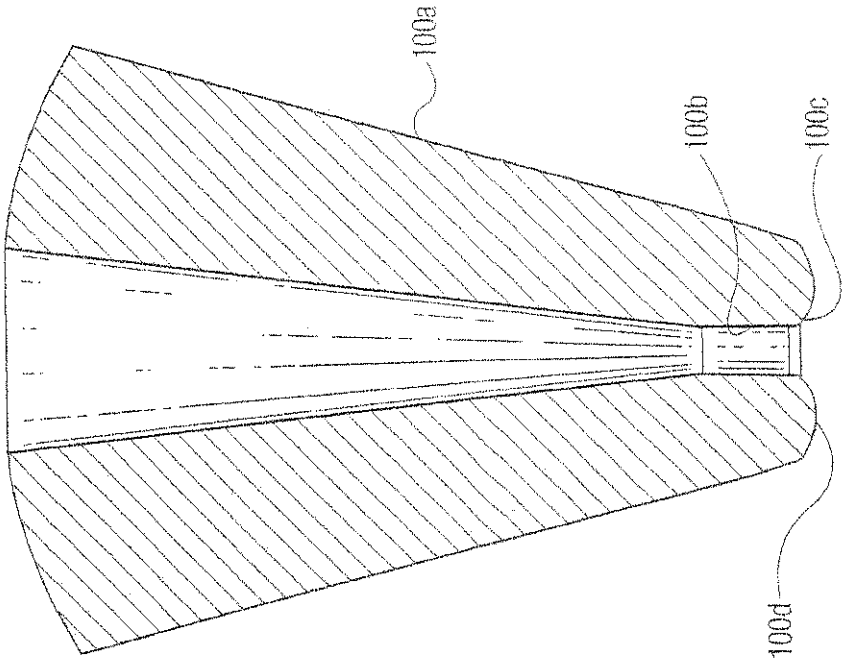


FIG. 1B

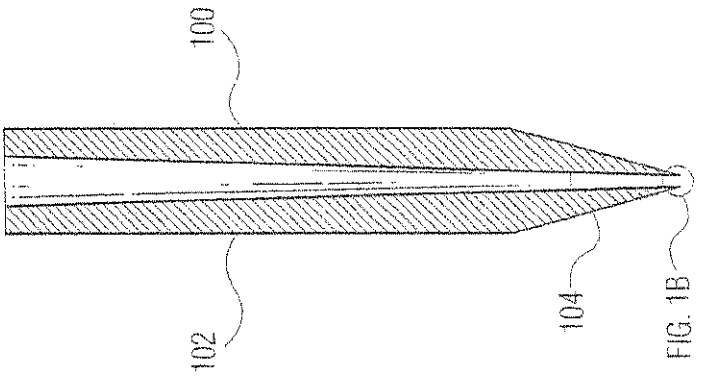


FIG. 1A

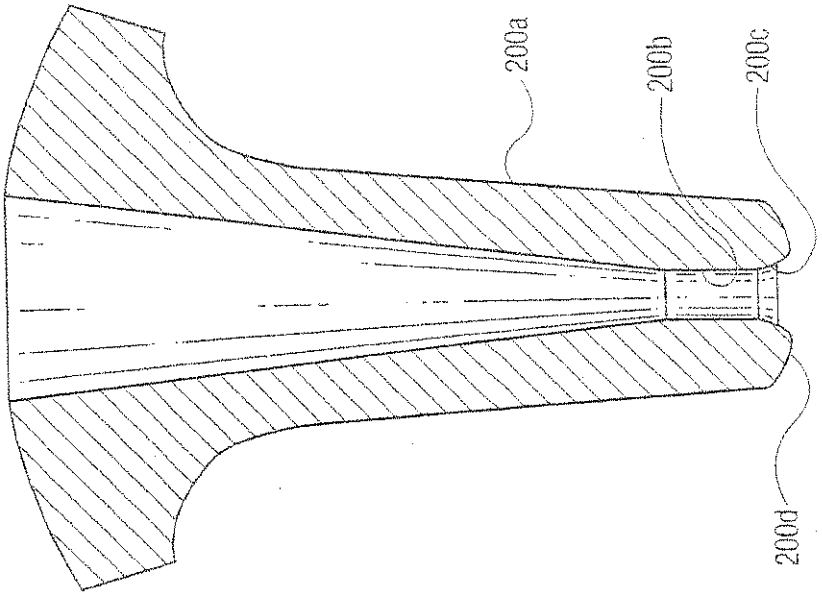


FIG. 2B

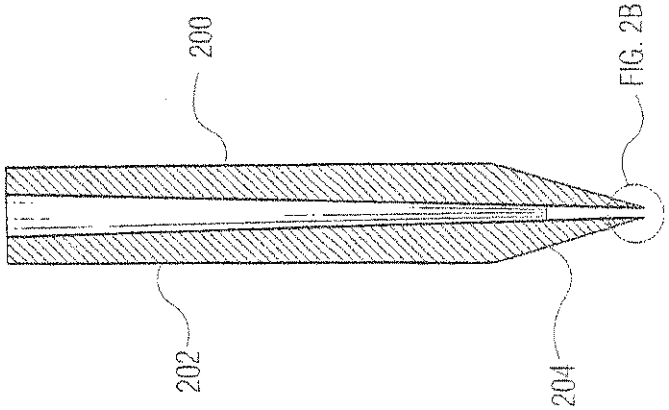


FIG. 2A

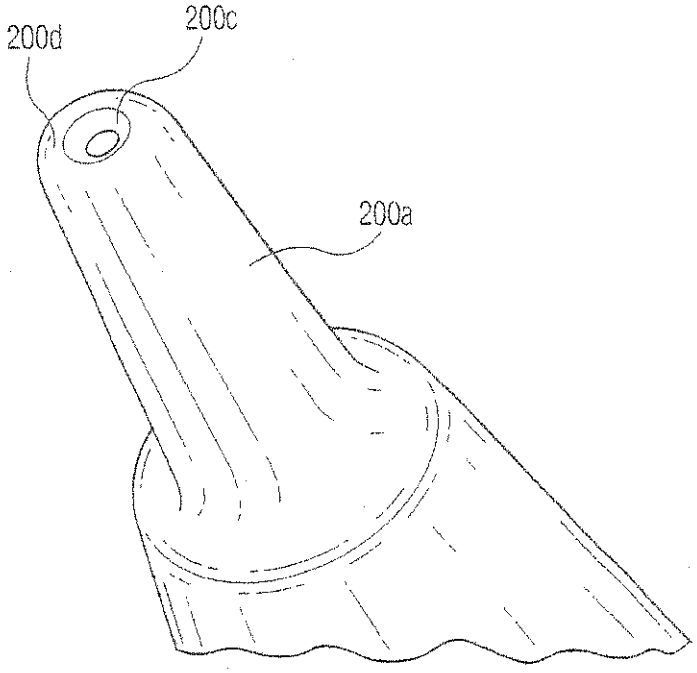


FIG. 2C

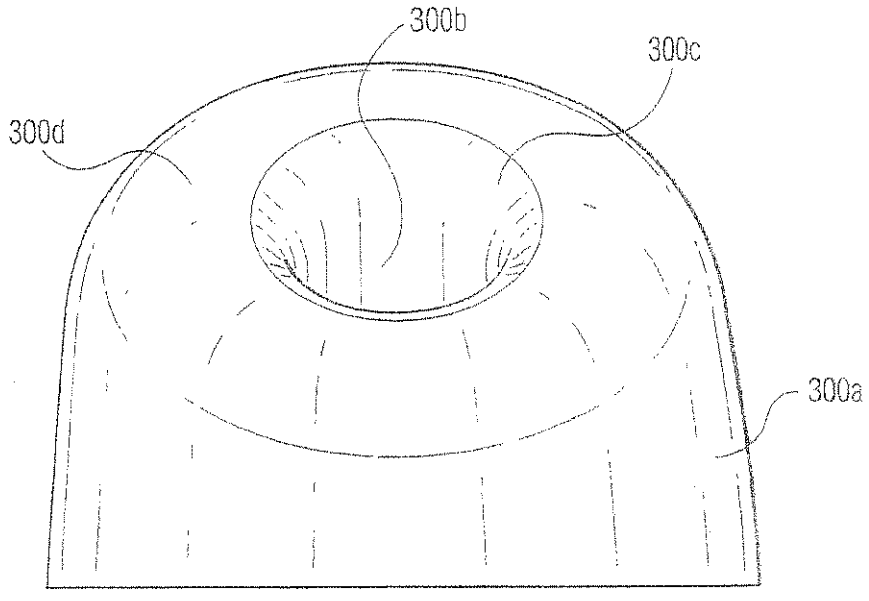


FIG. 3

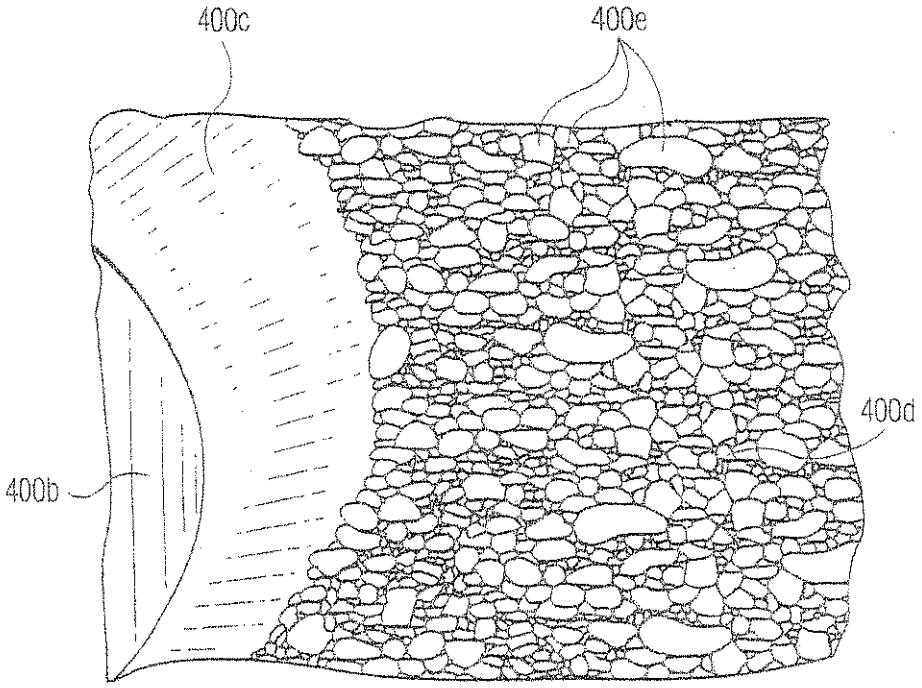


FIG. 4A

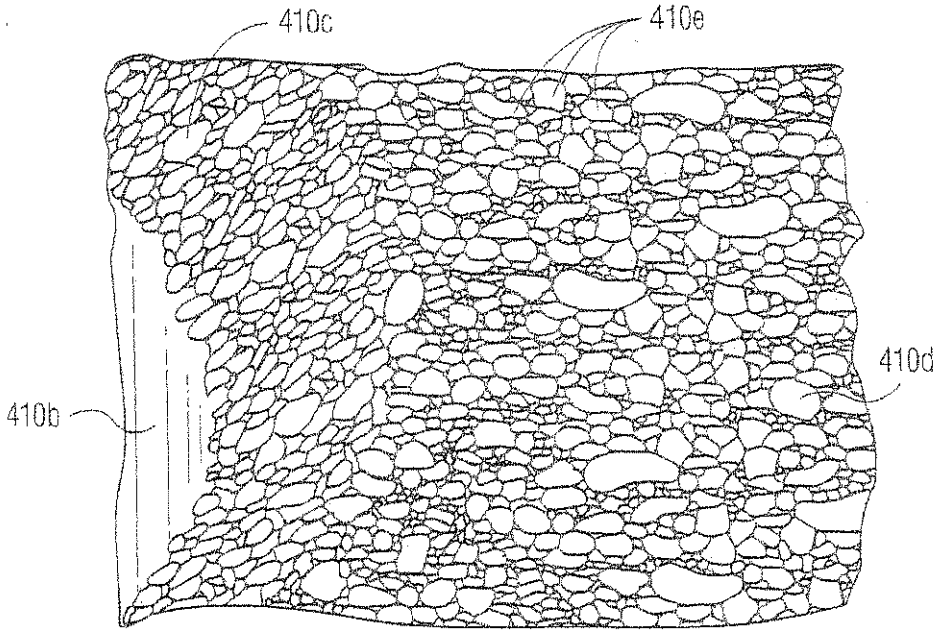


FIG. 4B

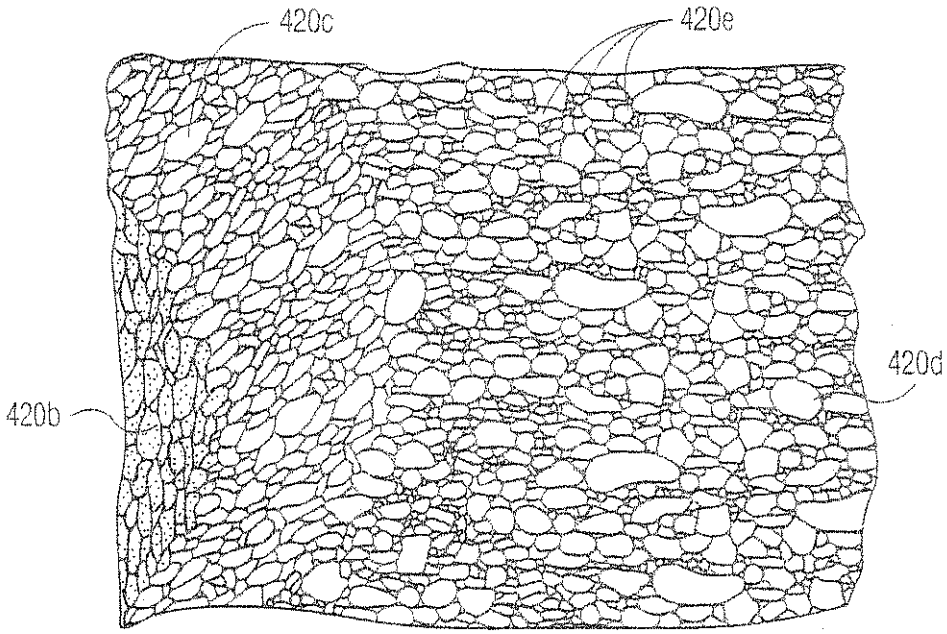


FIG. 4C

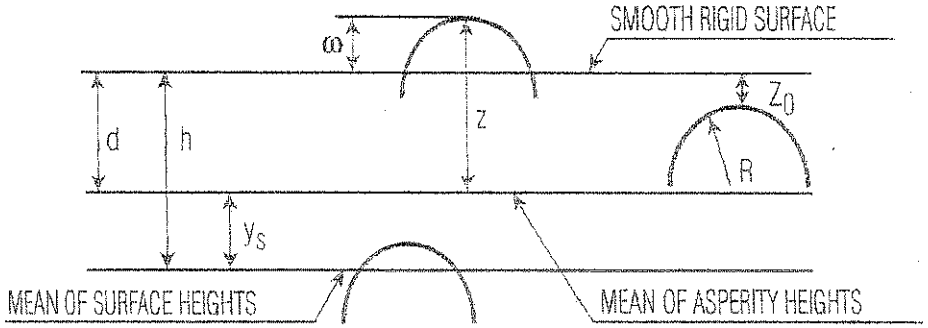

SMOOTH RIGID SURFACE
ω
d
h
z
Z_0
R
y_s
MEAN OF SURFACE HEIGHTS
MEAN OF ASPERITY HEIGHTS

FIG. 5

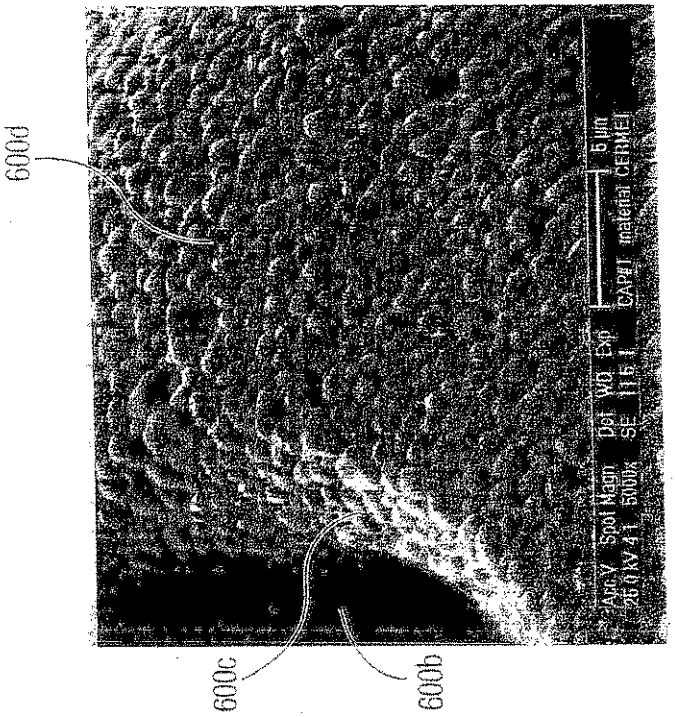

600d
600c
600b
Acc.V Spot Magn Det WD Exp
25.0 kV 4.1 5000x SE 11.5 1
5 µm
CAPUT material CERMET

FIG. 6B

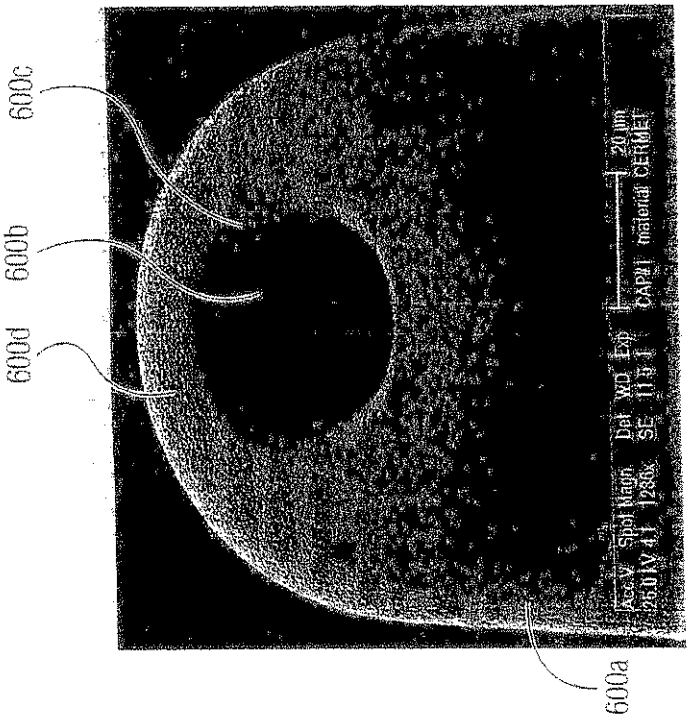

600c
600b
600d
600a
Acc.V Spot Magn Det WD Exp
25.0 kV 4.1 1280x SE 11.5 1
20 µm
CAPUT material CERMET

FIG. 6A

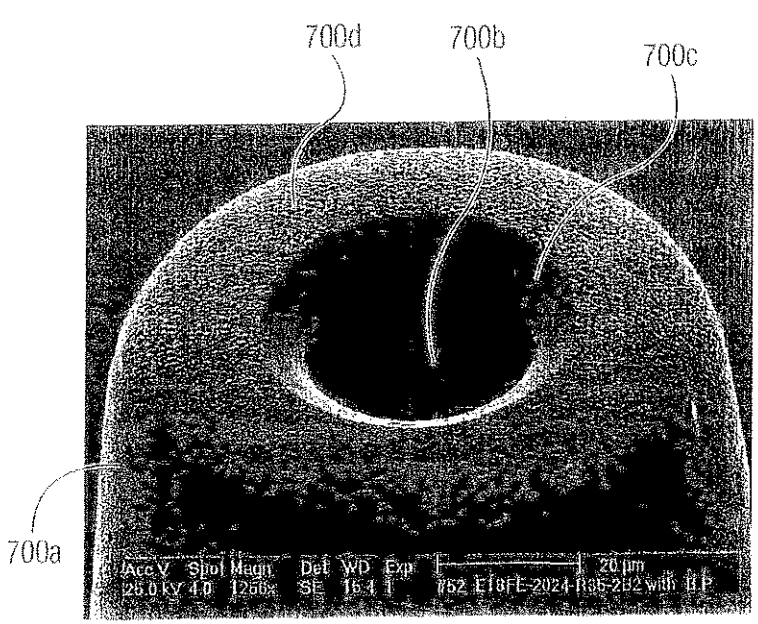

700d
700b
700c
700a
Acc.V Spot Magn Det WD Exp
25.0 kV 4.0 1256x SE 15.4 1
20 µm
752 E18FE-2024-R35-282 with B.P.

FIG. 7A

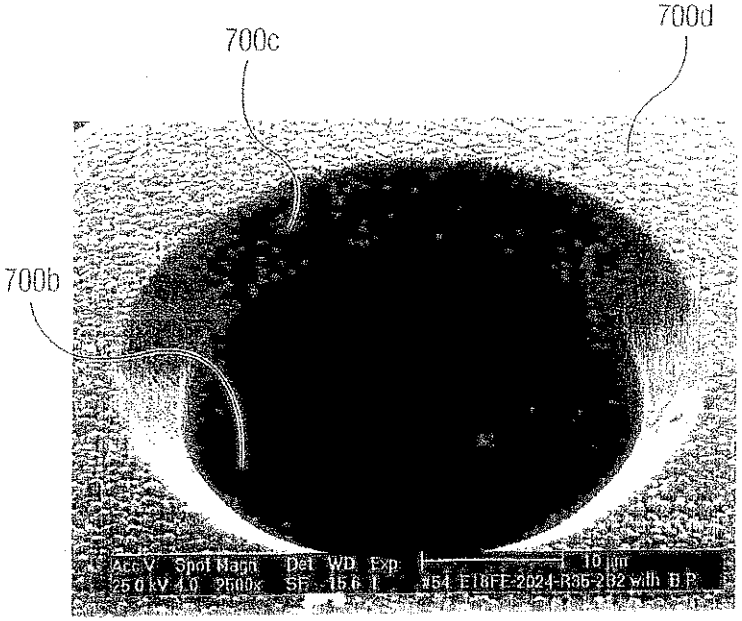

700c
700d
700b
Acc.V Spot Magn Det WD Exp
25.0 kV 4.0 2500x SE 15.6 1
10 µm
754 E18FE-2024-R35-282 with B.P.

FIG. 7B

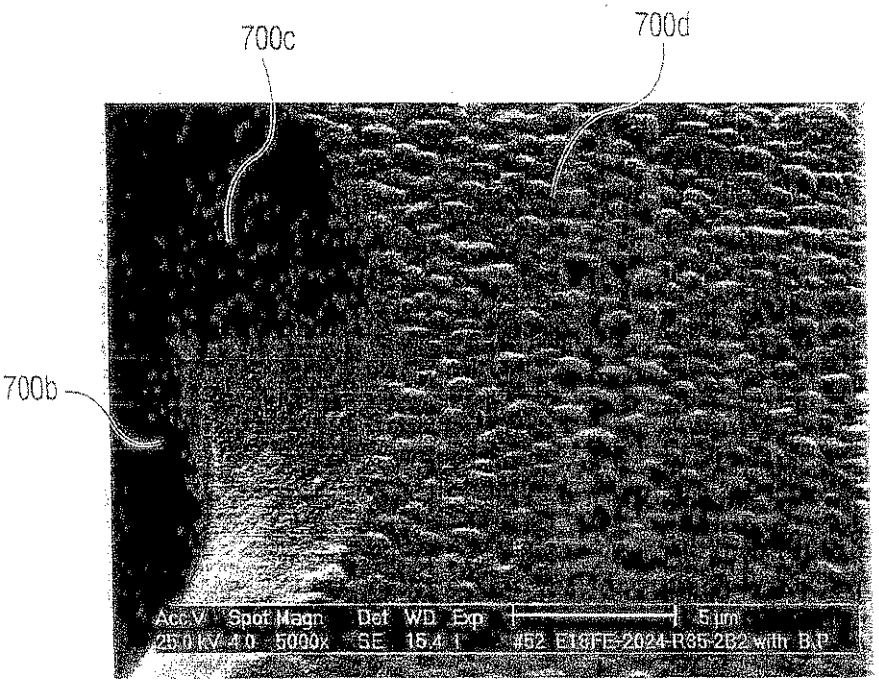

700c
700d
700b
Acc.V Spot Magn Det WD Exp 5 µm
25.0 kV 4.0 5000x SE 15.4 1 #52 E18FE-2024-R35-2B2 with BAP

FIG. 7C

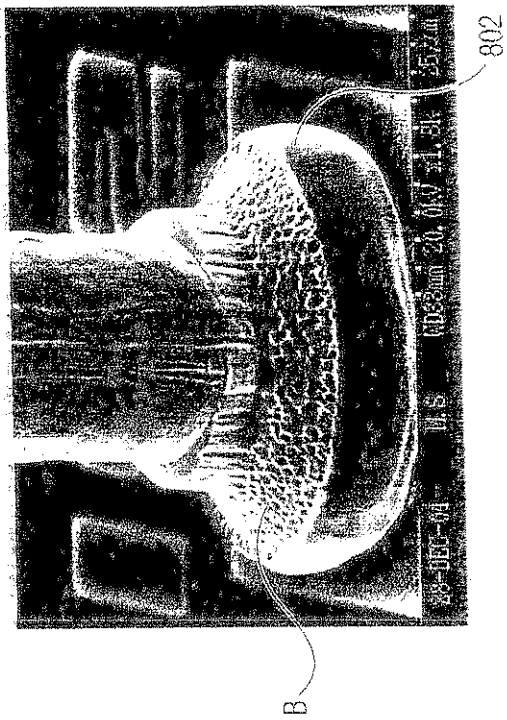


FIG. 8B

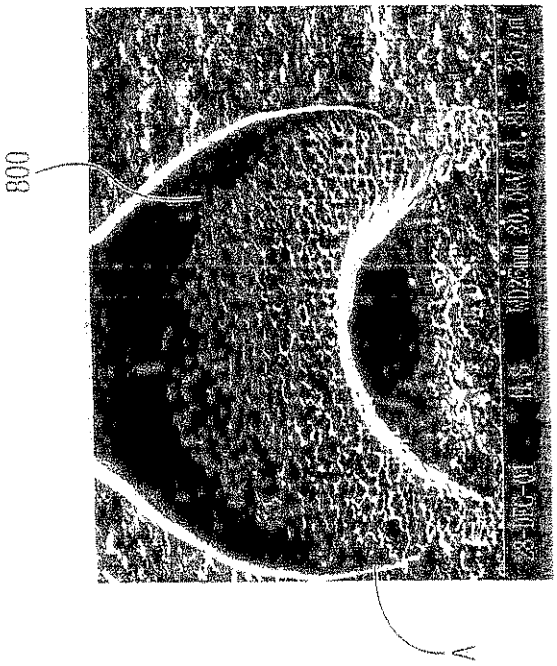


FIG. 8A

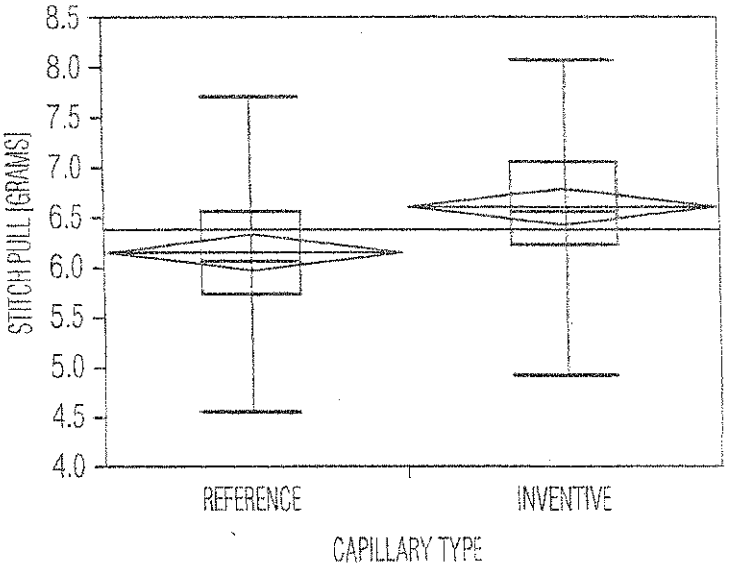


FIG. 9A

CAPILLARY TYPE	NUMBER OF TESTS	MEAN VALUE	LOWER 95%	UPPER 95%
REFERENCE	80	6.02325	5.8787	6.1678
INVENTIVE	80	6.63163	6.4871	6.7762

FIG. 9B

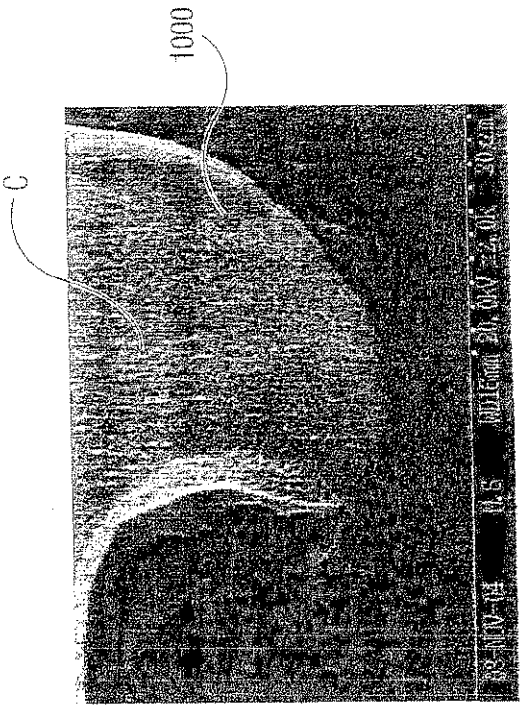


FIG. 10B



FIG. 10A

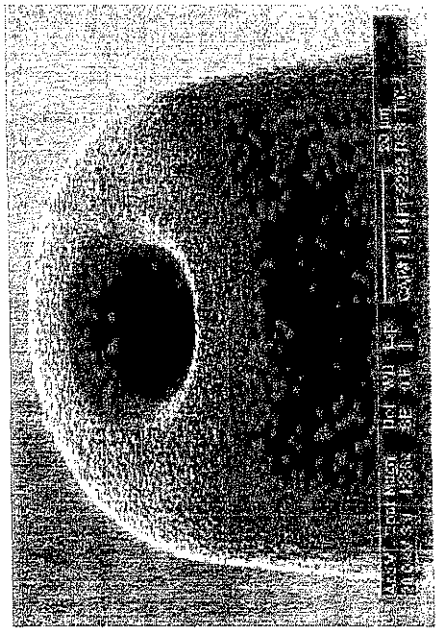


FIG. 11B

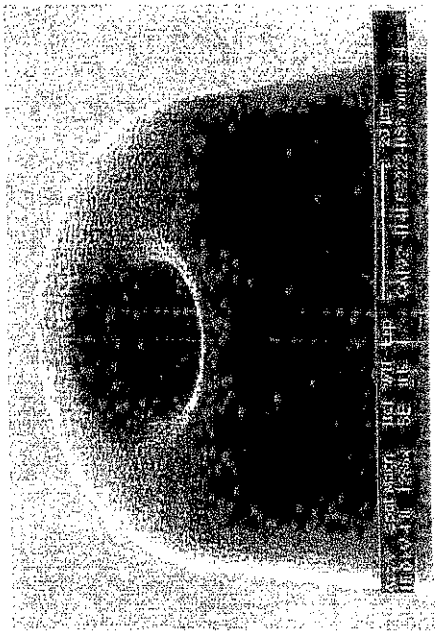


FIG. 11A

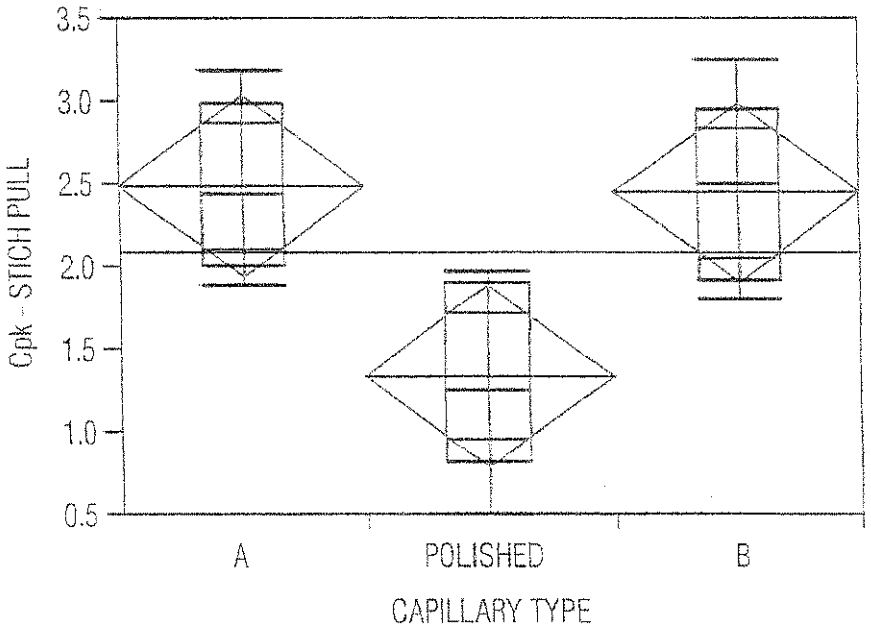


FIG. 12A

CAPILLARY TYPE	NUMBER OF TESTS	MEAN VALUE	LOWER 95%	UPPER 95%
MORPHOLOGY A	5	2.49228	1.9471	3.0375
POLISHED	5	1.34362	0.7984	1.8888
MORPHOLOGY B	5	2.45048	1.9053	2.9957

FIG. 12B

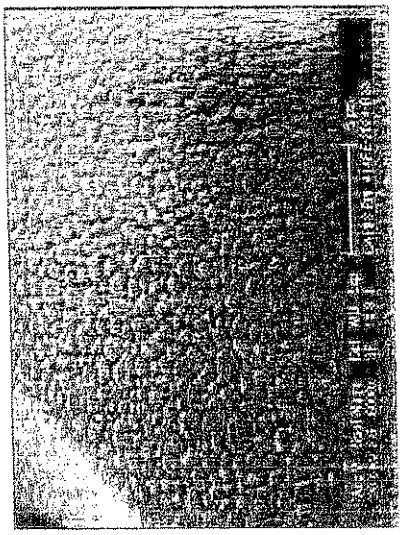


FIG. 19B

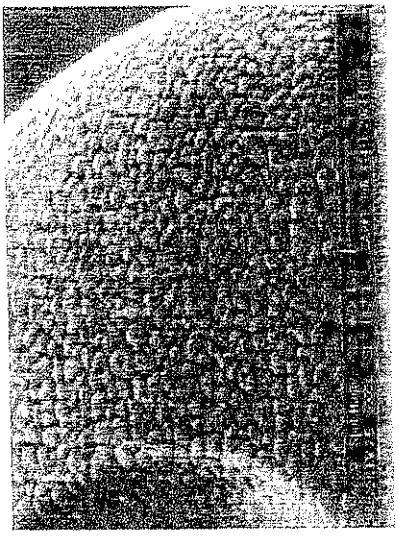


FIG. 19A

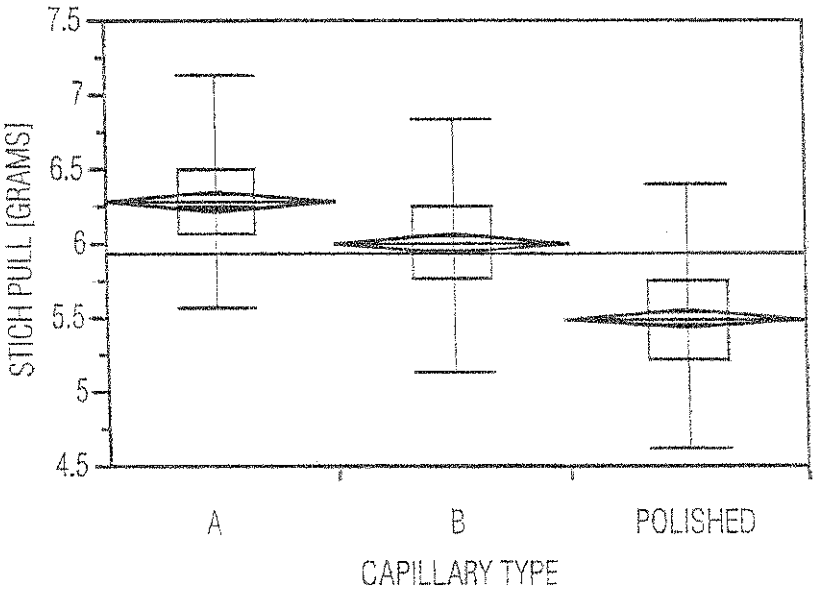


FIG. 13C

INVENTIVE	CONVENTIONAL MATTE	CONVENTIONAL POLISHED
1000	600	900
1000	300	500
600	300	400
	100	

FIG. 14A

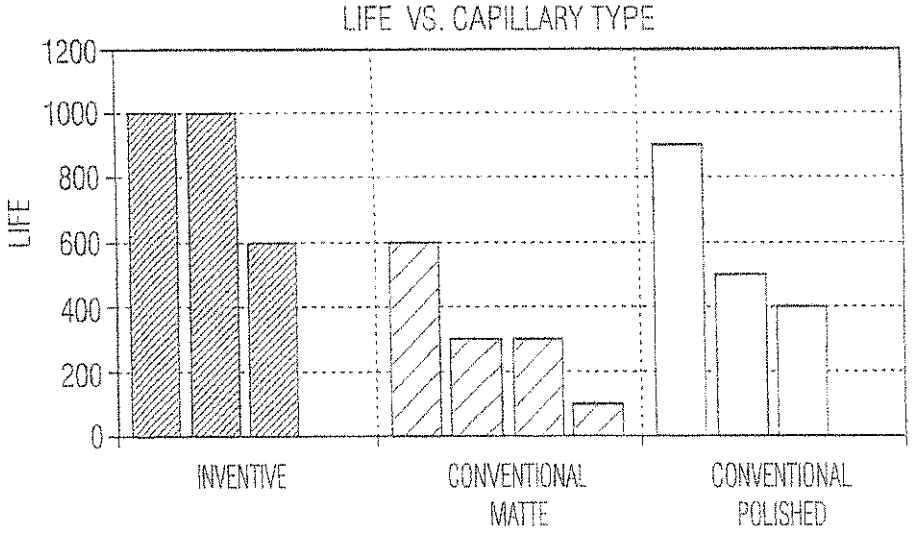


FIG. 14B

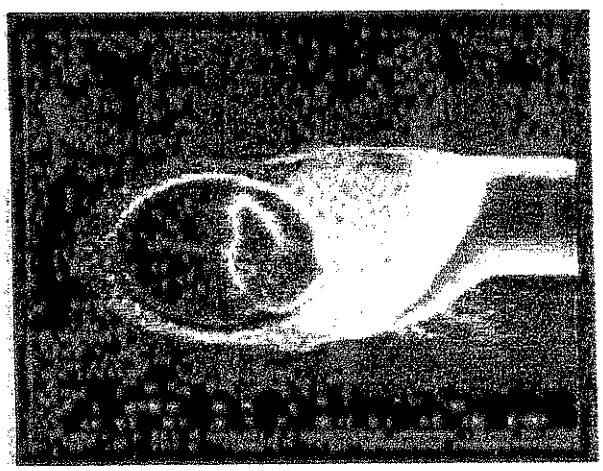


FIG. 15A

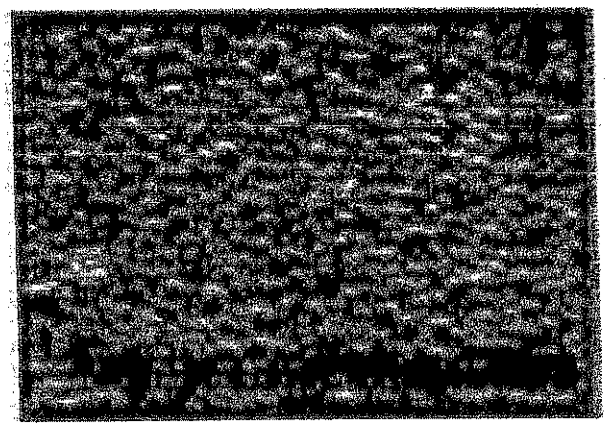


FIG. 15B

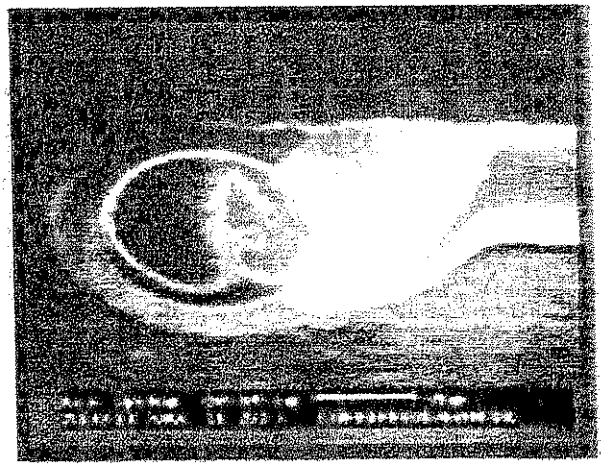


FIG. 15C

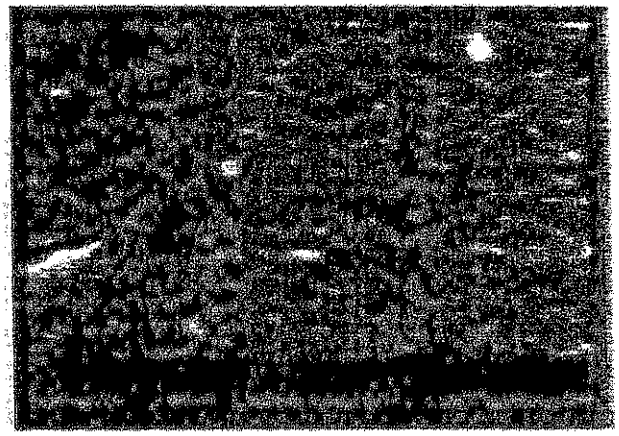


FIG. 15D

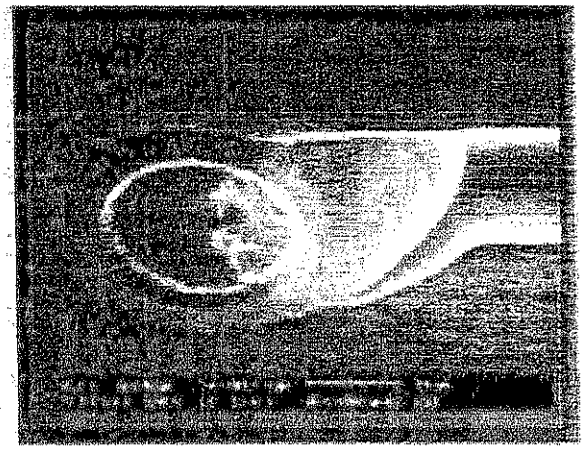


FIG. 15E

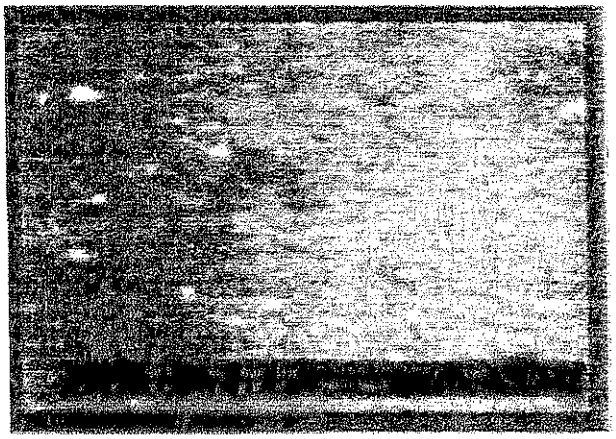


FIG. 15F

	EXEMPLARY INVENTIVE CAPILLARY			
CV - mils/msec	0.3			
USG - mA	175			
FORCE - grams	30			
	X RIGHT	Y DOWN	X LEFT	Y DOWN
1	3.64	3.64	4.48	4.48
2	3.92	3.36	4.48	4.2
3	4.2	3.08	4.2	3.92
4	4.2	2.8	4.2	4.48
5	4.48	3.36	4.2	5.04
AVG :	4.09	3.25	4.31	4.42
STDEV	0.32	0.32	0.15	0.42
MIN	3.64	2.8	4.2	3.92
MAX	4.48	3.64	4.48	5.04

FIG. 16A

	CONVENTIONAL CAPILLARIES											
CV - mils/msec	0.3				0.25				0.25			
USG - mA	175				165				155			
FORCE - grams	30				25				20			
	X RIGHT	Y DOWN	X LEFT	Y DOWN	X RIGHT	Y DOWN	X LEFT	Y DOWN	X RIGHT	Y DOWN	X LEFT	Y DOWN
1	1.68	0	SHTL	SHTL	0	2.8	2.24	2.8	2.8	2.24	2.52	SHTL
2	2.24	0	SHTL	SHTL	1.96	0	2.52	3.08	2.52	0	2.8	SHTL
3	1.68	0	SHTL	SHTL	2.24	0	3.08	3.36	2.52	0	3.08	SHTL
4	0	0	SHTL	SHTL	3.36	1.96	3.36	3.36	2.8	2.24	3.08	SHTL
5	1.68	0	SHTL	SHTL	1.68	2.24	2.52	SHTL	2.52	0	3.08	SHTL
AVG:	1.46	0.00	#DIV/0!	#DIV/0!	1.85	1.40	2.74	3.15	2.63	0.90	2.91	#DIV/0!
STDEV	0.85	0.00	#DIV/0!	#DIV/0!	1.21	1.31	0.46	0.27	0.15	1.23	0.25	#DIV/0!
MIN	0	0	0	0	0	0	2.24	2.8	2.52	0	2.52	0
MAX	2.24	0	0	0	3.36	2.8	3.36	3.36	2.8	2.24	3.08	0

FIG. 16B