# EXPERIMENTAL OPTION- MODIFIED VERSION OF FIG. 82 -US PATENT NO. 8,925,294 WITH MOVABLE U-SHAPED PARTITION ELECTRODES EXTENDING FROM OPEN END OF ELECTRODE ASSEMBLY

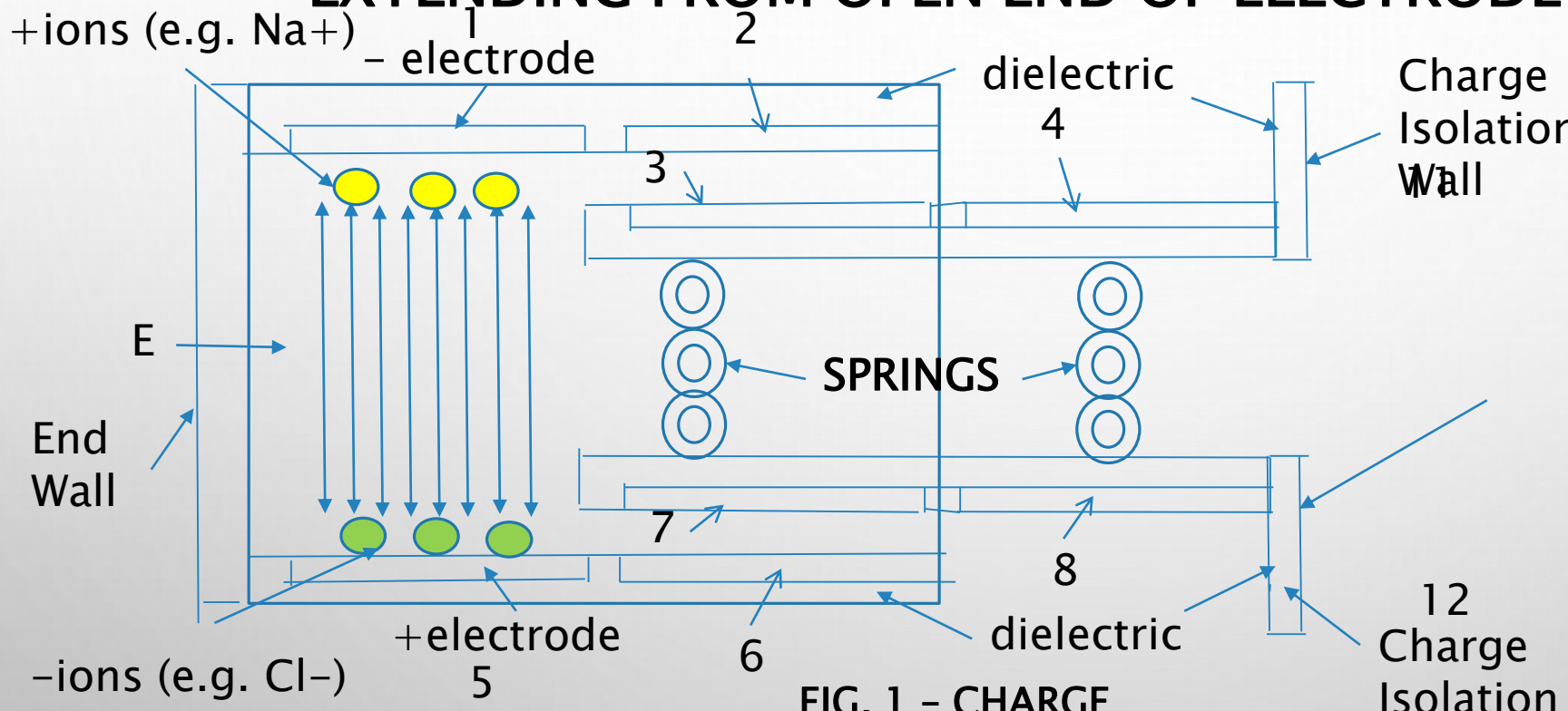



FIG. 1 – CHARGE ACCUMULATION MODE – ORTHOGONAL ELECTRIC FIELD – ~1.2-1.5V NO PARTITION ELECTRODES ACTIVATED

ALL ELECTRODES WILL HAVE SURFACE AREA DIMENSIONS OF W = 1 OR 2 CM AND L = 10 CM

PARTITION ELECTRODES PARTIALLY INSERTED (ROLLER BALL BEARINGS ON THE SIDES OF THE PARTITION ELECTRODES THAT ENABLE MOVEMENT IN ANY DIRECTION ARE NOT SHOWN)

# EXPERIMENTAL OPTION- MODIFIED VERSION OF FIG. 82 WITH U-SHAPED PARTITION ELECTRODES INSERTED ENTIRELY INTO ELECTRODE ASSEMBLY

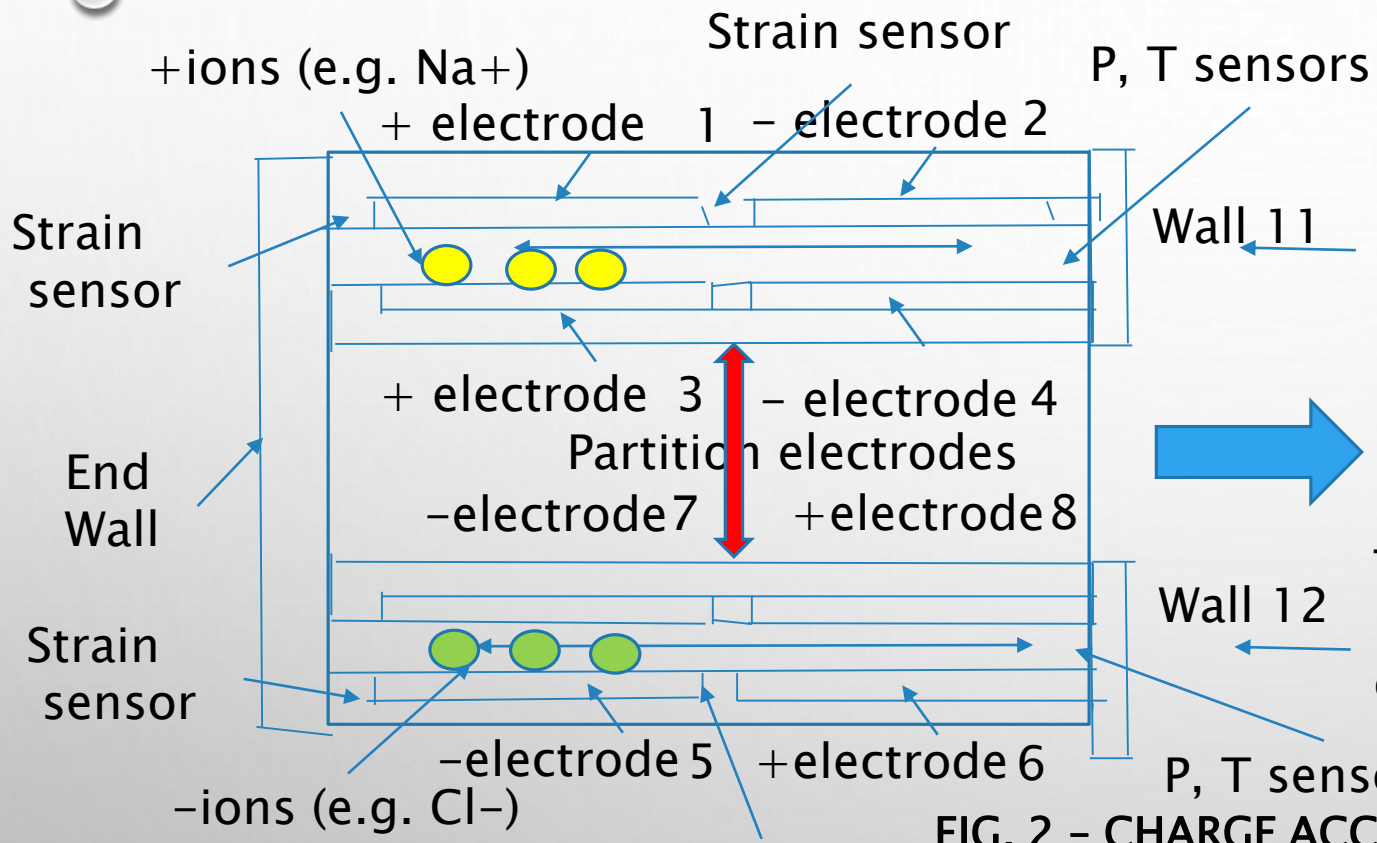



FIG. 2 – CHARGE ACCELERATION MODE- PARTITION ELECTRODES ALSO ELECTRICALLY ACTIVATED

CHARGE ACCUMULATION ON 1 AND 5. PARTITION ELECTRODES 3, 4, 7, 8 INSERTED WHILE MAINTAINING ORTHOGONAL FIELD BETWEEN 1 AND 5- THEN ACTIVATED TO CAUSE ONLY TRANSVERSE LONGITUDINAL FIELDS INITIALLY ASSUME 1.5 V VOLTAGE REQUIRED – ACTUAL TO BE DETERMINED

IF P OR T INCREASES OR ION BEAM IMPINGEMENT OCCURS, PARTITION ELECTRODES SHOULD MOVE BACK TOWARDS POSITION IN FIG. 1 AS SHOWN BY BLUE ARROW AND/OR MOVE CLOSER TO EACH OTHER PER RED ARROW (SPRINGS AND ROLLER BEARINGS SHOWN IN FIG. 3)

# HOUSING WITH ELECTRODES 1 & 2 AND 5 & 6

NOTES:
1. HOUSING WHICH INCLUDES CAVITIES FOR ELECTRODES 1 & 2 AND 5 & 6 MAY POSSIBLY BE 3D PRINTED WITH A COMPOSITE INSULATING DIELECTRIC MATERIAL. ROUTING OF ELECTRICAL WIRING MUST ALSO BE ACCOMMODATED.
2. DIELECTRIC BASES FOR UPPER & LOWER PARTITION ELECTRODES 3 & 4 AND 7 & 8 AND WIRING ROUTING MAY ALSO POSSIBLY BE 3D PRINTED IN A SIMILAR MANNER.

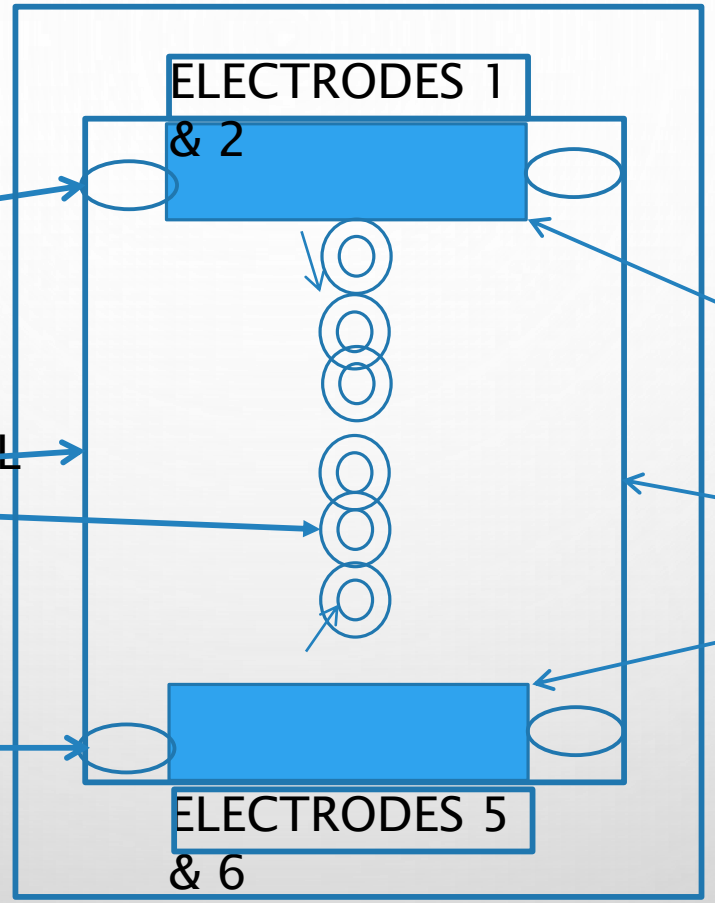
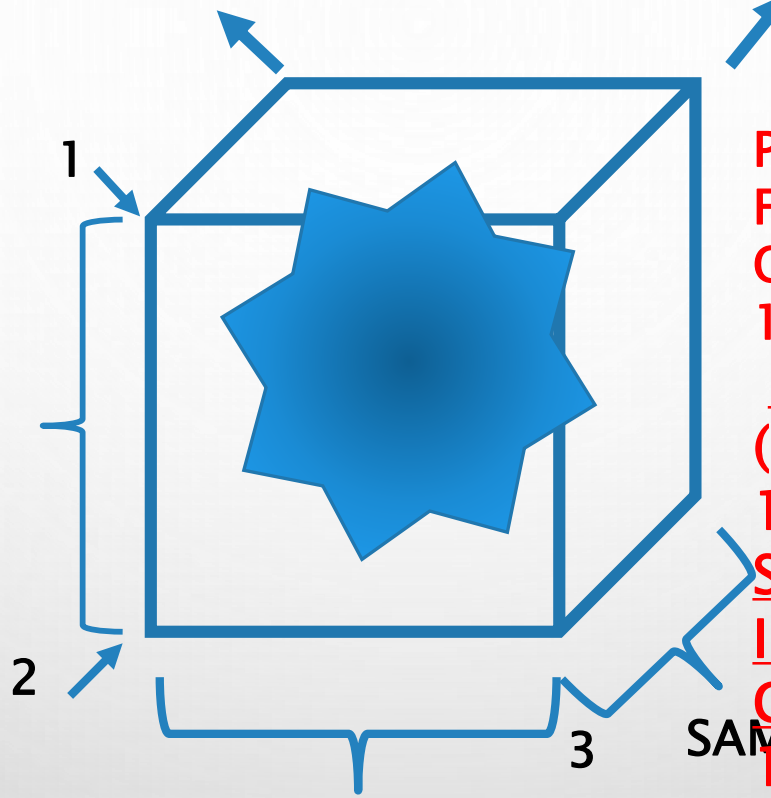



FIG. 3– END VIEW TO SHOW ROLLER BALL BEARINGS ENABLE ELECTRODES 3 & 4 AND 7 & 8 TO MOVE ALONG SIDE WALLS

# 1 $CM^3$ OF LIKE-CHARGED IONS
# 10E+18 IONS X 1 COUL/1.6E-19 IONS = 0.167 COULOMB

10 E+ 6 IONS

10 E-14 NEWTONS X 10 E+6 = 10 E-8 NEWTONS




10 E+ 6 IONS

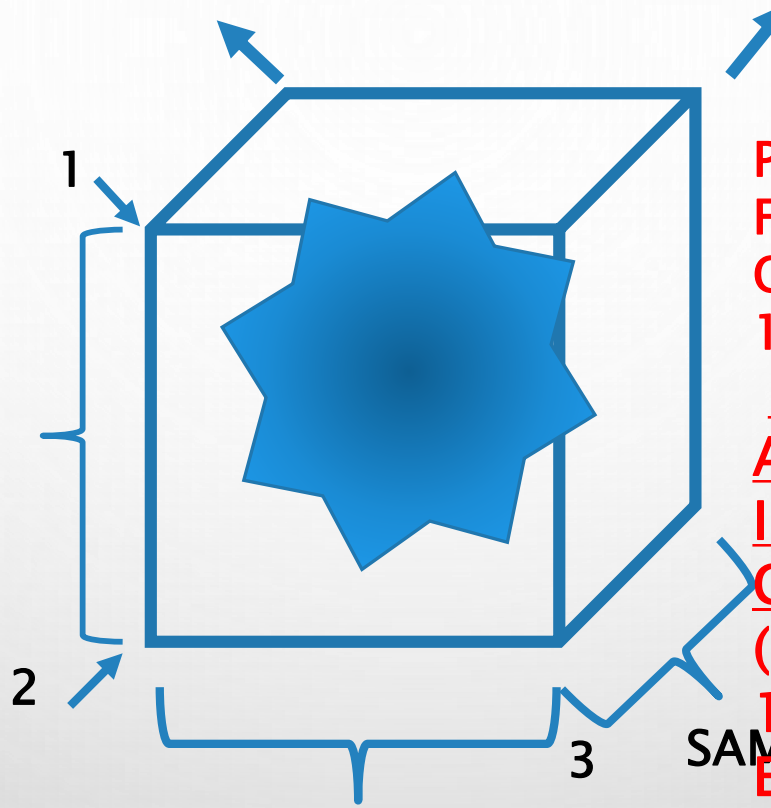
10 E-14 NEWTONS X 10 E+6 = 10 E-8 NEWTONS

PER "CROSS-FORCE COEFFICIENT" FORCES AT EACH CORNER 1…8 OF CUBE ARE AT LEAST 10E-8 X10E+6 X 10E+6 = 10E+4 NEWTONS (SHOULD EVEN BE 10E+4 X 10E+6= 10E+10 NEWTONS SINCE THERE ARE THREE SURFACES INTERSECTING TO FORM THE CORNER AND EVEN GREATER, E.G., 10E+10 X 10E+6 X10E+6 = 10E+22 NEWTONS IF INTERNAL IONS ARE ALSO CONSIDERED)

# 1 MM$^3$ OF LIKE-CHARGED IONS
# 10E+15 IONS <1.7 X 10E-4 COULOMB

10 E+ 5 IONS

10 E-14 NEWTONS X 10 E+5 = 10 E-9 NEWTONS




10 E+ 5 IONS

10 E-14 NEWTONS X 10 E+5 = 10 E-9 NEWTONS

PER "CROSS-FORCE COEFFICIENT" FORCES AT EACH CORNER 1…8 OF CUBE ARE AT LEAST 10E-9 X10E+5 X 10E+6 = 10E+1 NEWTONS -SINCE THERE ARE THREE SURFACES INTERSECTING TO FORM THE CORNER (SHOULD EVEN BE 10E+1 X 10E+5= 10E+6 NEWTONS AND EVEN GREATER CONSIDERING INTERNAL IONS, E.G., 10E+6 X 10E+5 X 10E+5 = 10E+ 16 NEWTONS)

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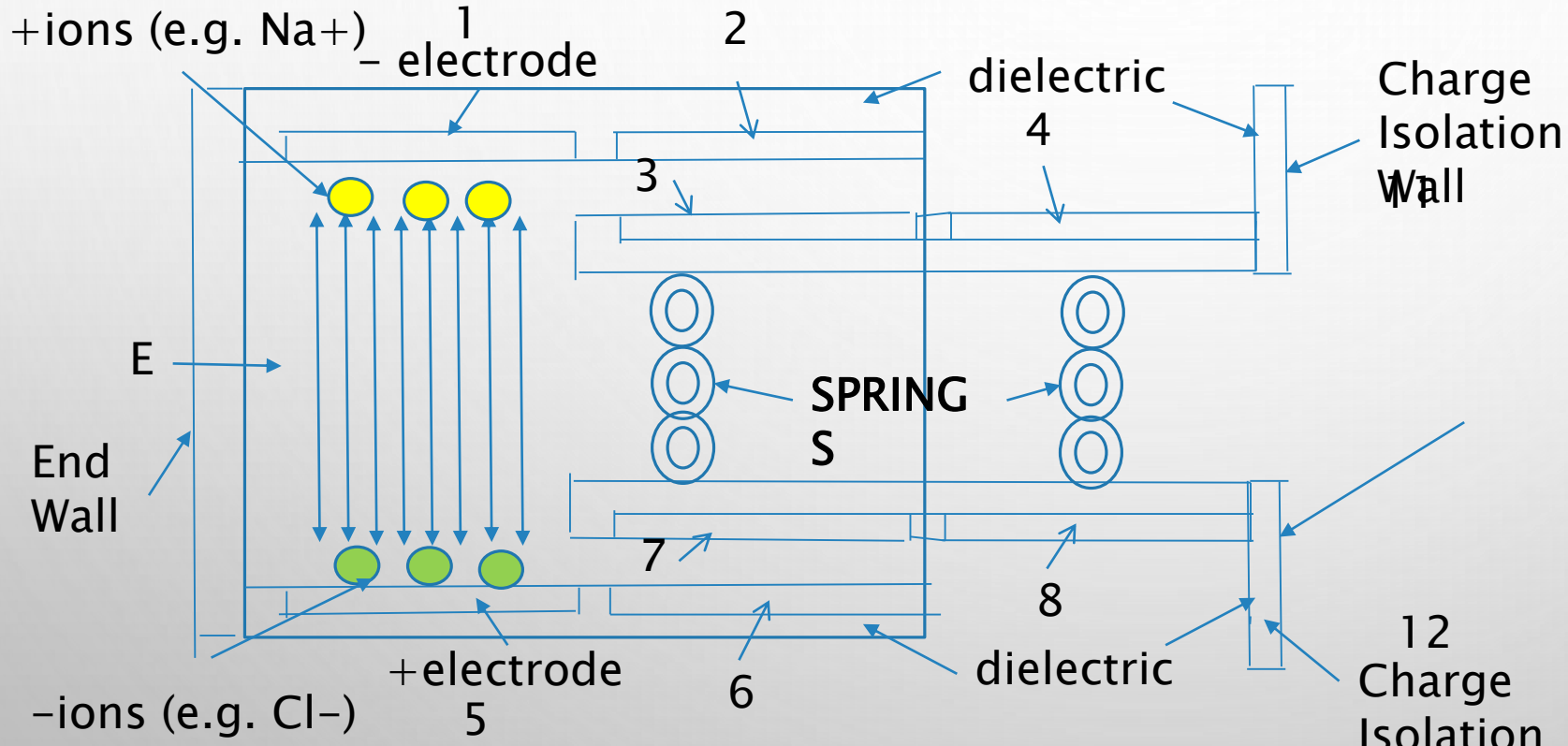



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