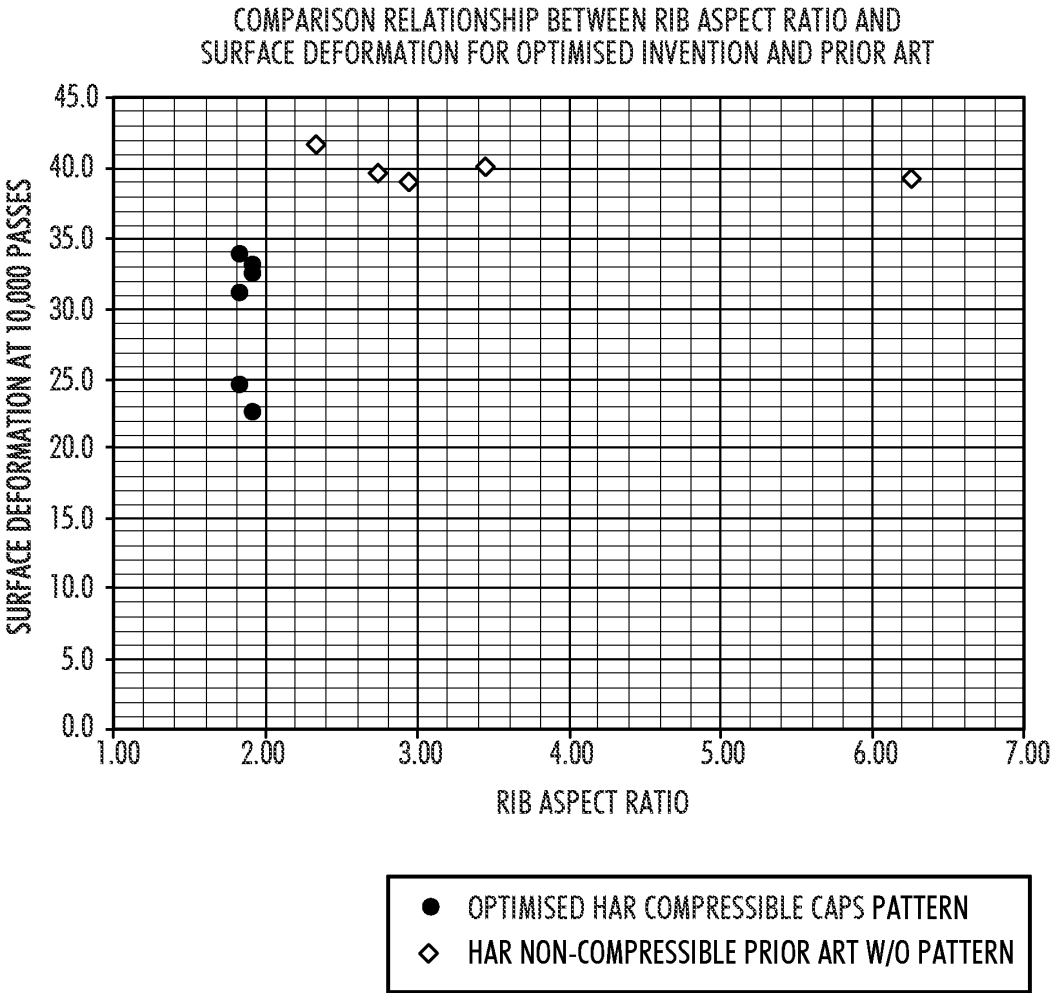


FIG.13

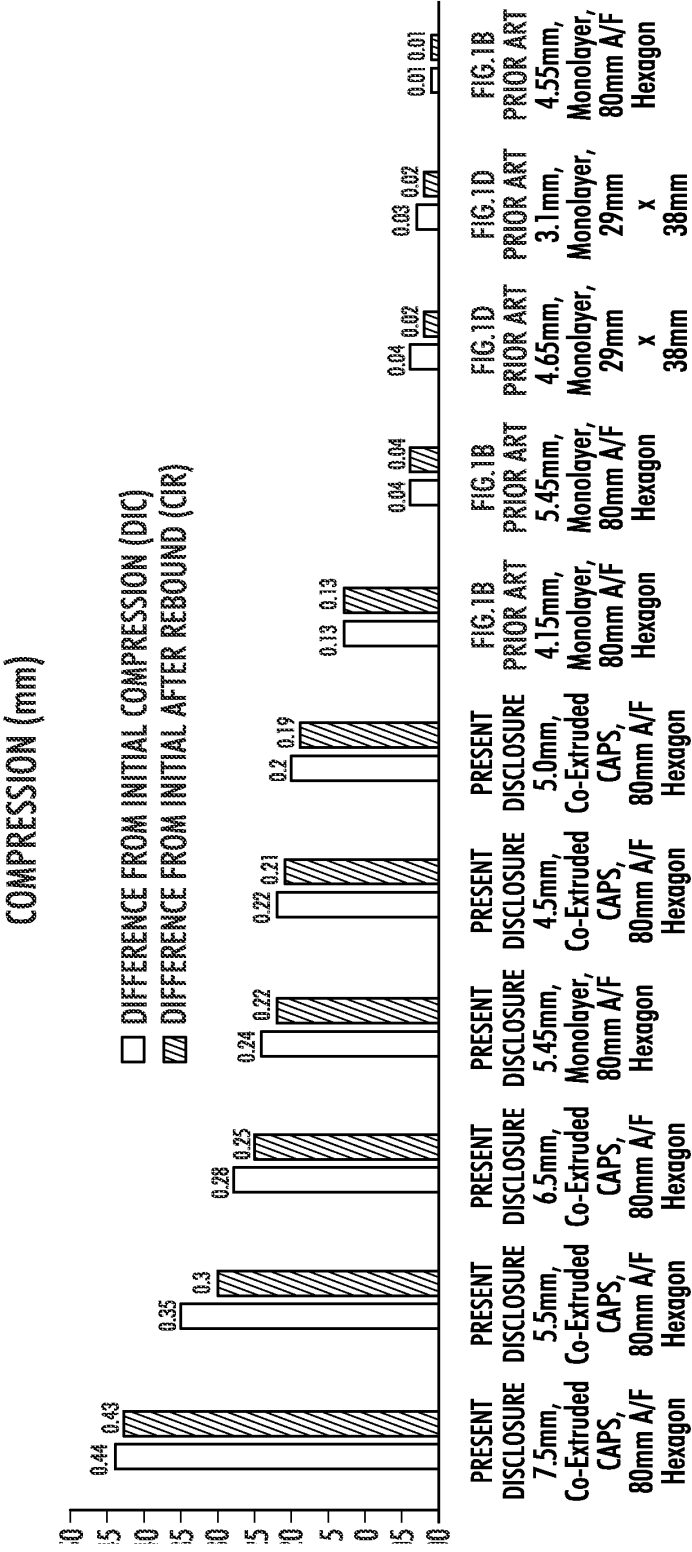


FIG.14A

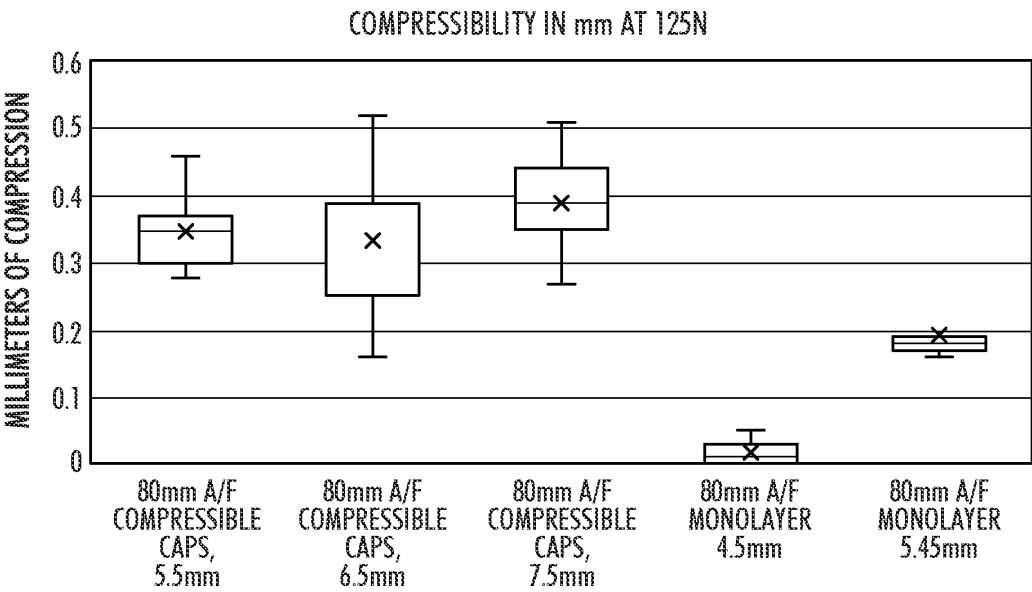


FIG.14B

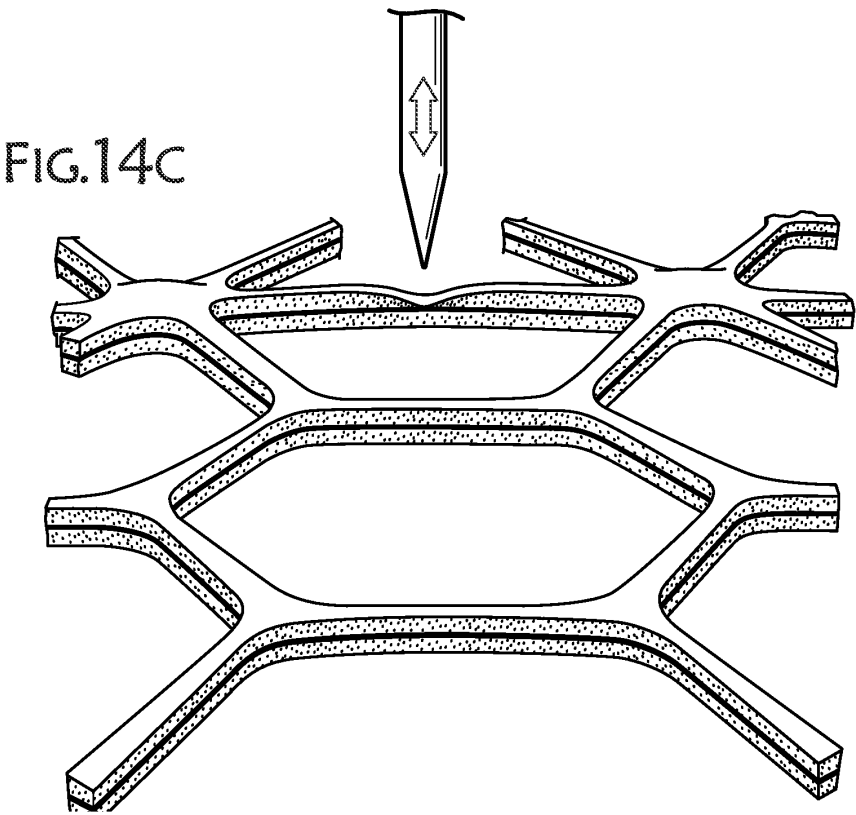


FIG.14C

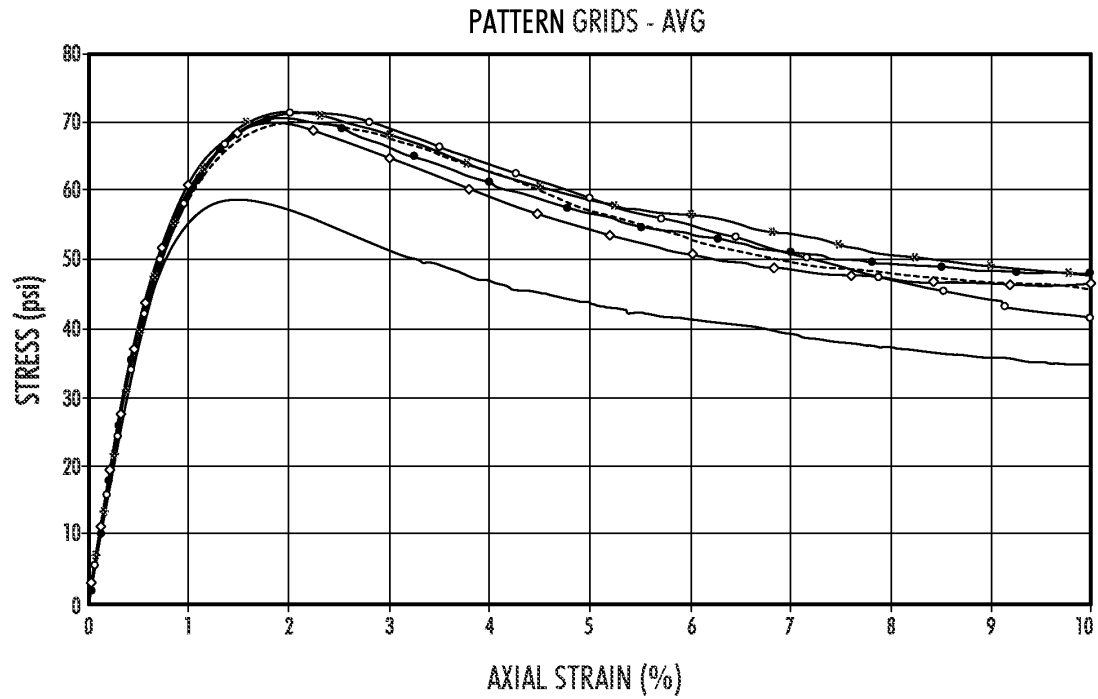


FIG.15

	AVERAGE VALUES	
	PEAK STRESS (psi)	STRAIN AT PEAK STRESS (%)
— CONTROL	55.9	1.81
----- PATTERN Grid A	70.2	2.17
—●— PATTERN Grid B	71.1	2.08
—○— PATTERN Grid C	71.6	2.27
—◆— PATTERN Grid D	71.0	1.92
—◇— PATTERN Grid E	70.1	1.82
—*— PATTERN Grid F	72.0	2.07

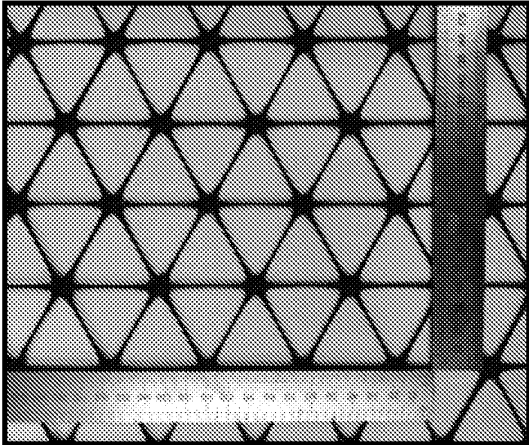


FIG.16A
PRIOR ART

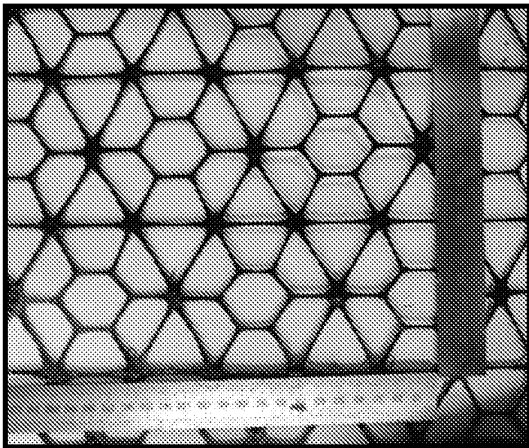


FIG.16B

	FIG.16B	FIG.16A
Unoriented Nodes Per m2 (Measured and Extrapolated)	384	480
Oriented Tensile Elements Per m2	2224	1424
Open Area	85%	85%
Average Aperture Open Area, mm ^ 2	588 (see breakdown)	794

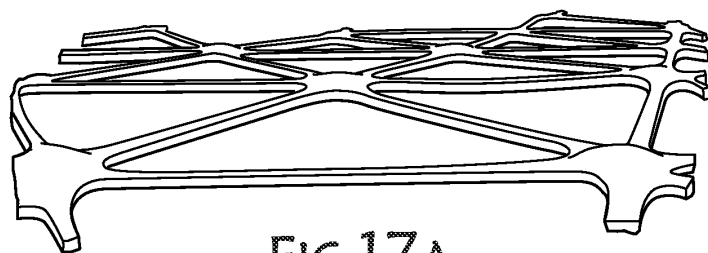


FIG. 17A
PRIOR ART

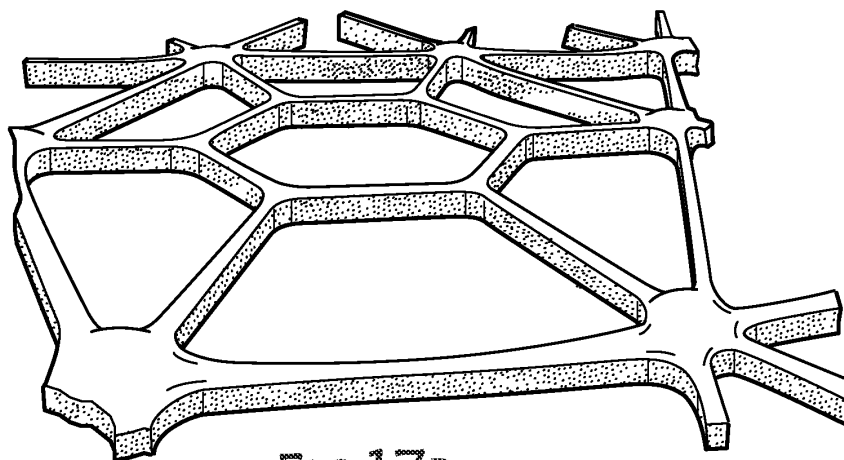


FIG. 17B

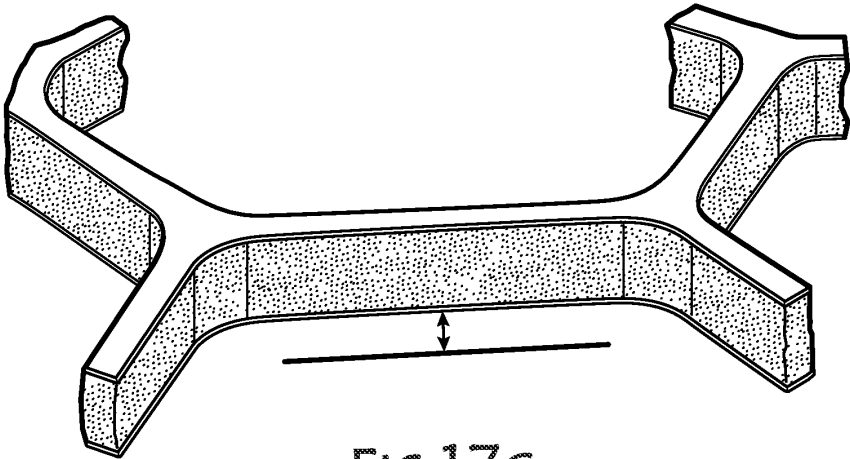


FIG.17C

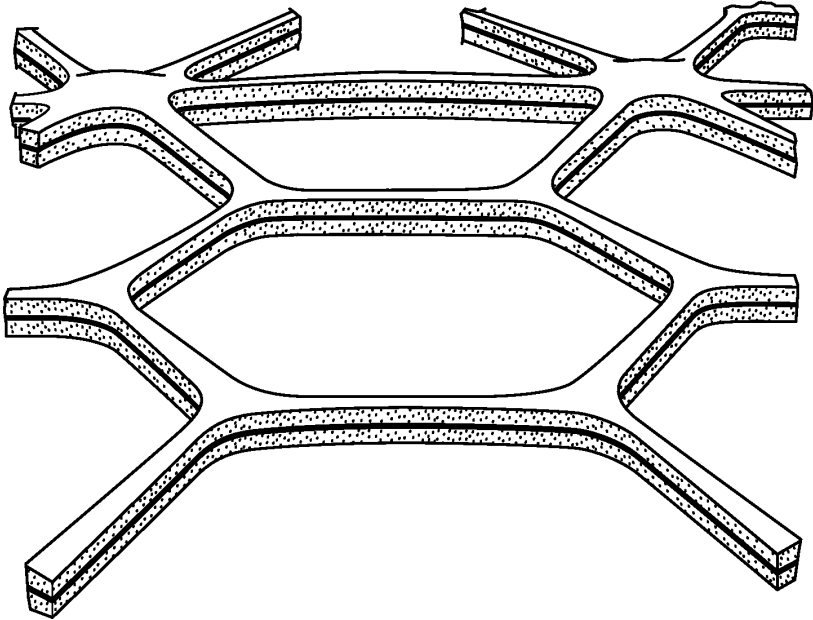


FIG.17D

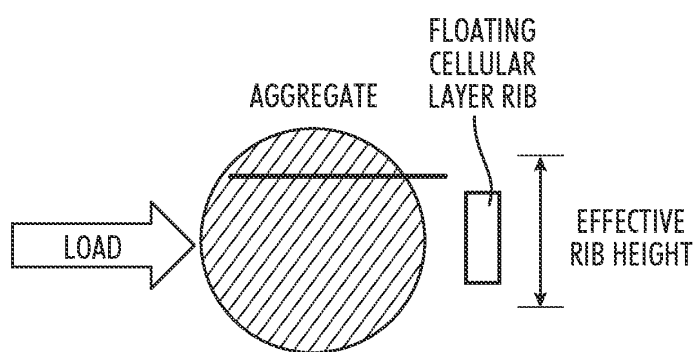


FIG.18A

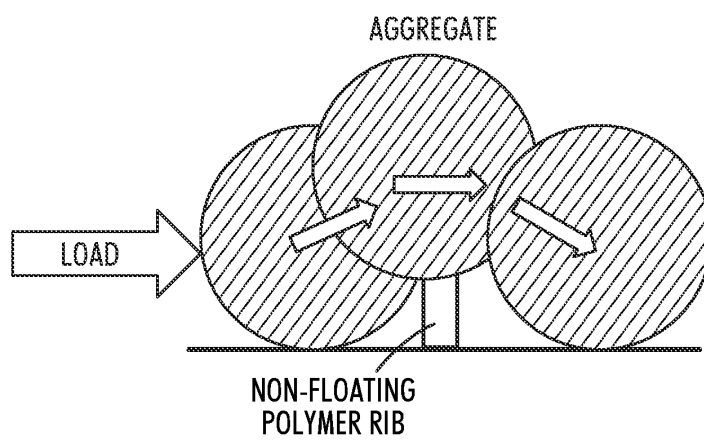


FIG.18B

FIG.19A

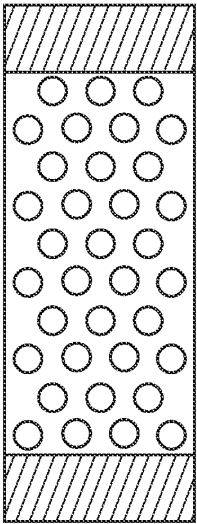


FIG.19B

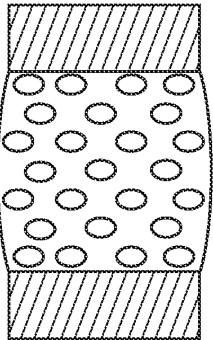
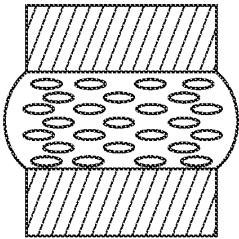


FIG.19C



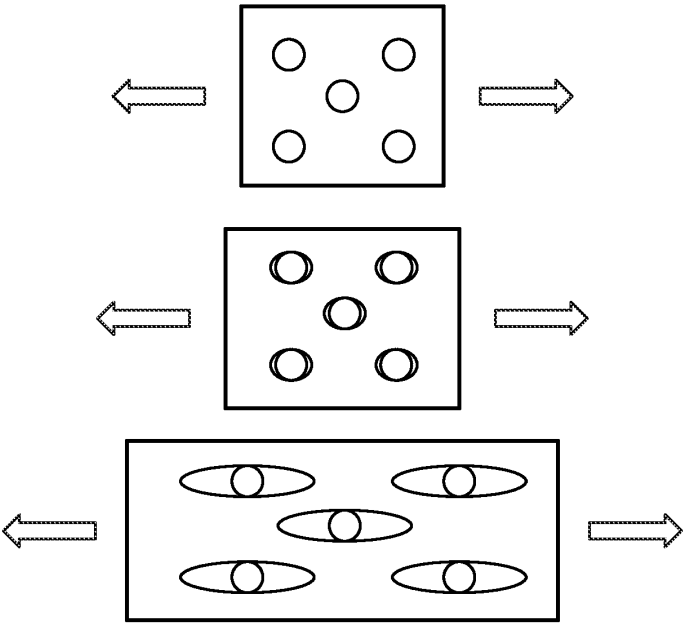
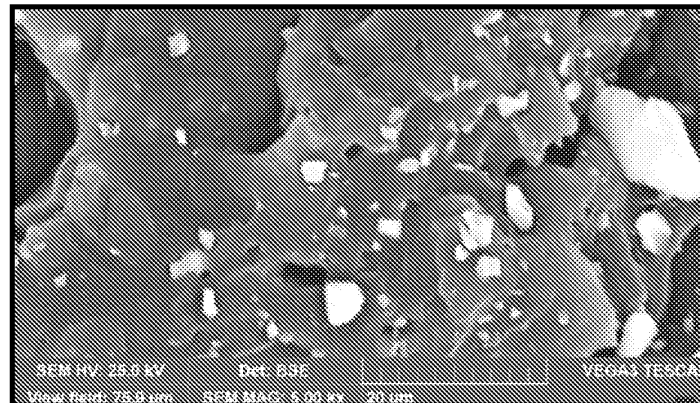
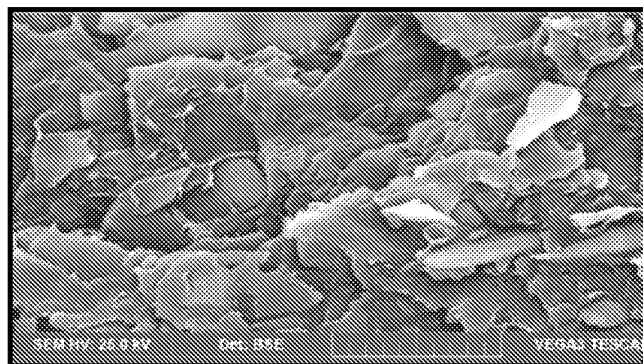


FIG.20



ADDITIVES WITH SURFACE ENERGY 2X OR GREATER THAN
PP DO NOT BOND WITH PP AND ARE NOT ENCAPSULATED
ALLOWING PP TO COMPRESS AROUND THE PP/PARTICLE INTERFACE

FIG.21A



ADDITIVES WITH SURFACE ENERGY APPROACHING THAT OF
PP EITHER BOND OR GET ENCAPSULATED BY PP WHICH
LIMITS COMPRESSIBILITY AND COMPLIANT STIFFNESS

FIG.21B

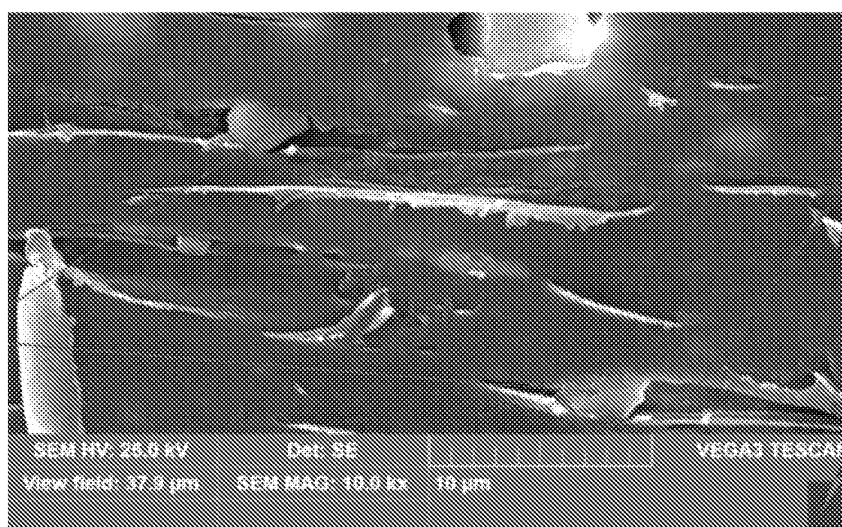
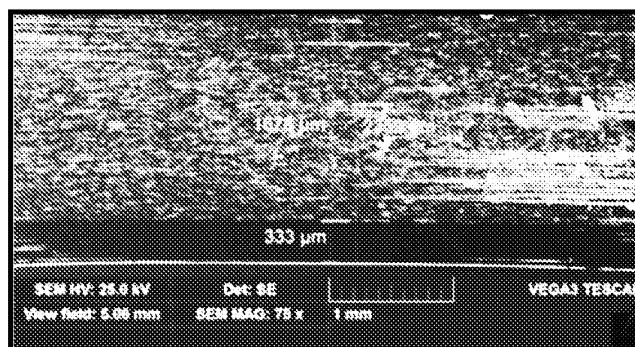
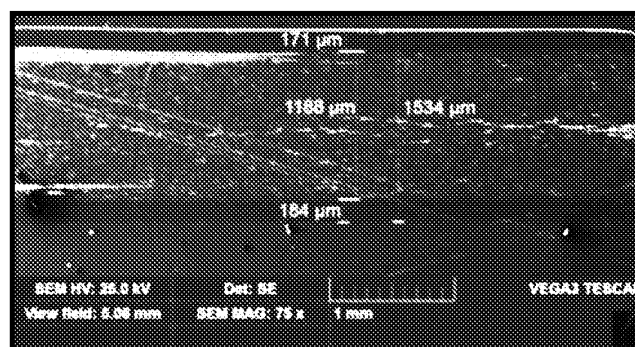


FIG.22



LONGITUDINAL VIEW OF RIB - WHITE STRIATIONS REPRESENT LOW MAGNIFICATION VOIDS CREATED DURING STRETCHING BUT PRIOR TO COMPRESSION - 2.4mm HIGH

FIG.23A



LONGITUDINAL VIEW OF RIB - WHITE STRIATIONS ARE MOSTLY GONE - COLLAPSED/CRUSHED OUT DURING VERTICAL LOAD. THICKNESS IS REDUCED FROM 2.4 TO 1.5mm

FIG.23B

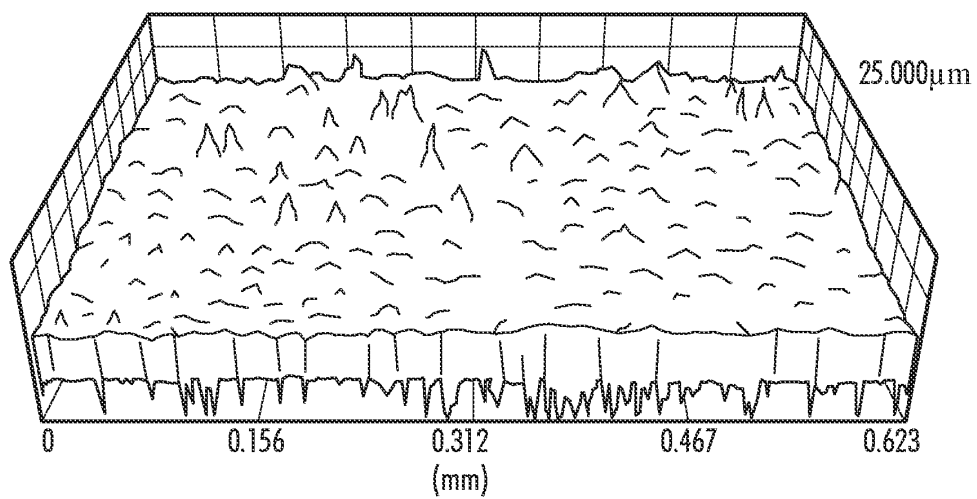


FIG.24A

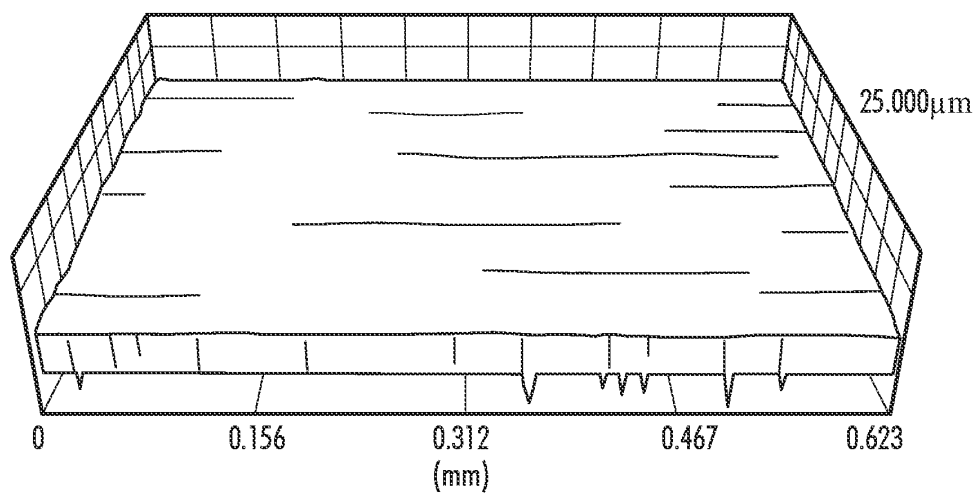
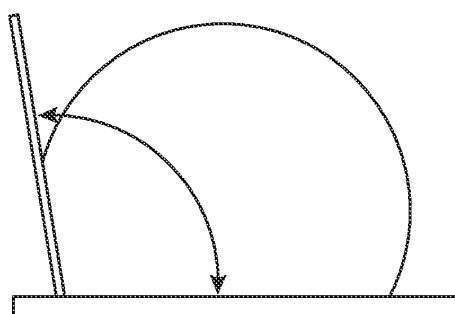
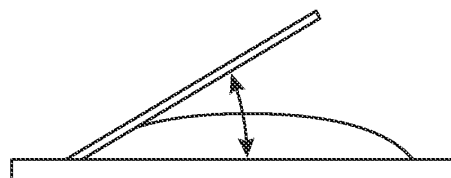


FIG.24B



HIGH CONTACT ANGLE
LOW SURFACE ENERGY.
GOOD RELEASE, NON-STICK PROPERTIES

FIG.25A



LOW CONTACT ANGLE
HIGH SURFACE ENERGY.
POOR RELEASE, POOR NON-STICK PROPERTIES

FIG.25B
PRIOR ART

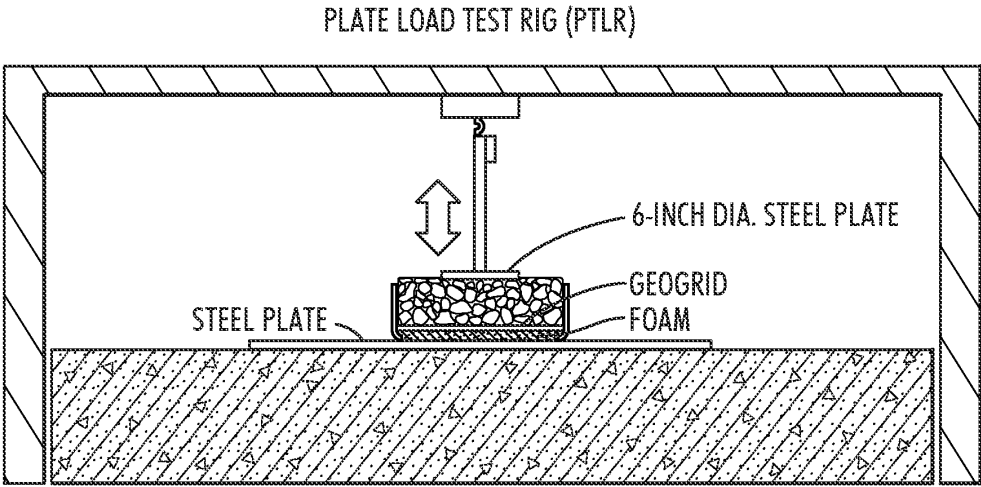


FIG.26