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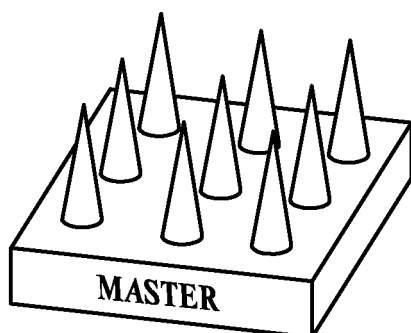


Fig. 1a.

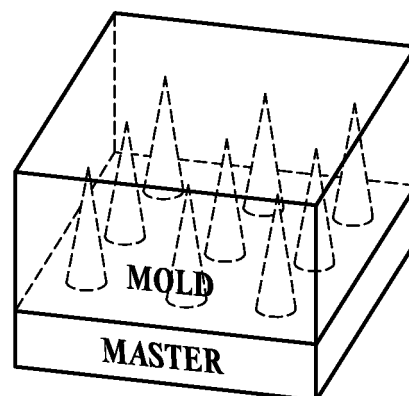


Fig. 1b.

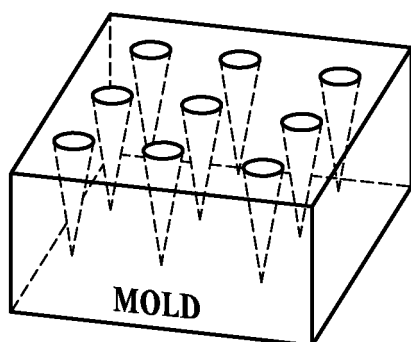


Fig. 1c.

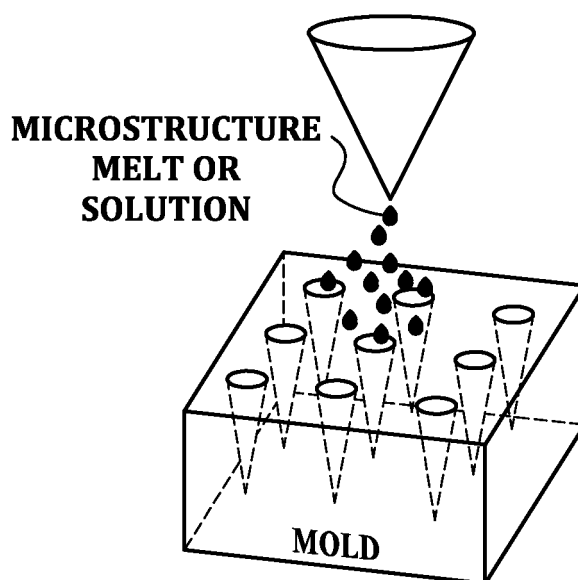


Fig. 1d.

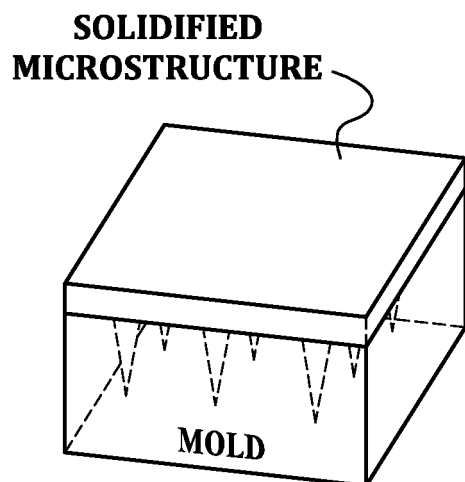


Fig. 1e.

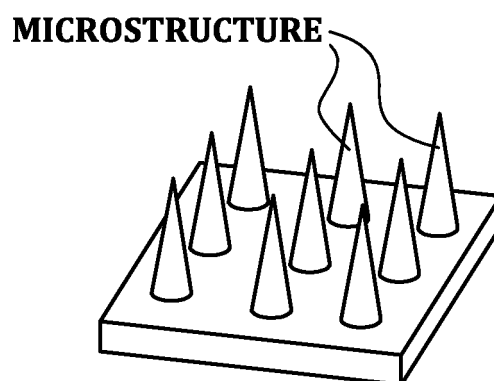


Fig. 1f.

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	HEIGHT	BASE	TIP WIDTH	ANGLE
M1	992	446	60	90

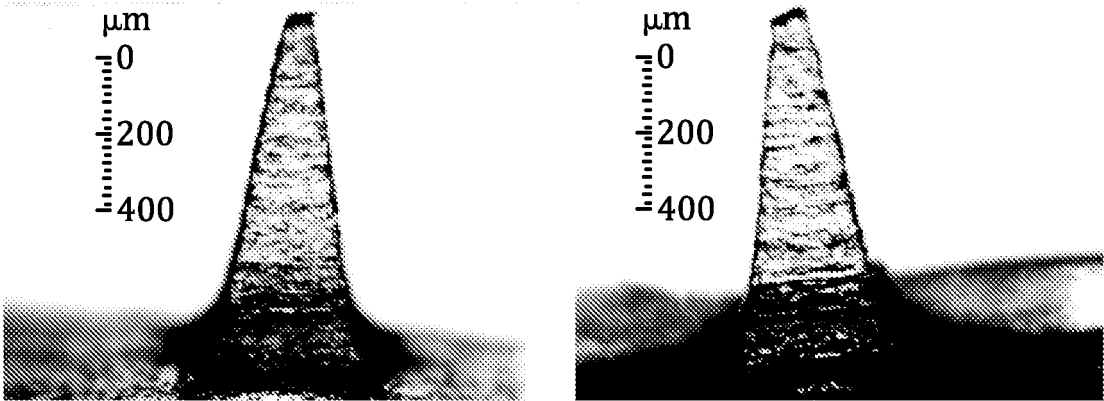


Fig.2a.

	HEIGHT	BASE	TIP WIDTH	ANGLE
C2	880	1068	22	51

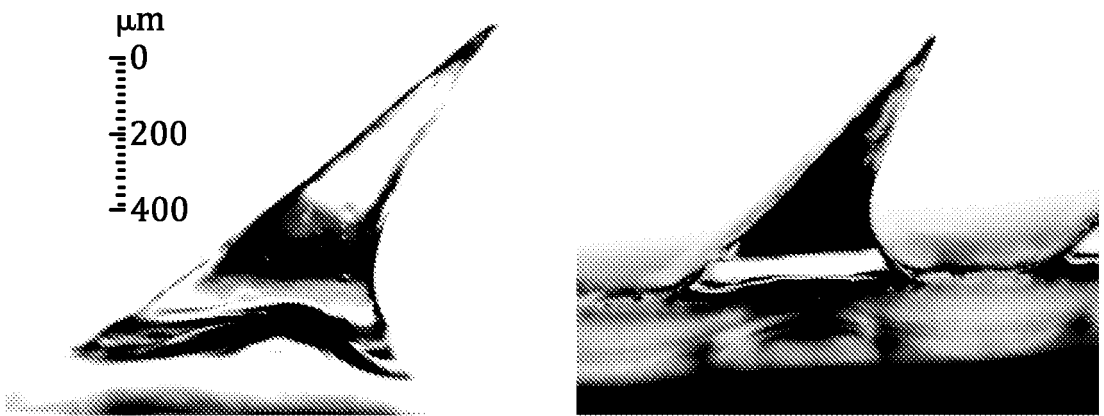


Fig.2b.

	HEIGHT	BASE	TIP WIDTH	ANGLE
B1	1300	820	35	90

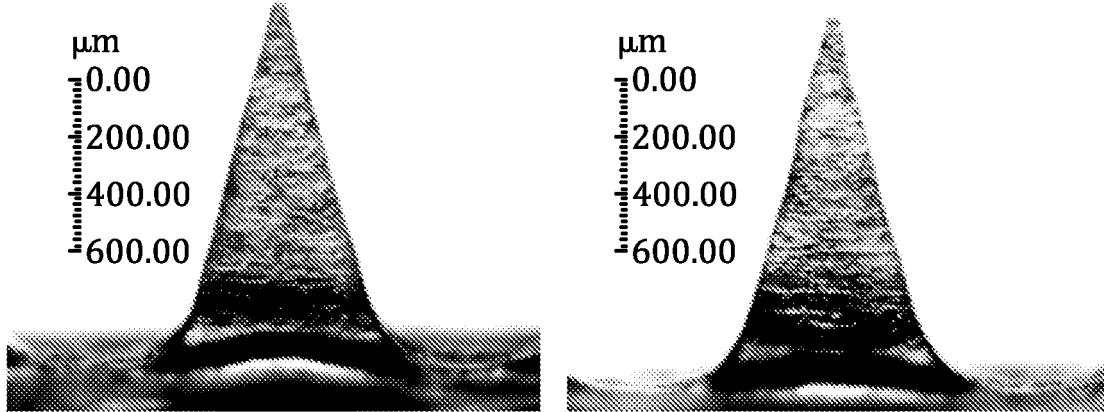
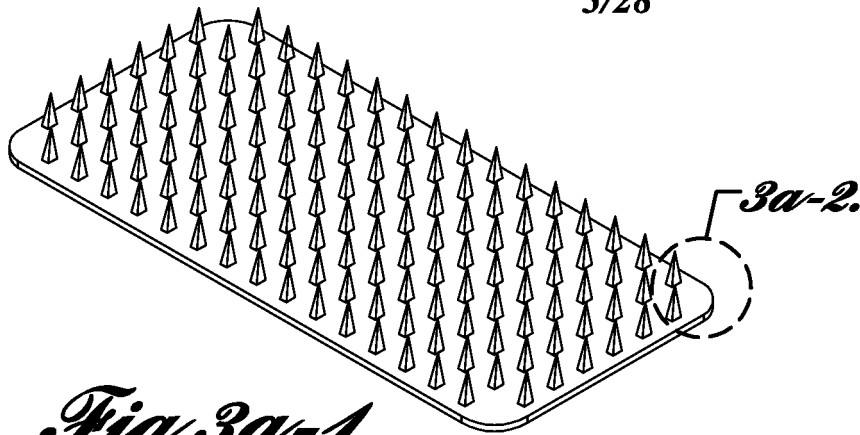
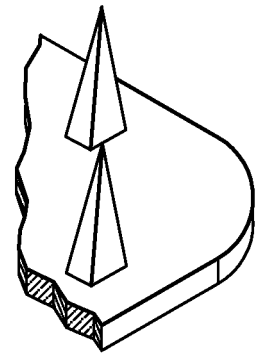
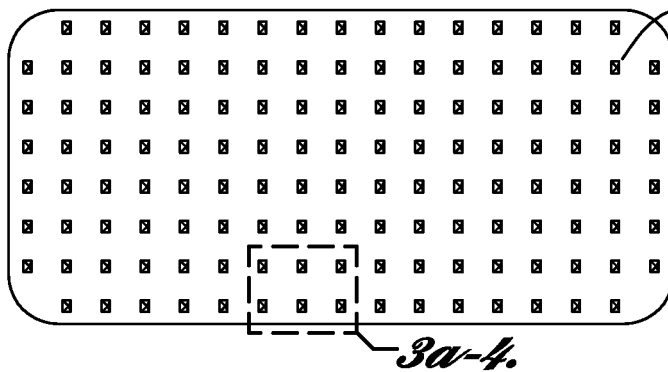
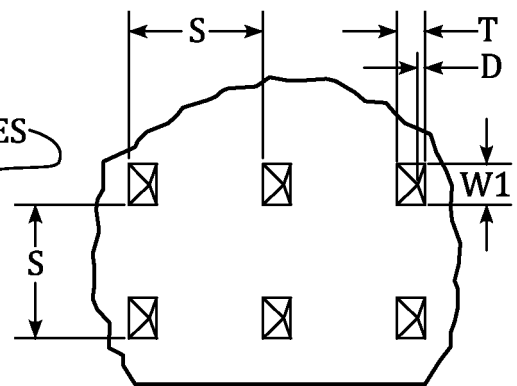
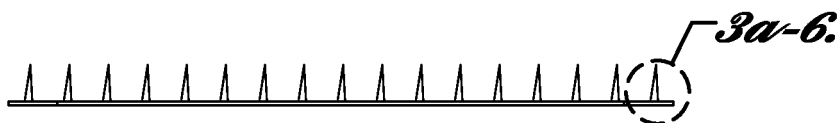
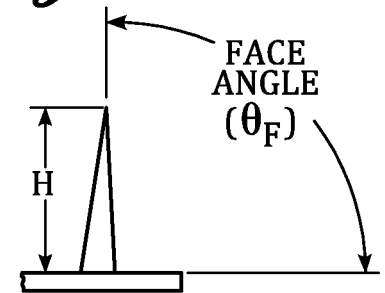


Fig.2c.

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*Fig. 3a-1.**Fig. 3a-2.*

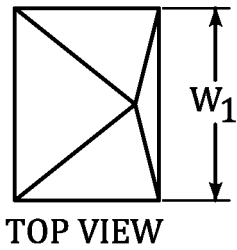
100 MICRONEEDLES / CM²
 8 NEEDLES X 17 NEEDLE ARRAY
 (MINUS CORNERS) 132 TOTAL NEEDLES
 *FOR 104-2A 177 NEEDLES / CM²
 10 X 23 (MINUS CORNERS) 226 TOTAL NEEDLES

*Fig. 3a-3.**Fig. 3a-4.**Fig. 3a-5.**Fig. 3a-6.*

PART NUMBER	TYPE	HEIGHT (H)	WIDTH (W1)	WIDTH (W2)	THICK NESS (T)	TIP OFFSET (D)	SPACING (S)	FACE ANGLE
104-1	MICRONEEDLE 1MN	700	200	NA	125	25	1	92.1
104-2	MICRONEEDLE 2MN	700	250	NA	150	50	1	94.1
104-2A	MICRONEEDLE 2MN	700	250	NA	150	50	0.75	94.1
104-3	MICRONEEDLE 3MN	950	300	NA	200	50	1	93

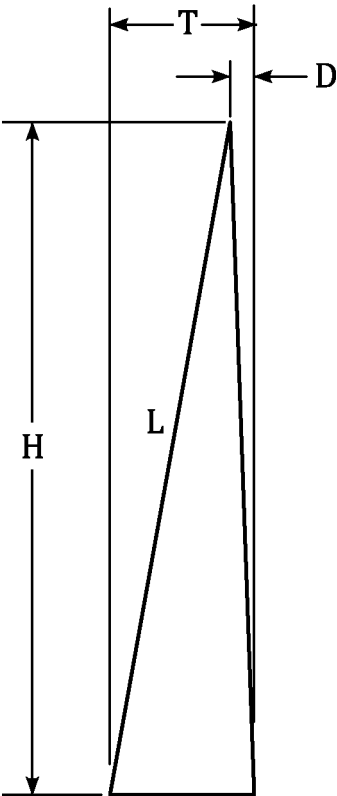
DIMENSIONS ARE IN MILLIMETERS. TOLERANCES: .X +/- .1; .XX +/- .05; ANGULAR +/- .5 DEG

Fig. 3b.

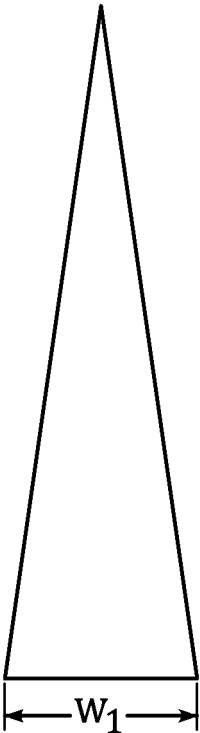


TOP VIEW

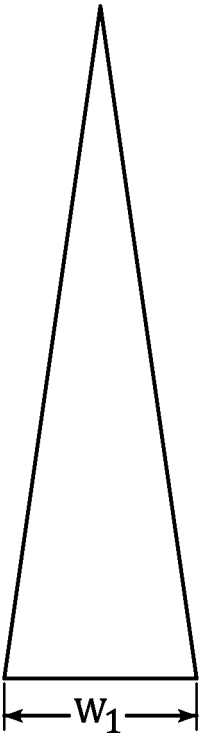
Fig. 4a.



SIDE VIEW



BACK VIEW
(AWAY FROM WOUND)



FRONT VIEW
(FACING WOUND)

Fig. 4b.

Fig. 4c.

Fig. 4d.

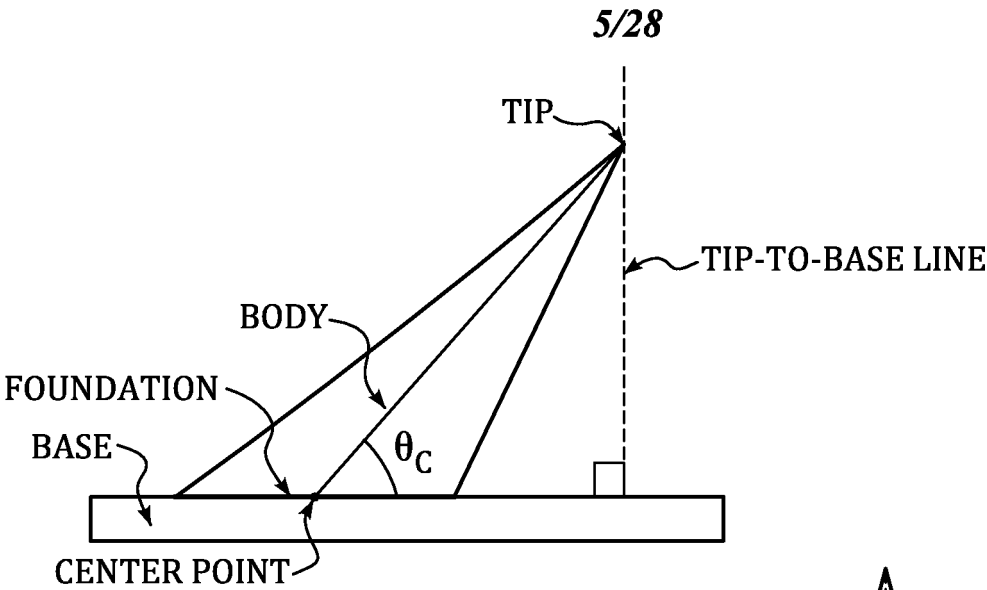


Fig. 5a.

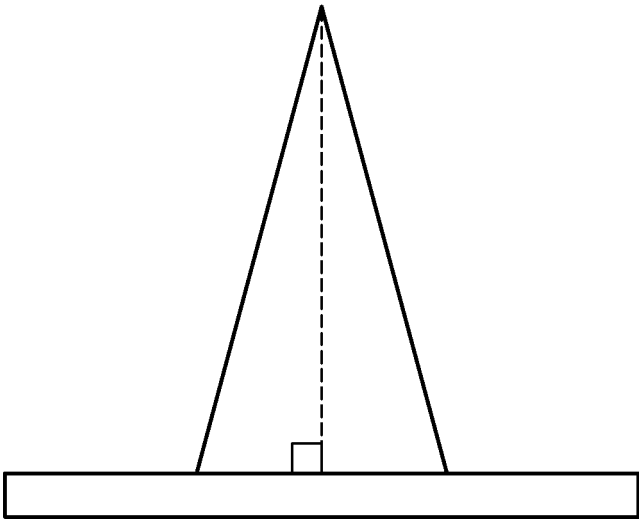


Fig. 5b.

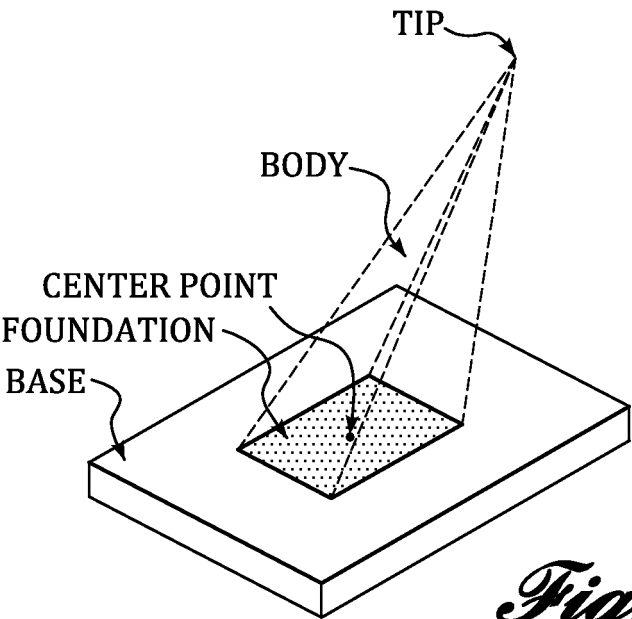
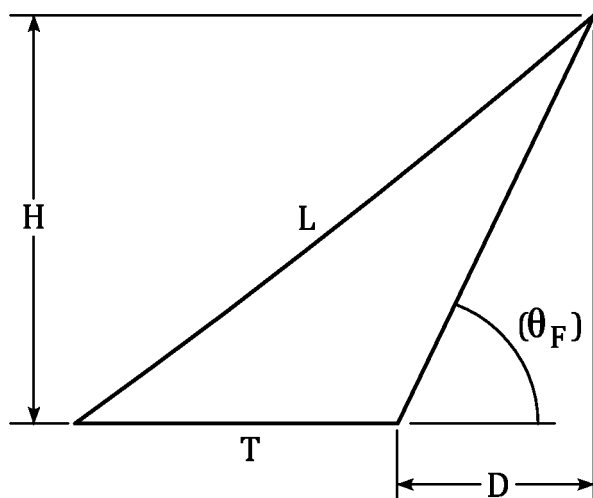
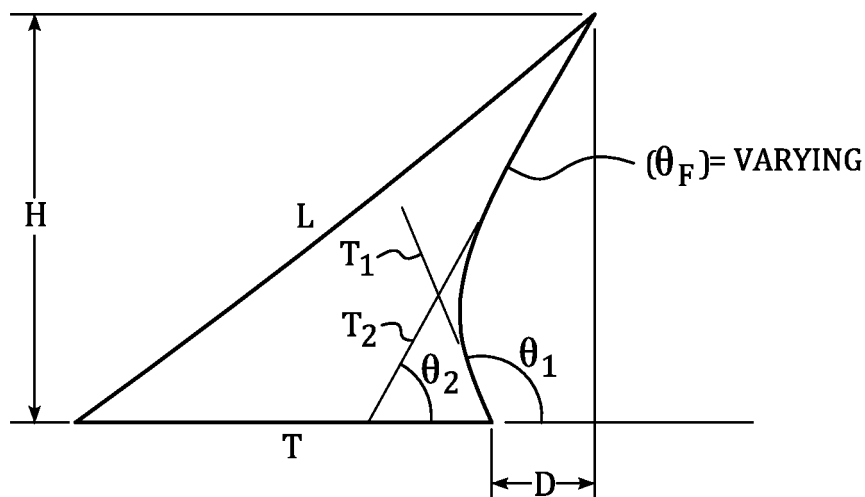
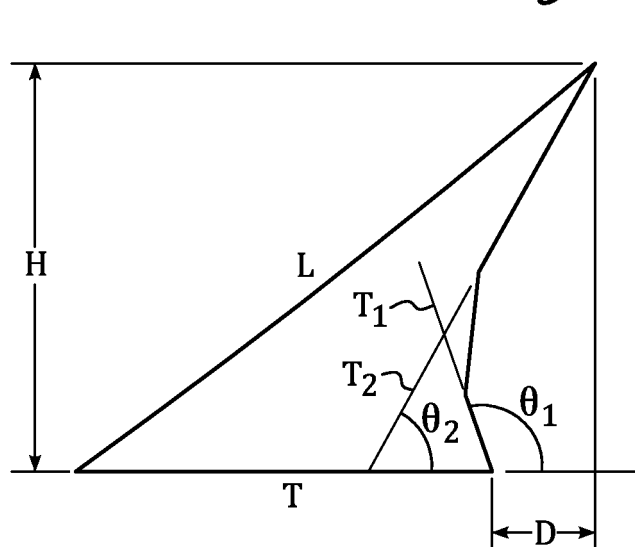
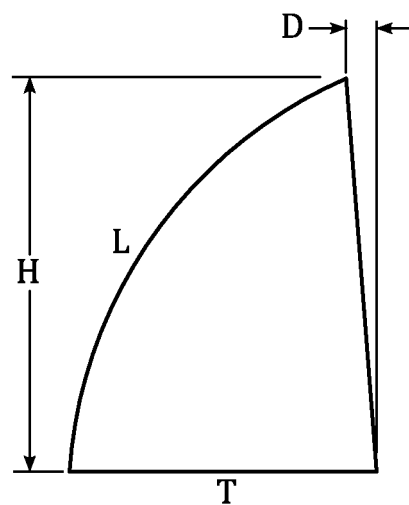


Fig. 5c.

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*Fig. 6a.**Fig. 6b.**Fig. 6c.**Fig. 6d.*

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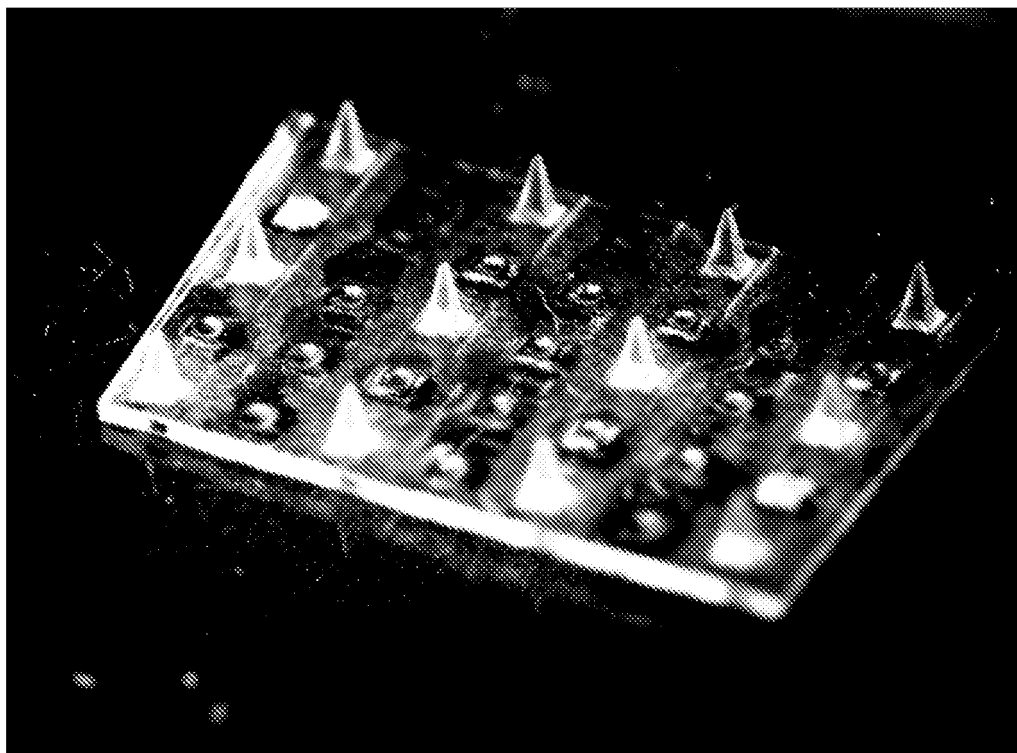


Fig. 7a.

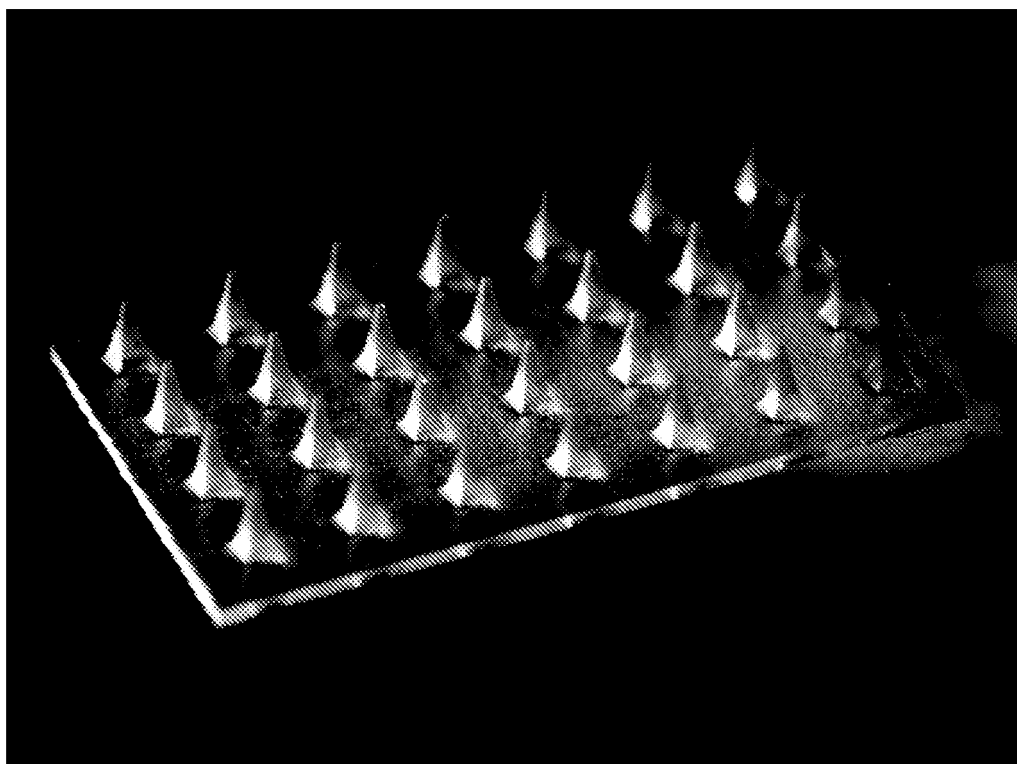
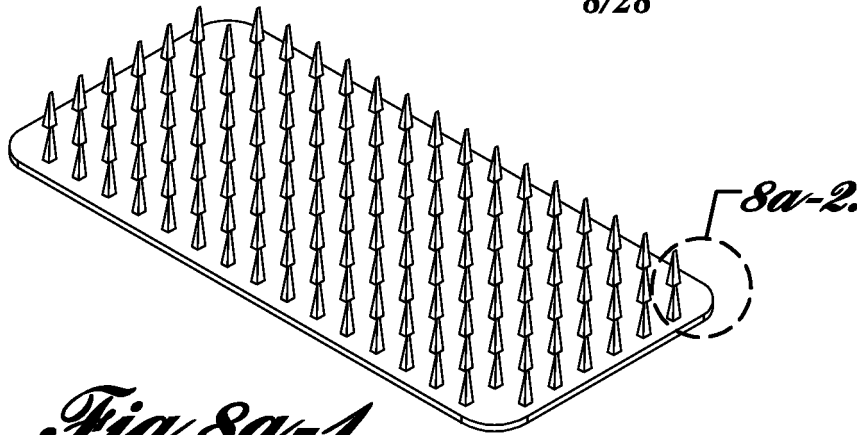
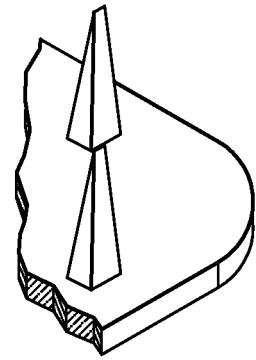
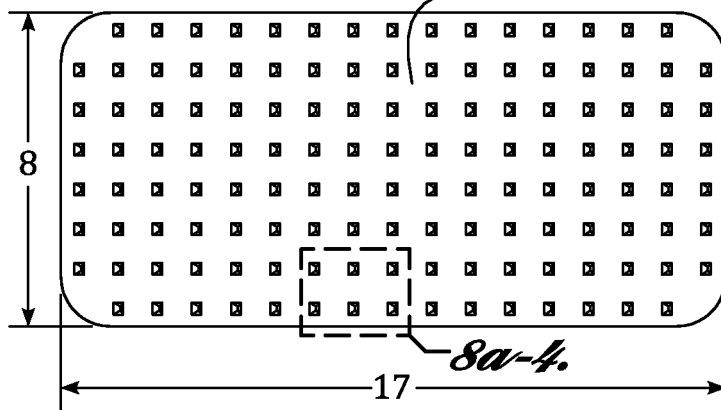
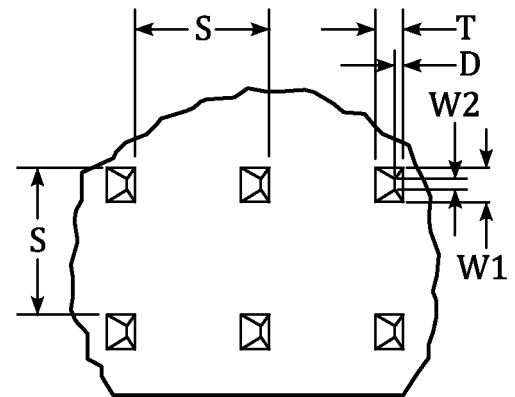
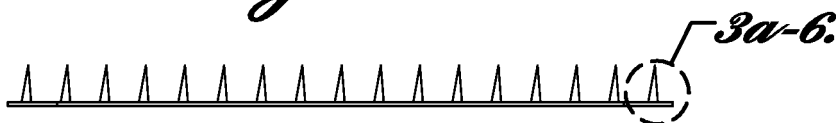
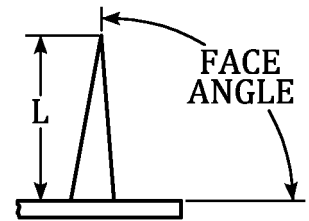


Fig. 7b.

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*Fig. 8a-1.**Fig. 8a-2.*

100 MICRONEEDLES / CM²
 8 NEEDLES X 17 NEEDLE ARRAY
 (MINUS CORNERS) 132 TOTAL NEEDLES
 *FOR 104-5A 177 NEEDLES / CM²
 10 X 23 (MINUS CORNERS)
 226 TOTAL NEEDLES

*Fig. 8a-3.**Fig. 8a-4.**Fig. 8a-5.**Fig. 8a-6.*

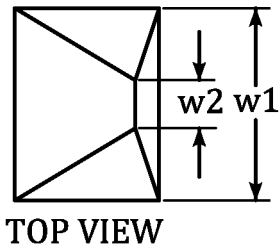
MICROSTRUCTURE BASED WOUND CLOSURE DEVICES

PART NUMBER	TYPE	LENGTH (L)	WIDTH (W1)	WIDTH (W2)	THICKNESS (T)	TIP OFFSET (D)	SPACING (S)	FACE ANGLE
104-4	MICROBLADE 1MB	700	200	50	125	25	1	92.1
104-5	MICROBLADE 2MB	700	250	50	150	50	1	94.1
104-5A	MICROBLADE 2MB	700	250	50	150	50	0.75	94.1
104-6	MICROBLADE 3MB	950	300	NA	200	50	1	93

DIMENSIONS ARE IN MILLIMETERS. TOLERANCES: .X +/- .1; .XX +/- .05; ANGULAR +/- .5 DEG

Fig. 8b.

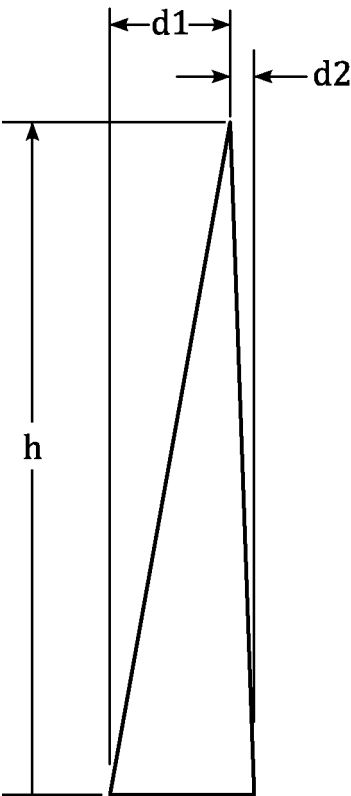
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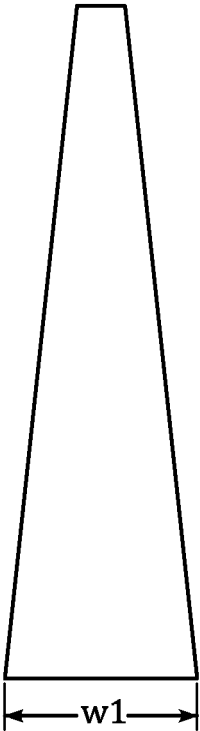
TOP VIEW

$h = 700\mu\text{m}$
 $d1 = 125\mu\text{m}$
 $d2 = 25\mu\text{m}$
 $w1 = 200\mu\text{m}$
 $w2 = 50\mu\text{m}$

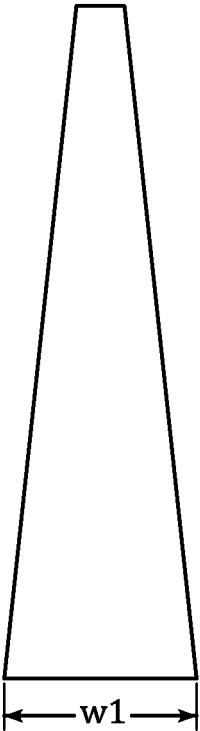
Fig.9a.



SIDE VIEW



BACK VIEW
(AWAY FROM WOUND)



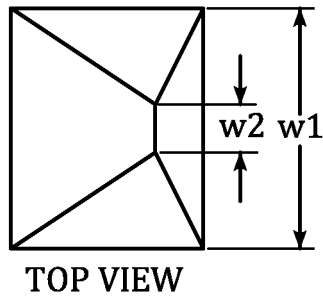
FRONT VIEW
(FACING WOUND)

Fig.9b.

Fig.9c.

Fig.9d.

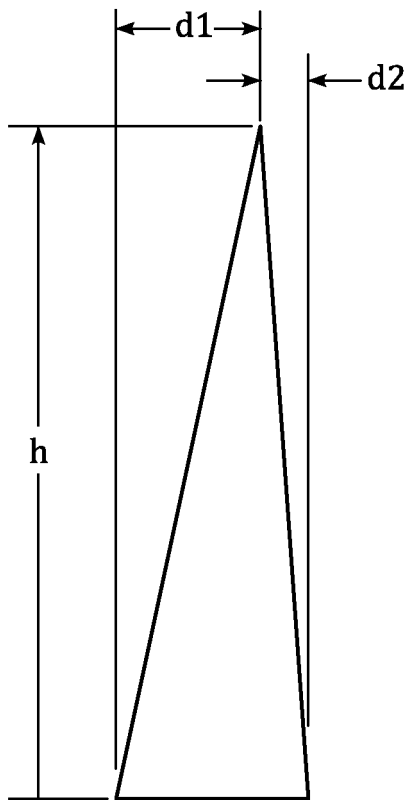
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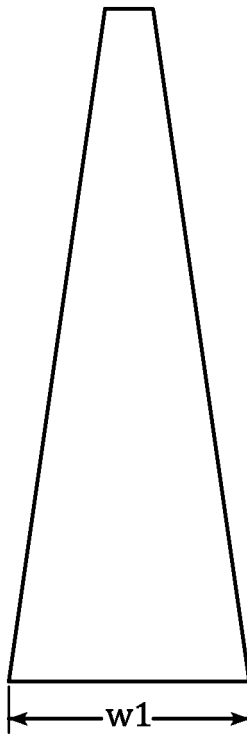
TOP VIEW

$h = 700\mu\text{m}$
 $d1 = 150\mu\text{m}$
 $d2 = 50\mu\text{m}$
 $w1 = 250\mu\text{m}$
 $w2 = 50\mu\text{m}$

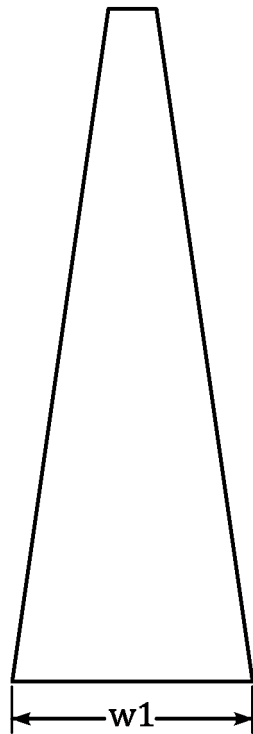
Fig. 10a.



SIDE VIEW



BACK VIEW
(AWAY FROM WOUND)



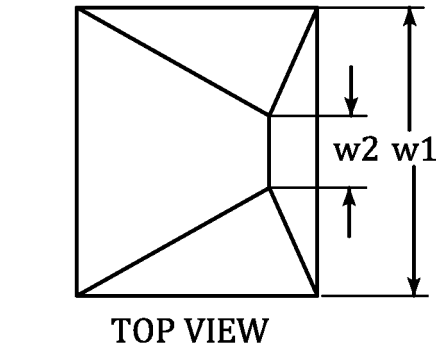
FRONT VIEW
(FACING WOUND)

Fig. 10b.

Fig. 10c.

Fig. 10d.

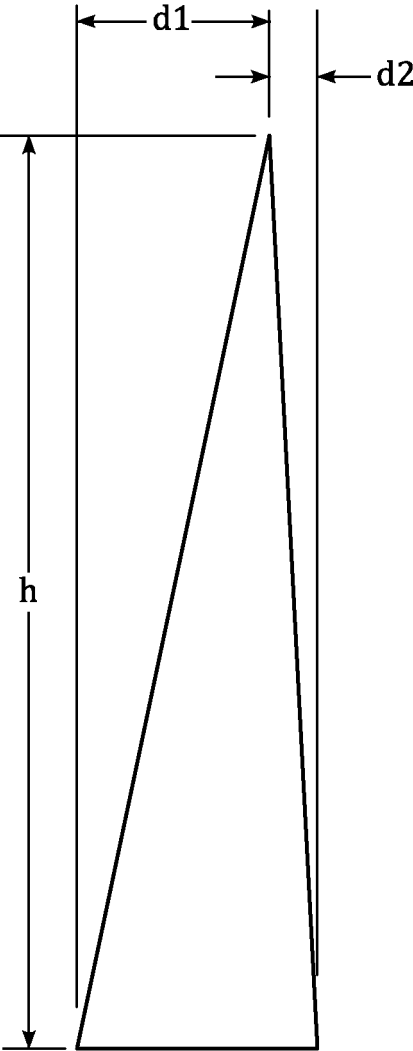
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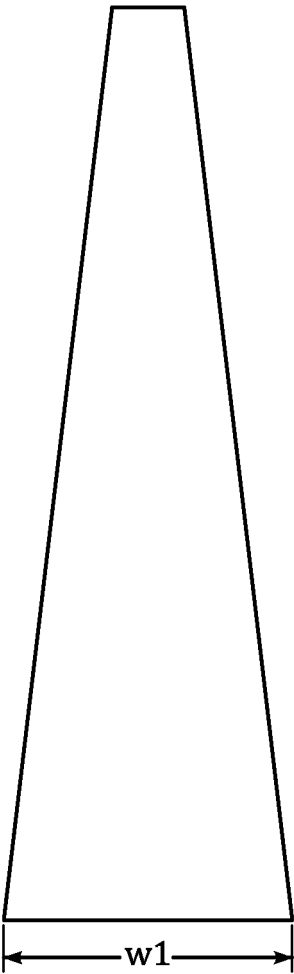
TOP VIEW

Fig. 11a.

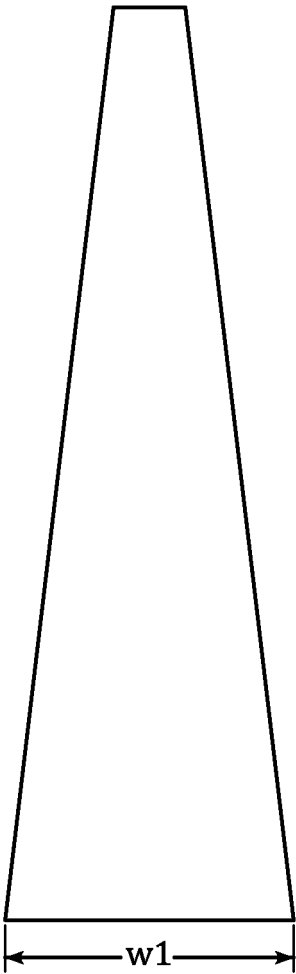
$h = 950\mu\text{m}$
$d1 = 200\mu\text{m}$
$d2 = 50\mu\text{m}$
$w1 = 300\mu\text{m}$
$w2 = 75\mu\text{m}$



SIDE VIEW



BACK VIEW
(AWAY FROM WOUND)



FRONT VIEW
(FACING WOUND)

Fig. 11b.

Fig. 11c.

Fig. 11d.

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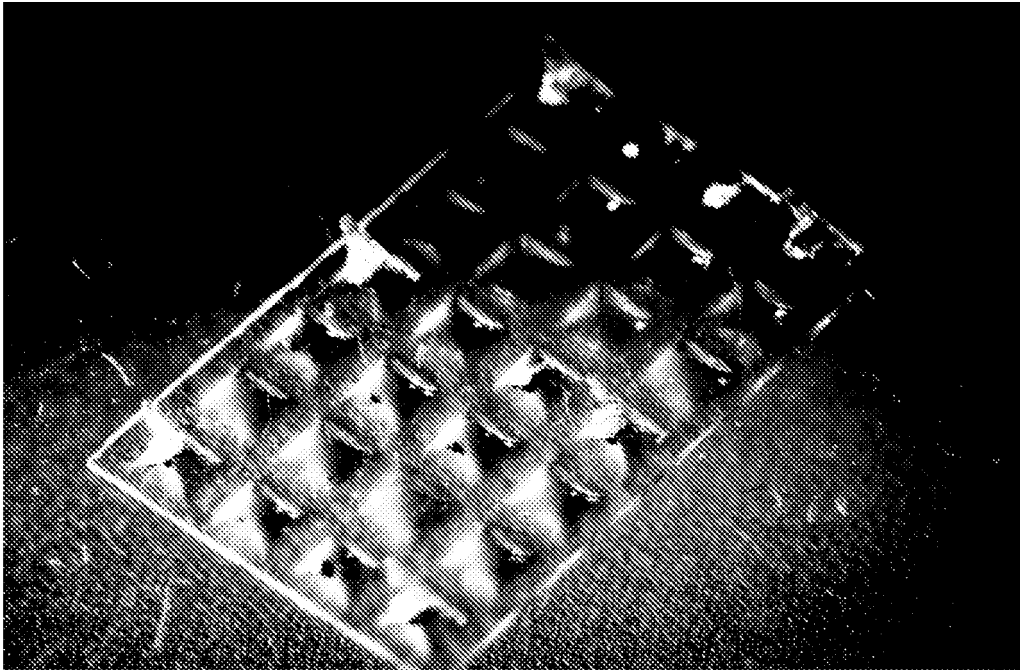


Fig. 12a.

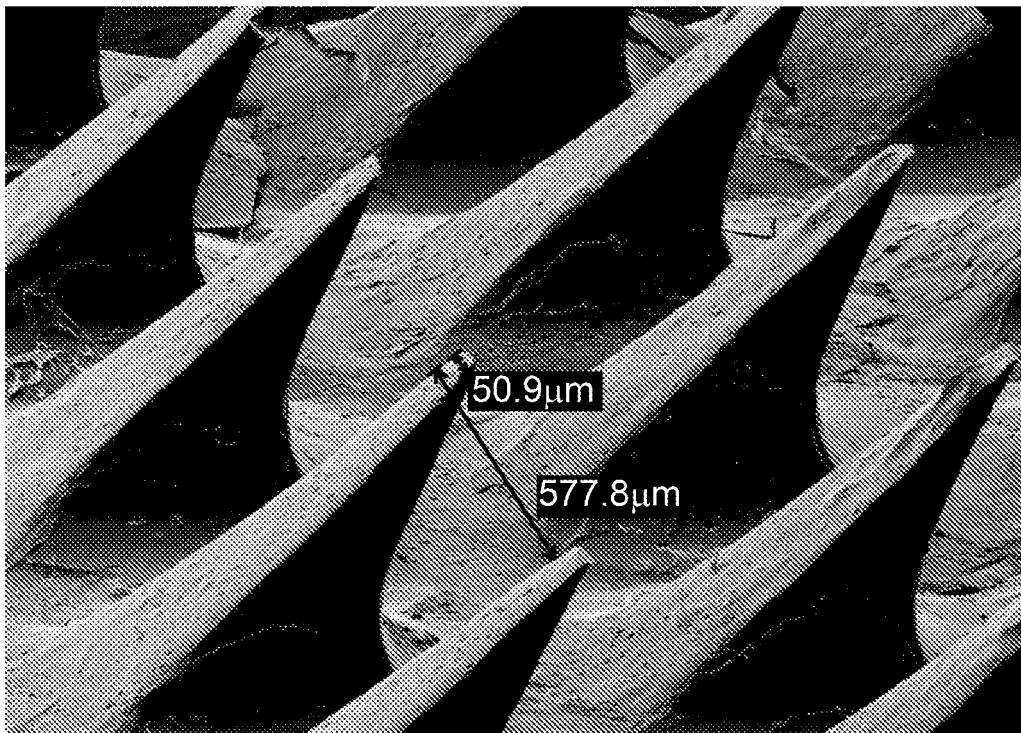


Fig. 12b.

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1000 MICRON LENGTH
250 MICRON BASE
20 MICRON TIP
24 DEGREE ANGLE
MICRONEEDLE

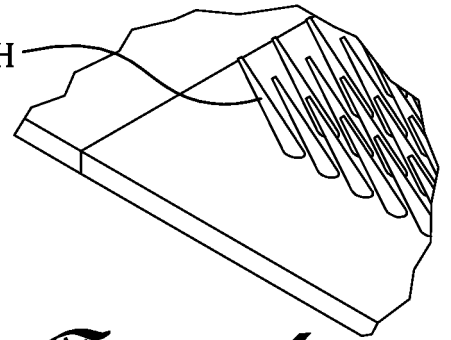


Fig. 13b.

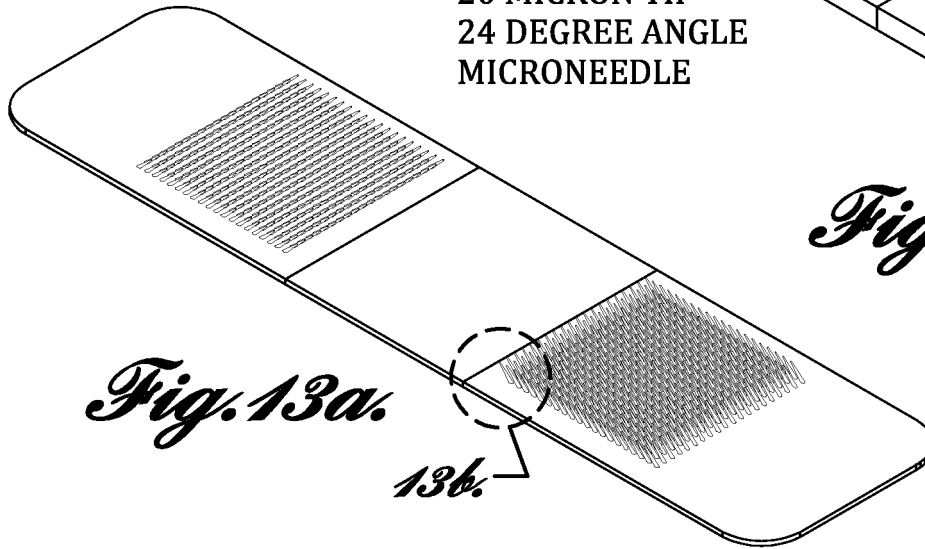


Fig. 13a.

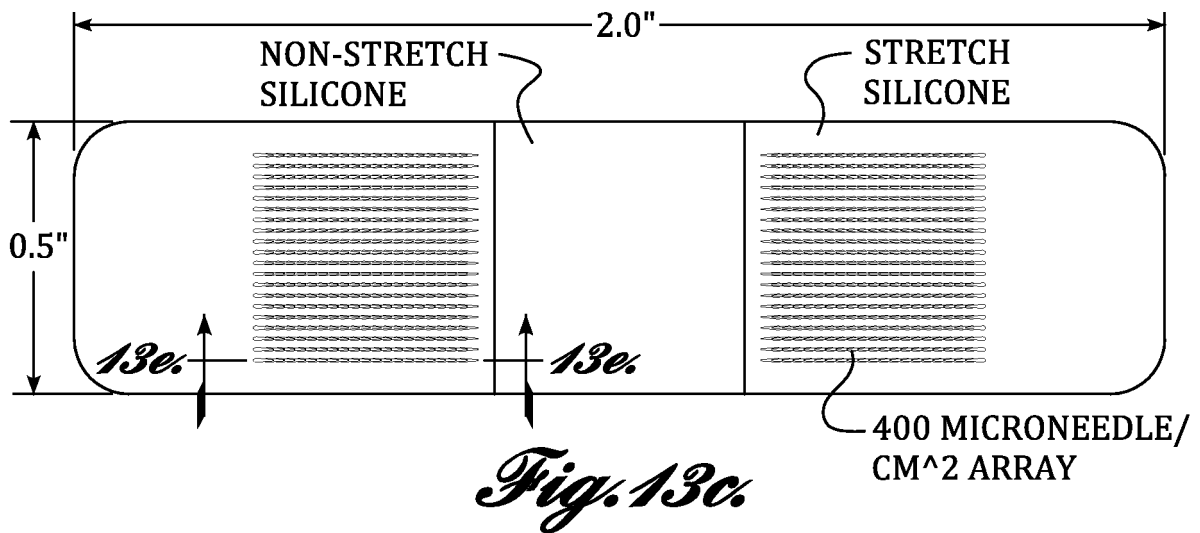


Fig. 13c.



Fig. 13d.

OPTIONAL COATING
SILICONE SUBSTRATE

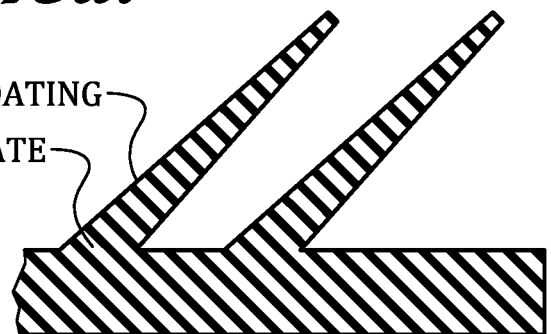


Fig. 13e.

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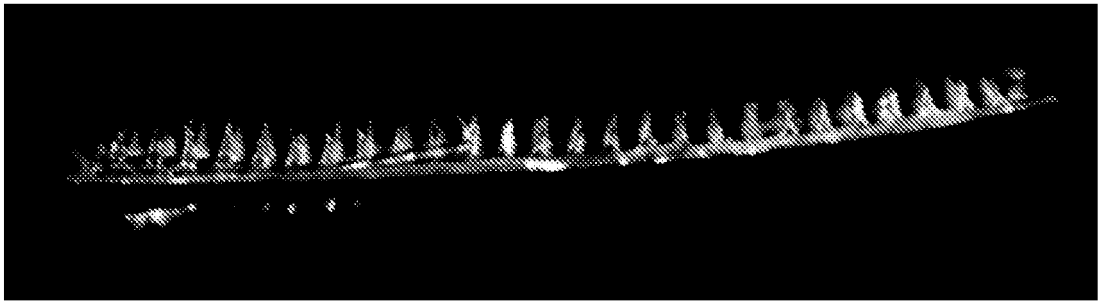


Fig. 14a.

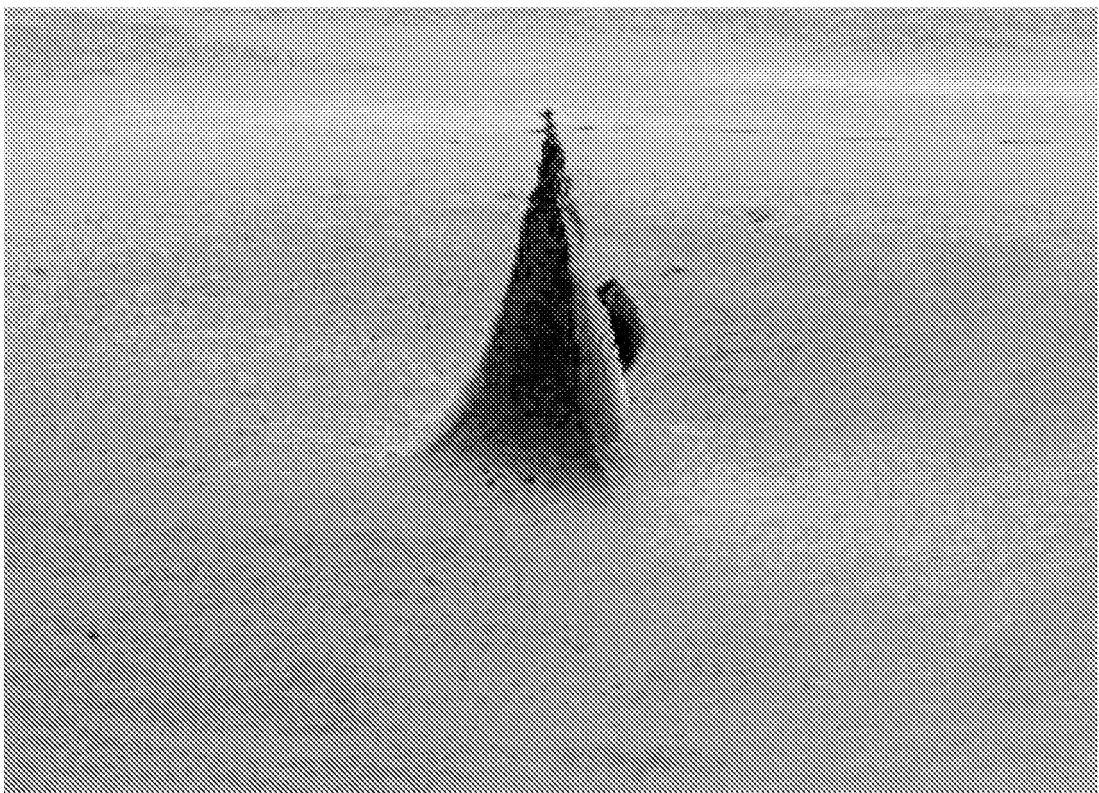


Fig. 14b.

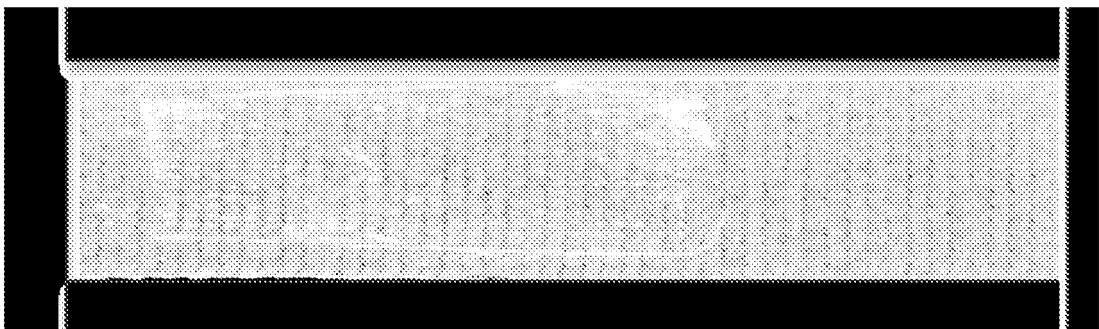
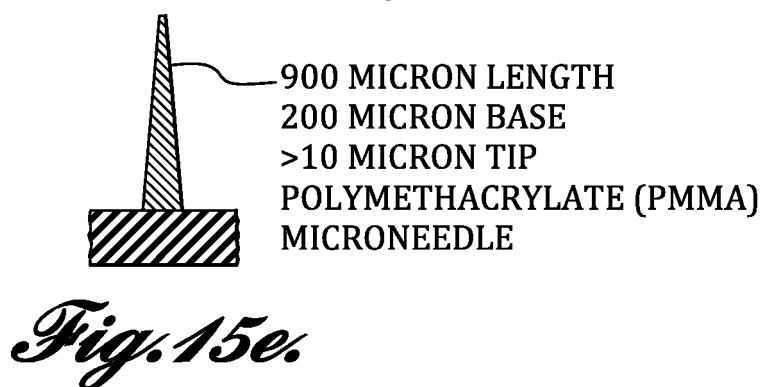
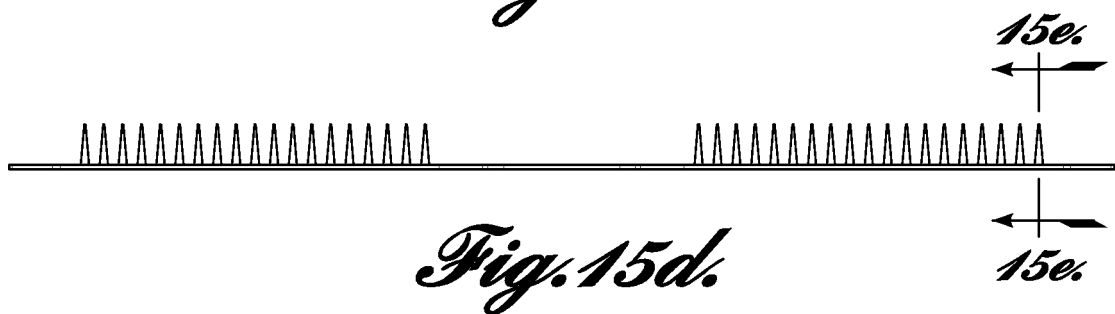
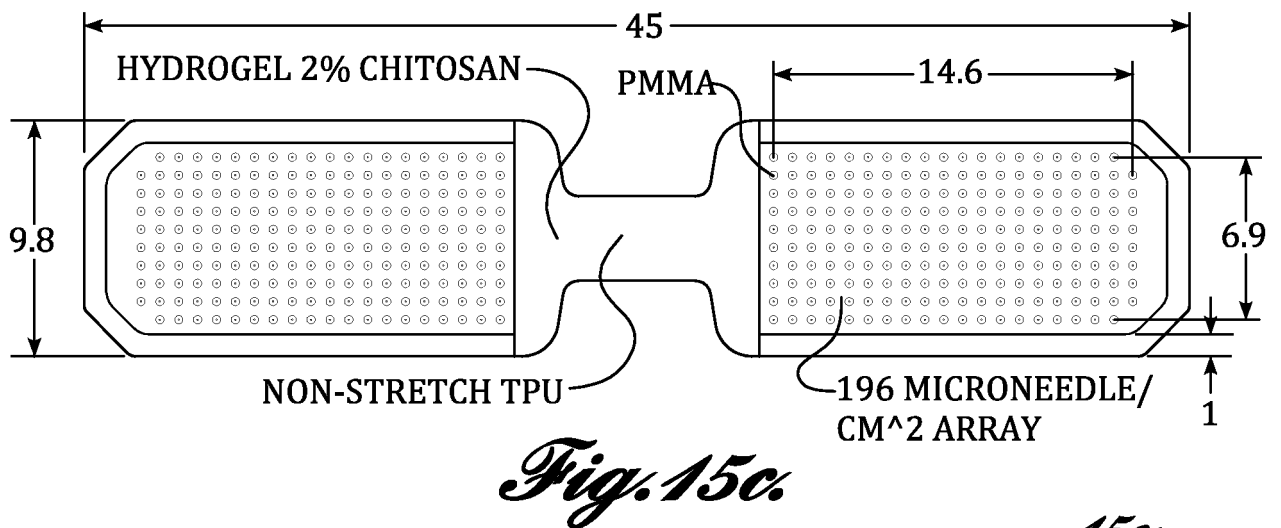
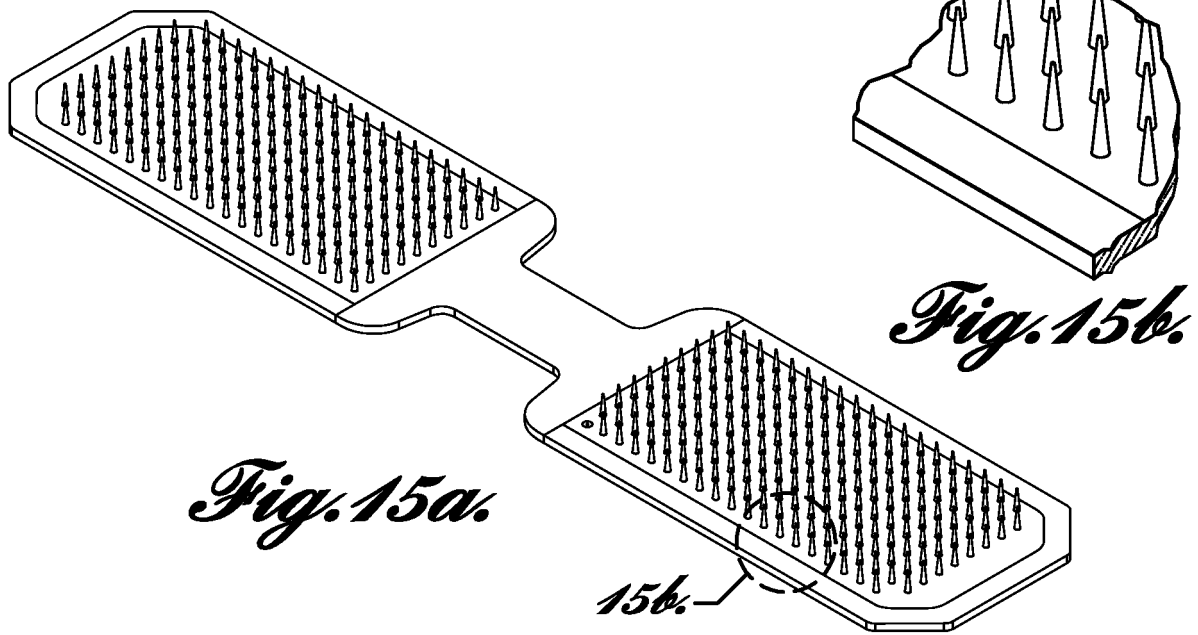


Fig. 14c.

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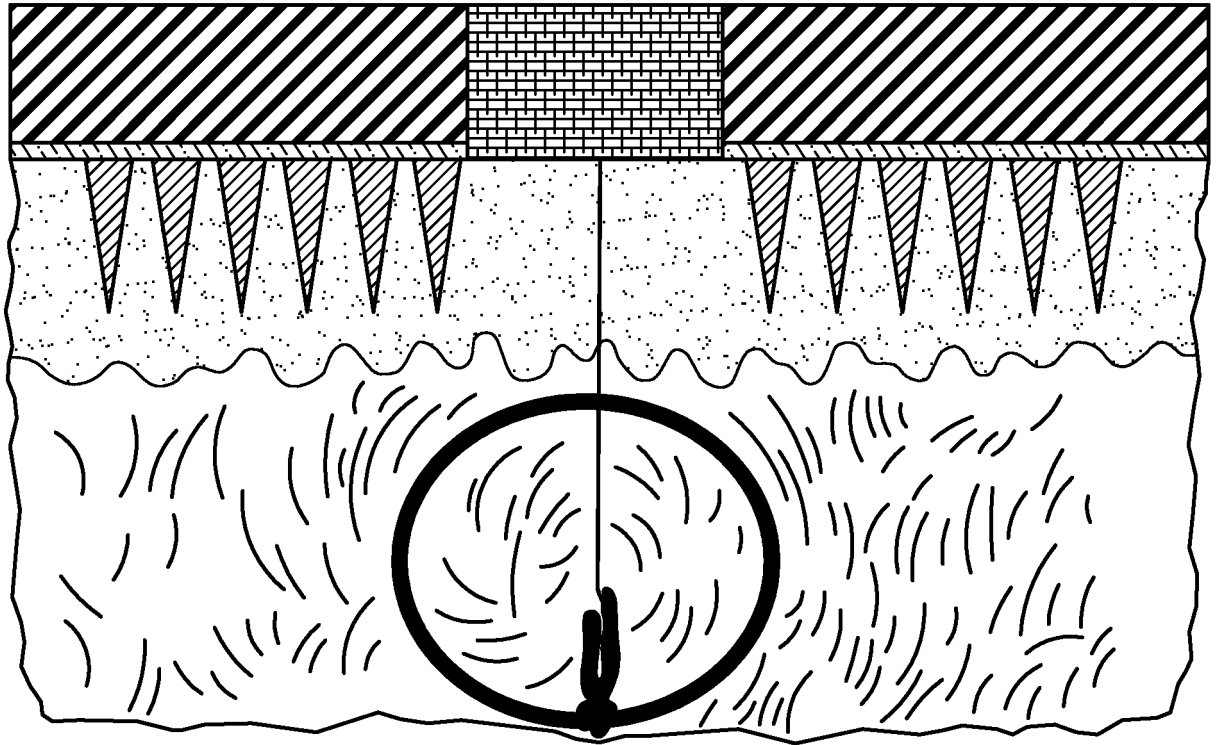


Fig. 16.

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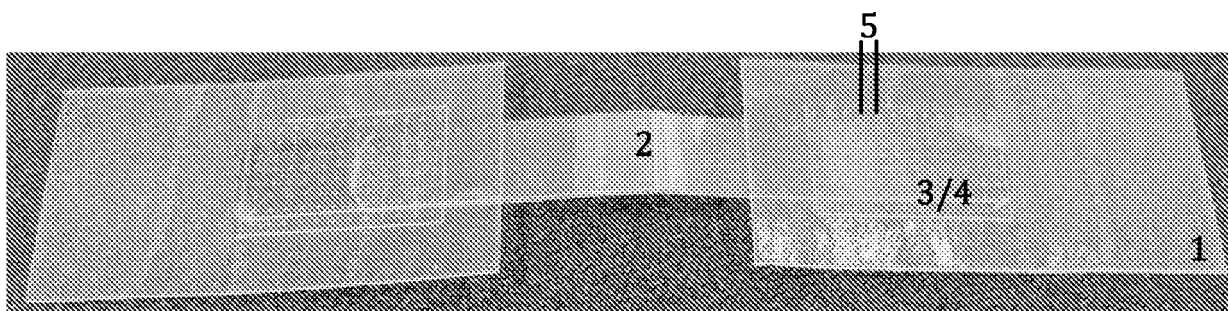


Fig. 17a.

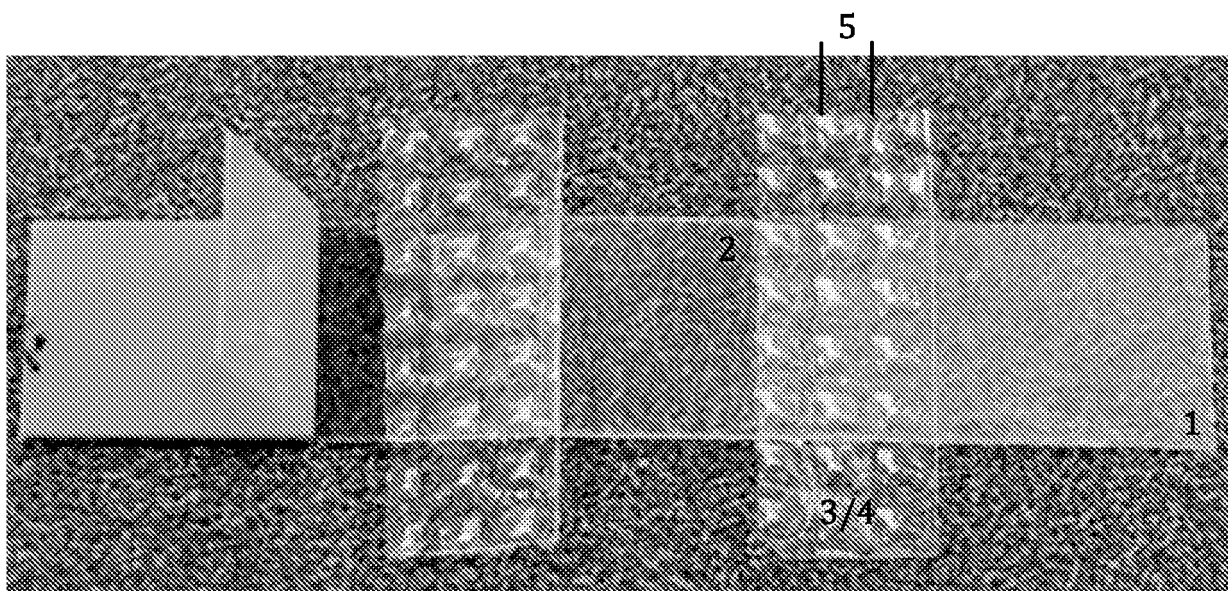


Fig. 17b.

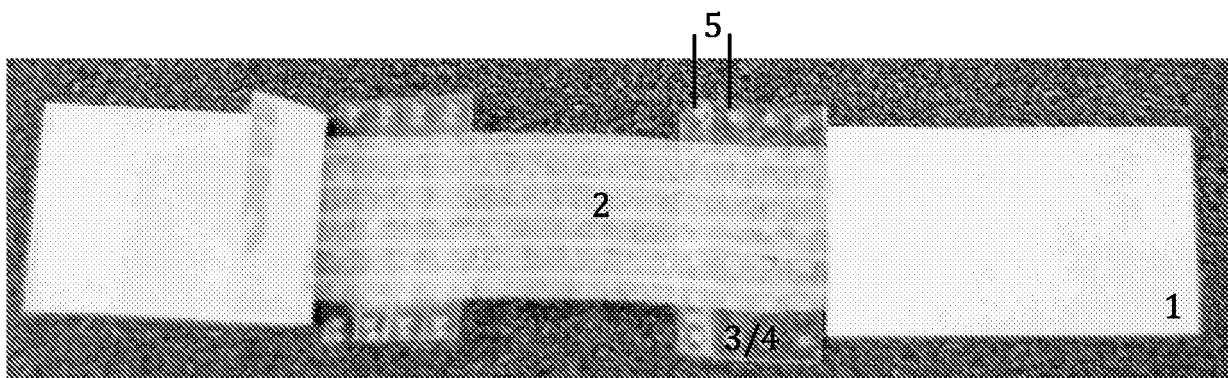


Fig. 17c.

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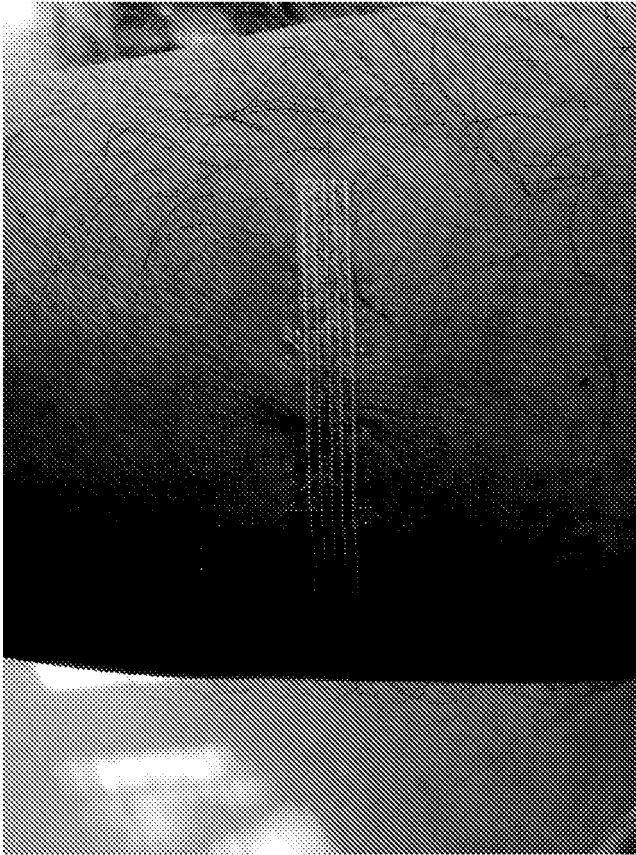


Fig. 18a.

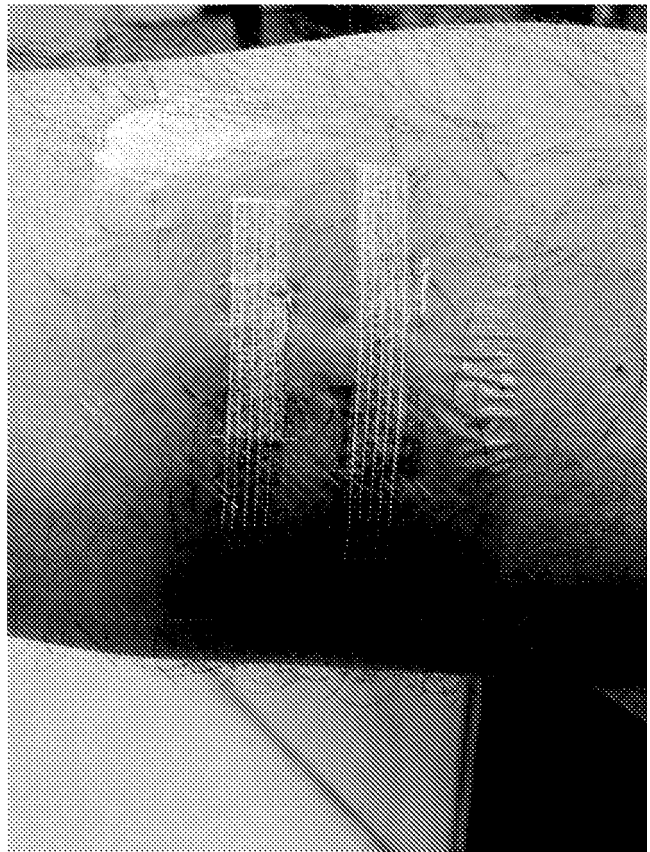


Fig. 18b.

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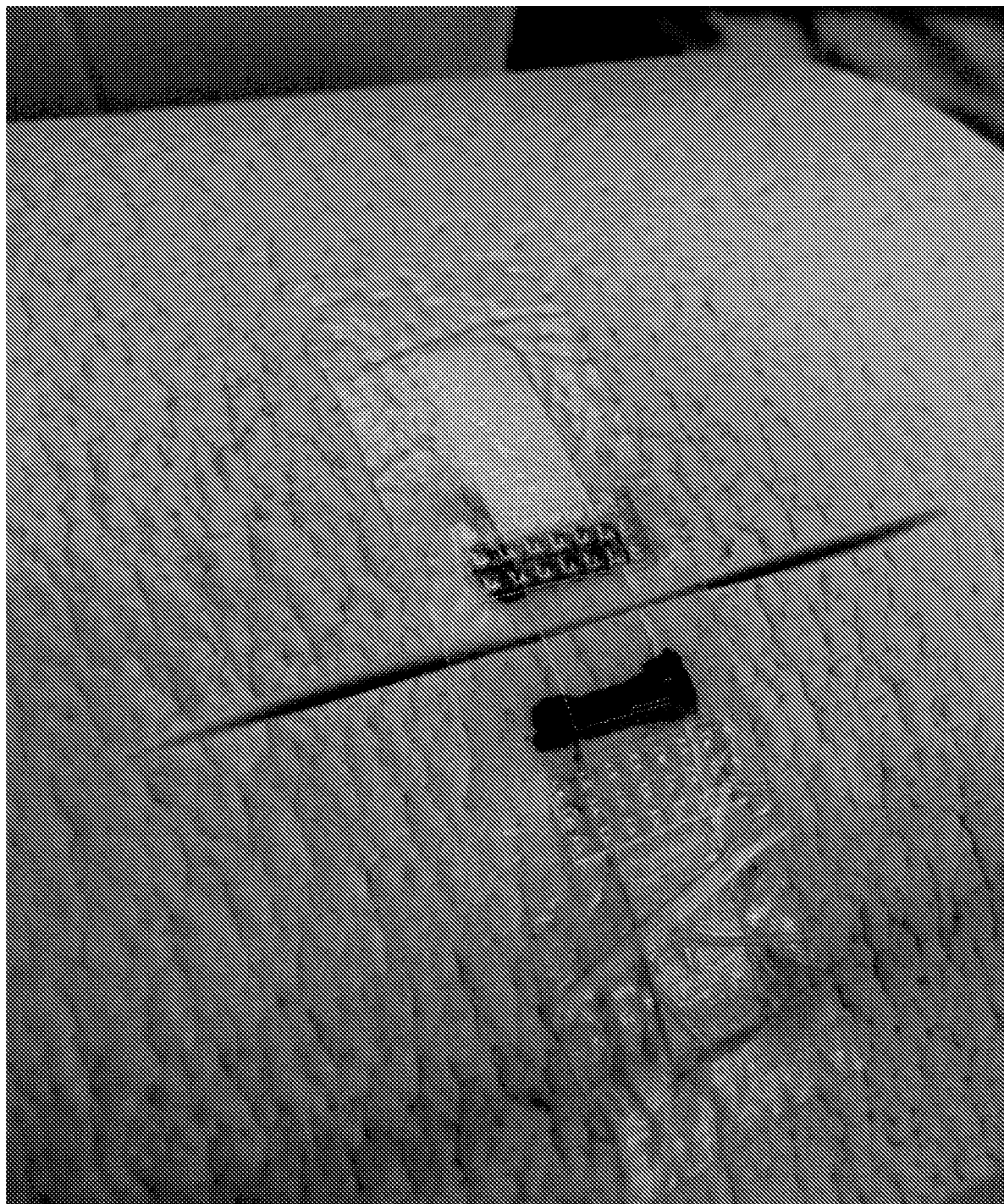


Fig. 19.

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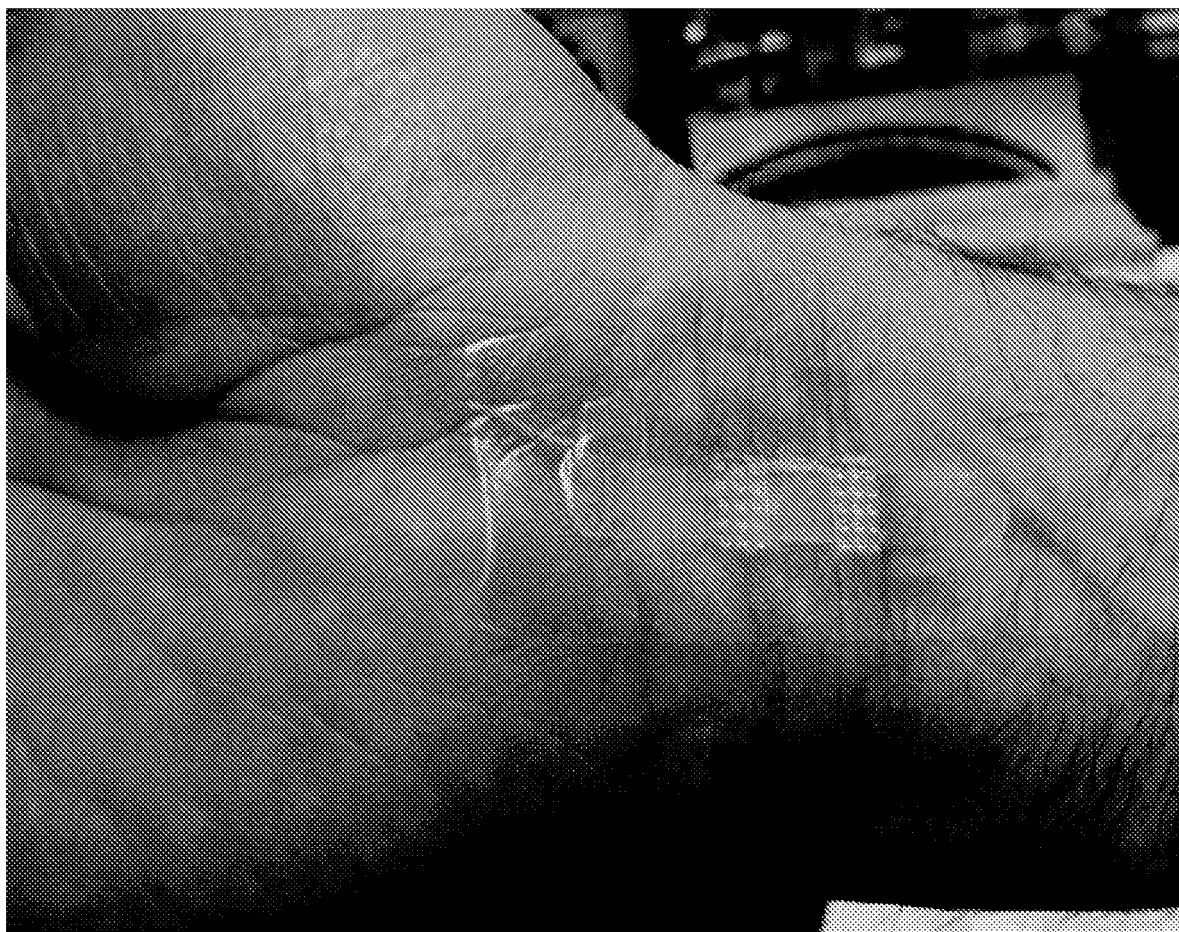
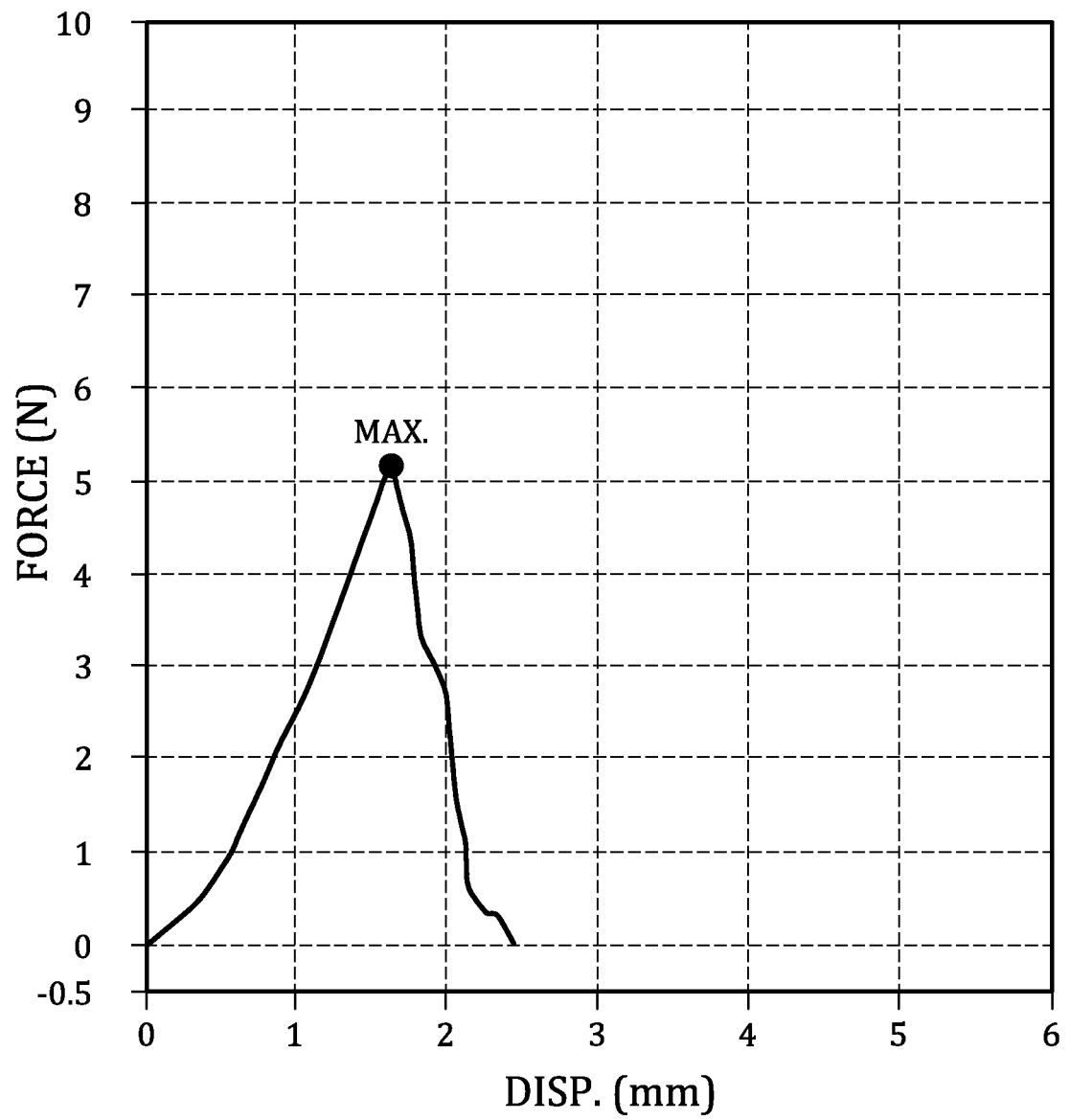


Fig. 20.

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*Fig.21.*

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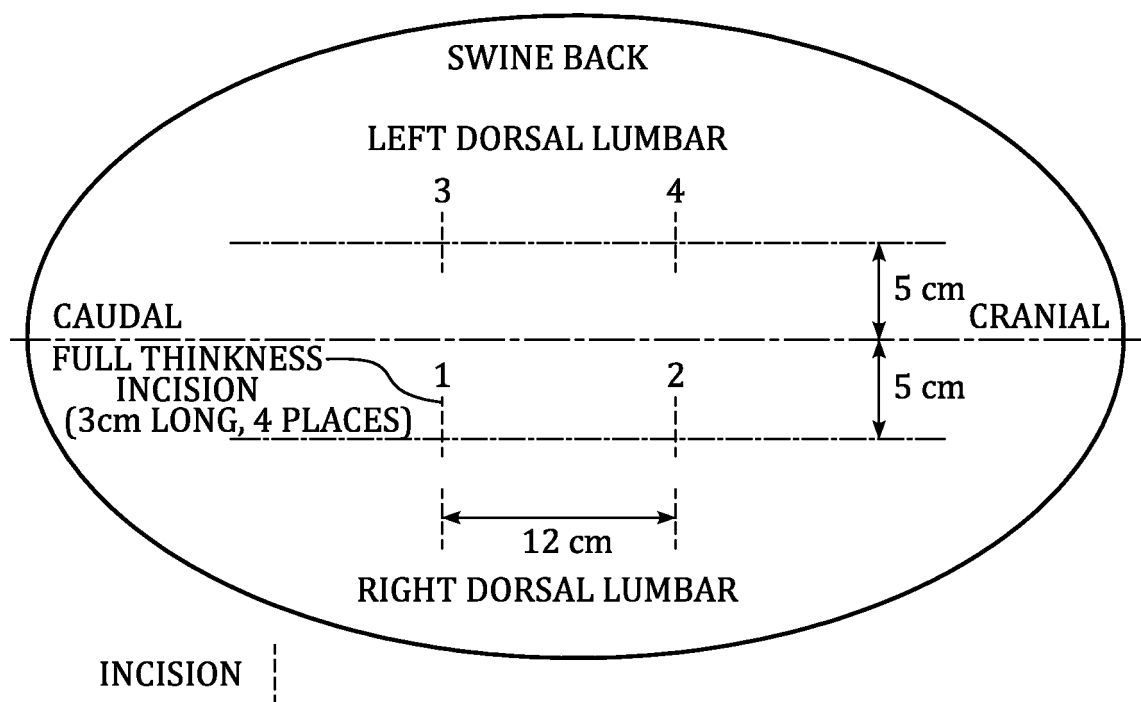


Fig. 22a.

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Fig. 22b.

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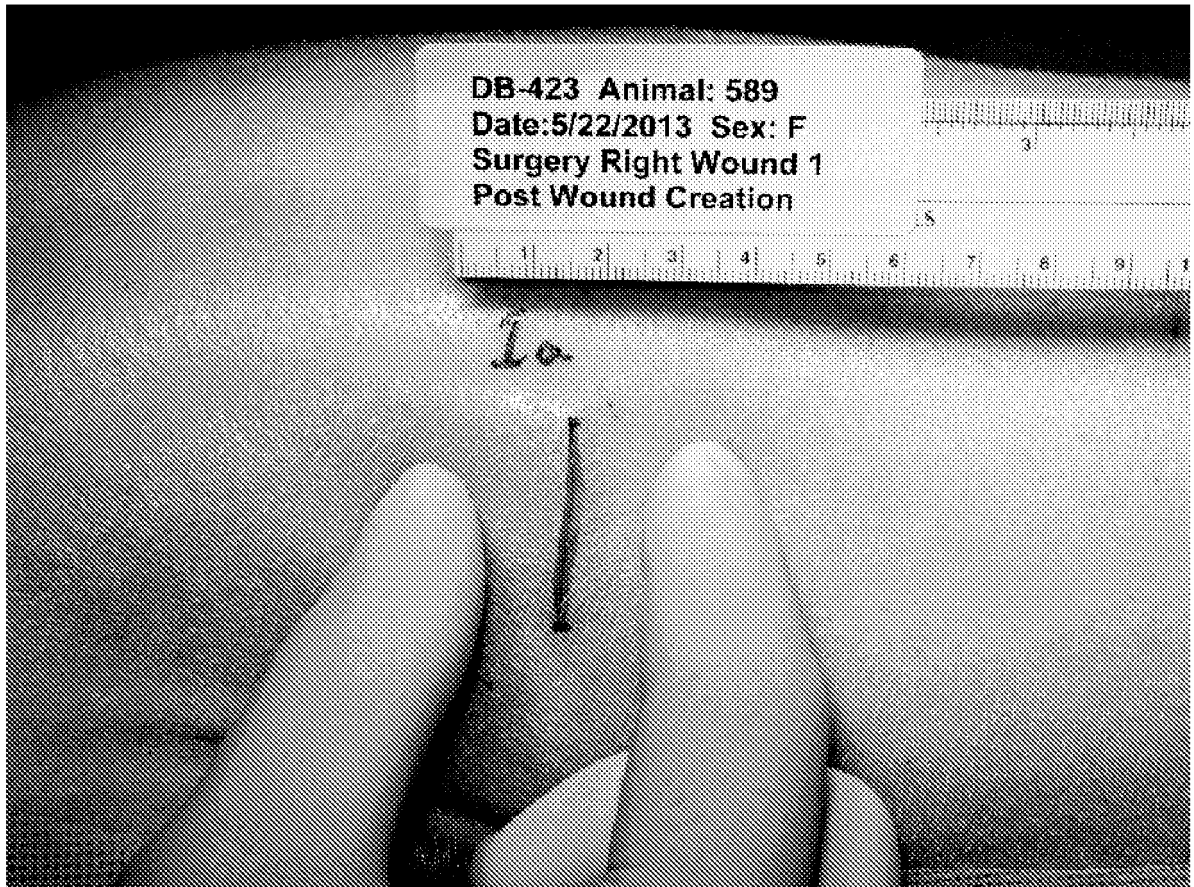


Fig. 22c.

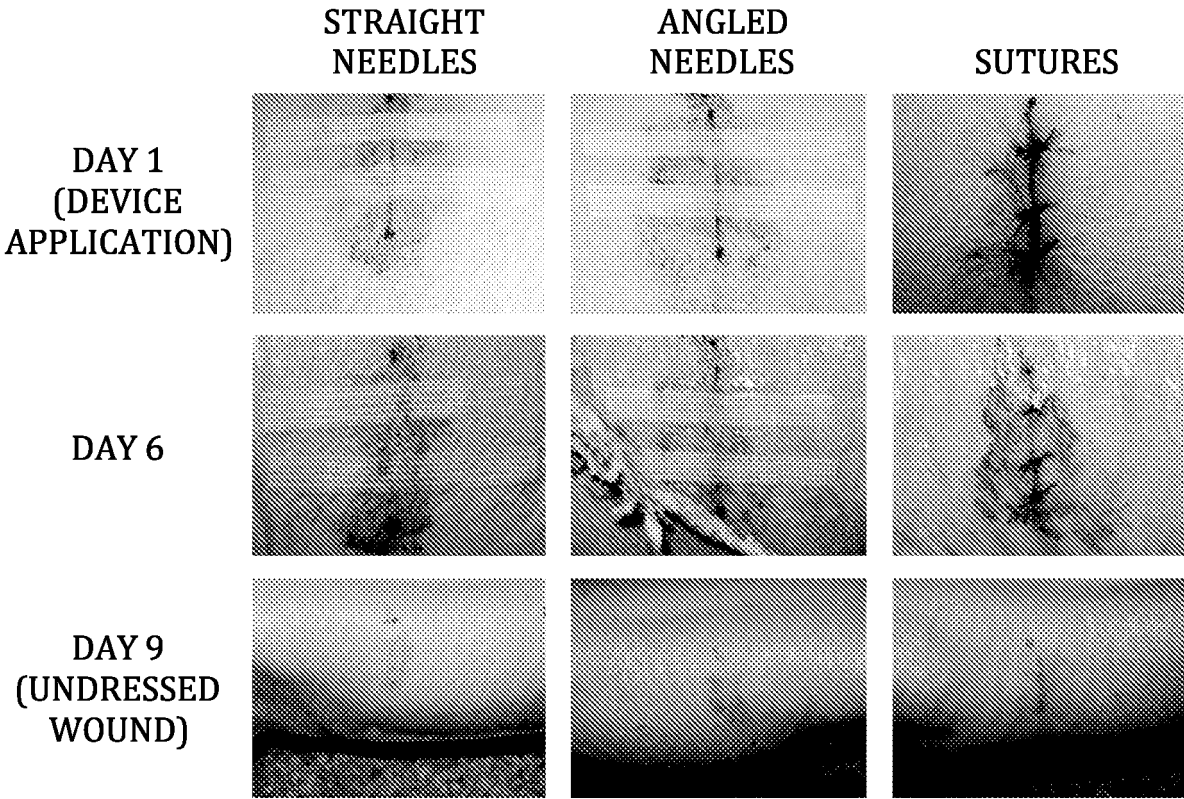


Fig.23.

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DAY 9 UNDRESSED WOUND
STRAIGHT NEEDLES



Fig.24.

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DAY 9 UNDRESSED WOUND
ANGLED NEEDLES



Fig.25.

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DAY 9 UNDRESSED WOUND
SUTURES



Fig.26.