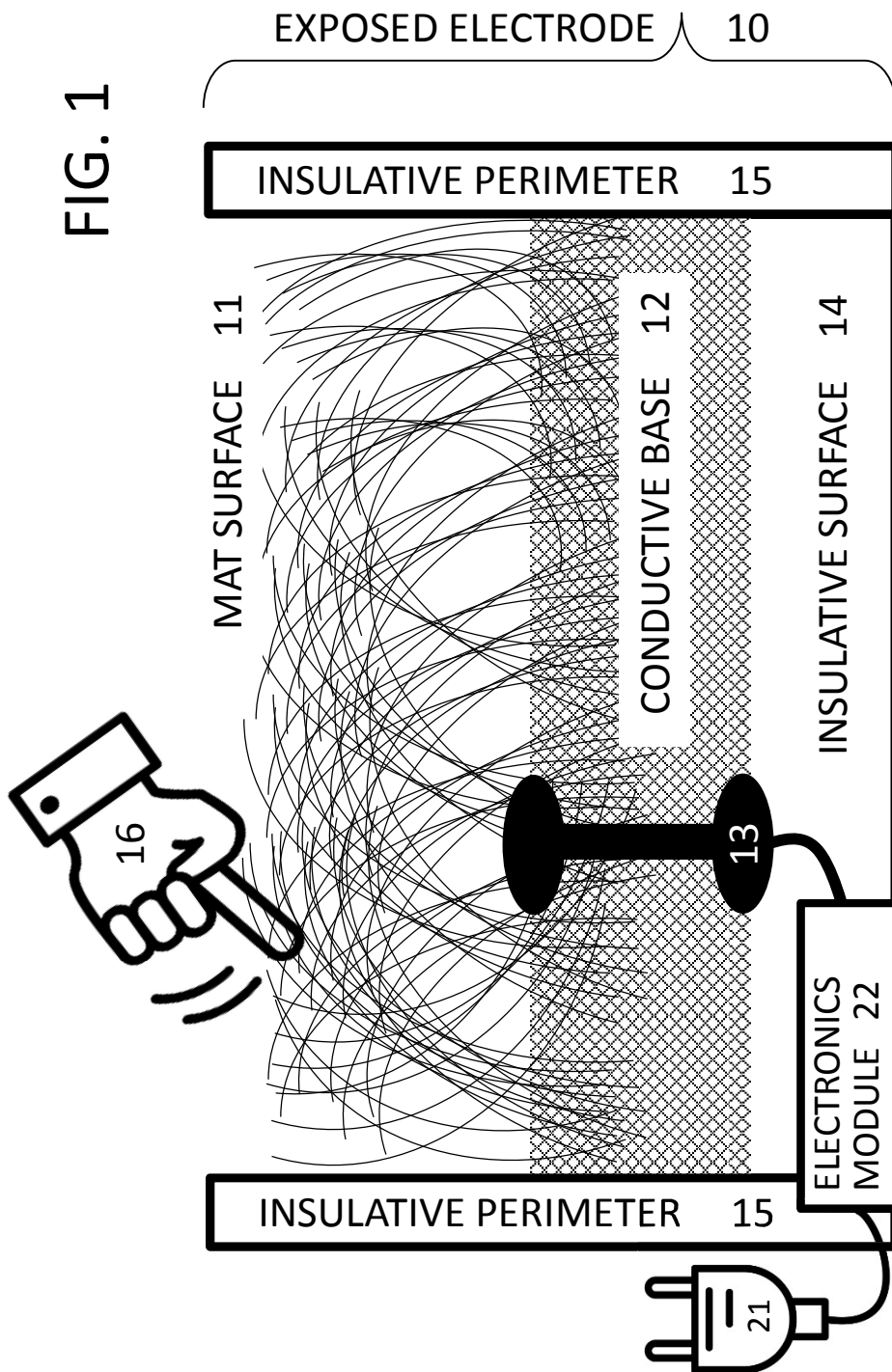




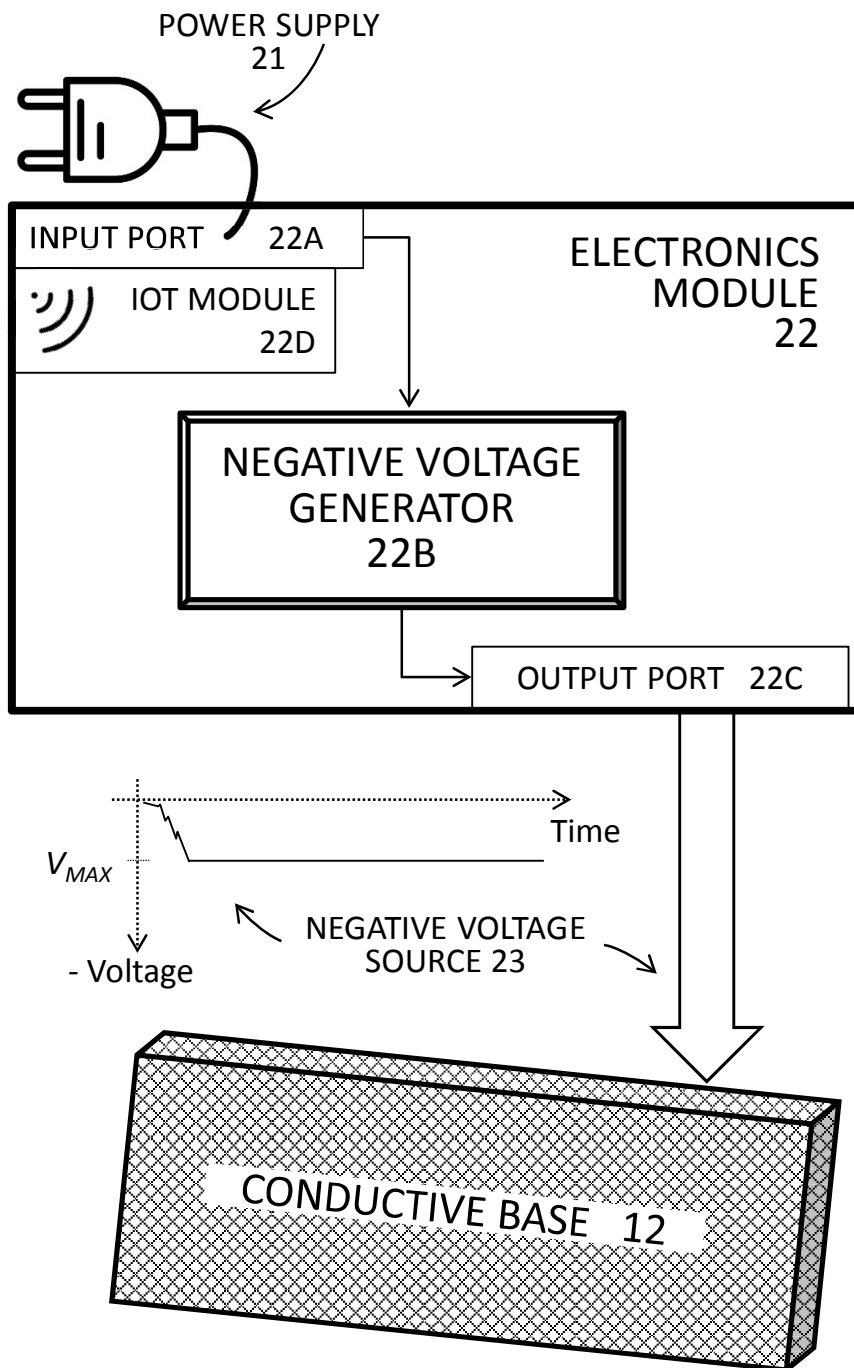
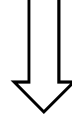


FIG. 2

MAXIMUM SURFACE AREA OF SINGLE CHARGED DISK PLATE

3-00



Equation 2

$$Q_{TH} = C_{PANEL} \times V_{MAX}$$

where:

Q_{TH} = charge discharge detection threshold

C_{PANEL} = self-capacitance of exposed electrode panel

V_{MAX} = maximum preset negative voltage

$$C_{PANEL} = 8\epsilon_0 r_D$$

Equation 3a

where:

r_D = radius of single charged disk

ϵ_0 = permittivity of free space,
approximately $8.85 \times 10^{-12} \text{ F}\cdot\text{m}^{-1}$

$$A_{MAX} = \pi \times r_D^2$$

Equation 3b

where:

A_{MAX} = max surface area of single charged disk plate

$$A_{MAX} = \pi \times \left(\frac{C_{PANEL}}{8\epsilon_0} \right)^2$$

Equation 3c

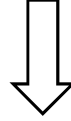
$$A_{MAX} = \pi \times \left(\frac{Q_{TH}}{V_{MAX} \times 8\epsilon_0} \right)^2$$

Equation 3d

FIG. 3

MAXIMUM RADIUS OF SINGLE CHARGED SPHERE

4-00



$$Q_{TH} = C_{PANEL} \times V_{MAX}$$

Equation 2

where:

 Q_{TH} = charge discharge detection threshold

 C_{PANEL} = self-capacitance of exposed electrode panel

 V_{MAX} = maximum preset negative voltage

$$C_{PANEL} = 4\epsilon_0 r_{MAX}$$

Equation 4a

where:

 r_{MAX} = maximum radius of single charged sphere

 ϵ_0 = permittivity of free space,
approximately $8.85 \times 10^{-12} \text{ F}\cdot\text{m}^{-1}$

$$r_{MAX} = \frac{Q_{TH}}{V_{MAX} \times 4\epsilon_0}$$

Equation 4b

FIG. 4

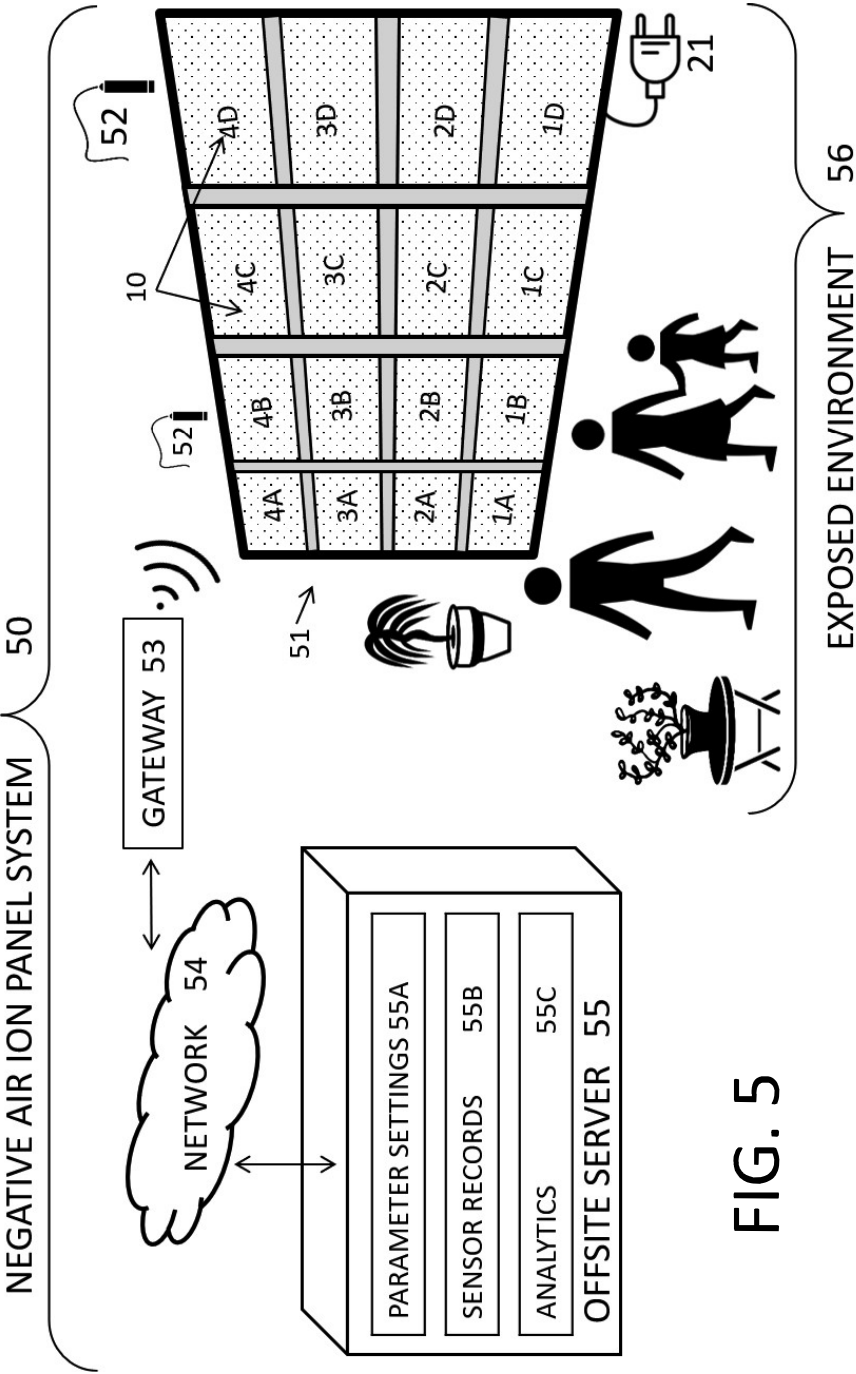


FIG. 5

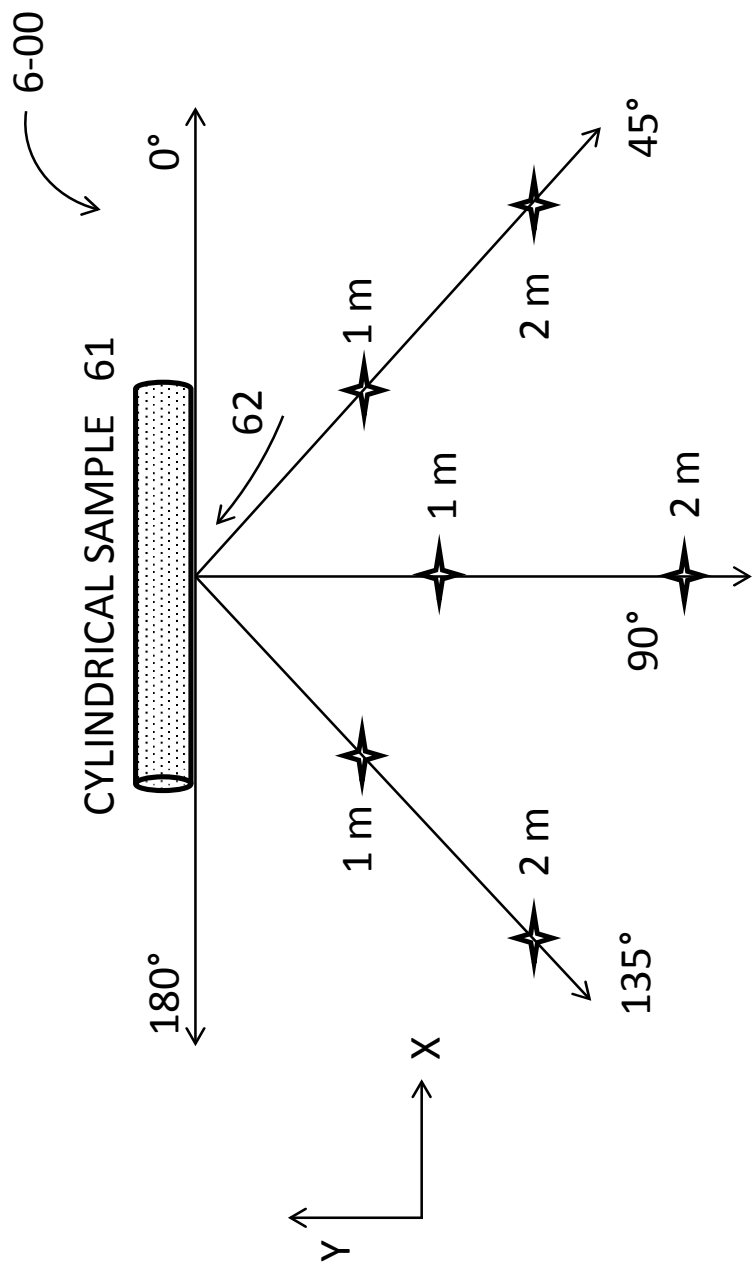


FIG. 6

7A-00

UNTREATED CYLINDRICAL SAMPLE (DRY)

	@ 1.0 m	@ 2.0 m
45°	455	50
90°	554	56
135°	644	26

FIG. 7A Units of 1,000 NAI / cm³

7B-00

FIRE RETARDANT TREATED CYLINDRICAL SAMPLE

@ 1.0 m	dry	wet
45°	450	522
90°	595	584
135°	495	580

FIG. 7B Units of 1,000 NAI / cm³

7C-00

WATER REPELLANT TREATED CYLINDRICAL SAMPLE

@ 1.0 m	dry	wet
45°	414	364
90°	380	510
135°	617	574

FIG. 7C Units of 1,000 NAI / cm³

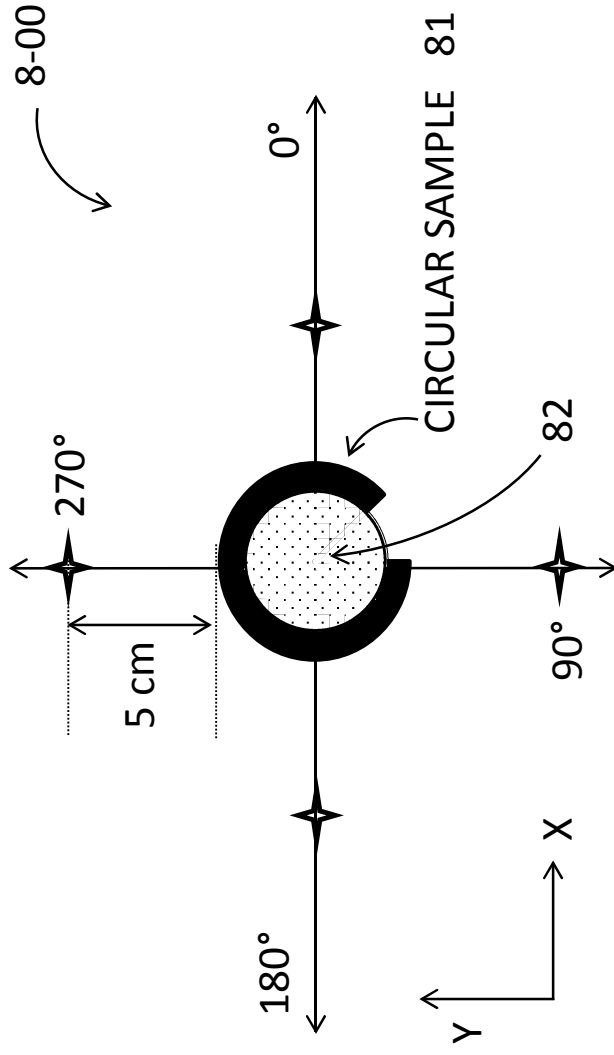


FIG. 8

9-00
↘

CIRCULAR FIBRE BRAID SAMPLE

@ 5 cm	@ -20 kV				@ -7 kV				average	
	0°	90°	180°	270°	0°	90°	180°	270°		
Coconut Coir	2000	2000	2000	2000	1500	300	1000	1300	1025	
Nettle (Coarse)	2000	2000	2000	2000	1000	200	1300	200	675	
Nettle (Fine)	2000	2000	2000	2000	98	650	900	1000	662	
Pineapple	2000	2000	2000	2000	420	470	1000	190	520	
Banana	2000	2000	2000	2000	500	450	340	700	498	
Jute	2000	2000	2000	2000	100	90	40	150	95	
Abaca	2000	2000	20	2000	2	20	33	55	28	
Hyacinth	2000	2000	< 1	1500	15	< 1	< 1	< 1	4	

Units of 1,000 NAI / cm³

FIG. 9