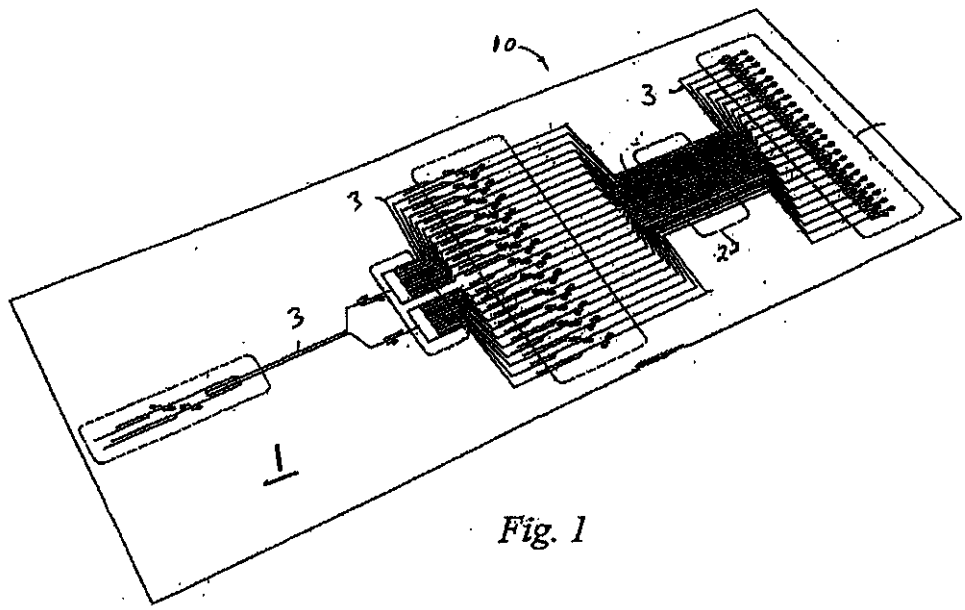



*Fig. 1*

**Figure 2**

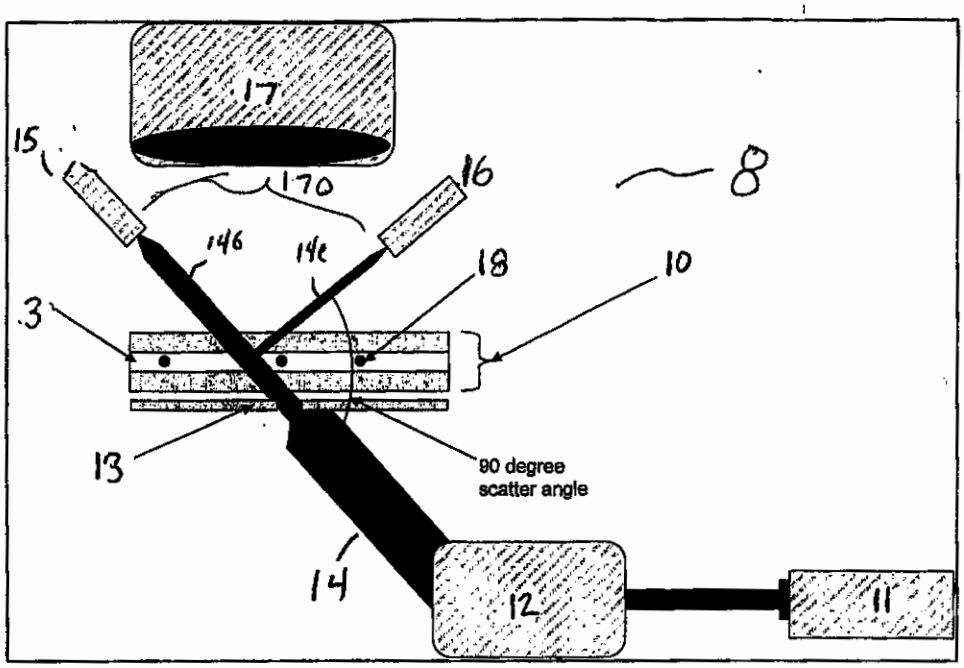



**Figure 3**

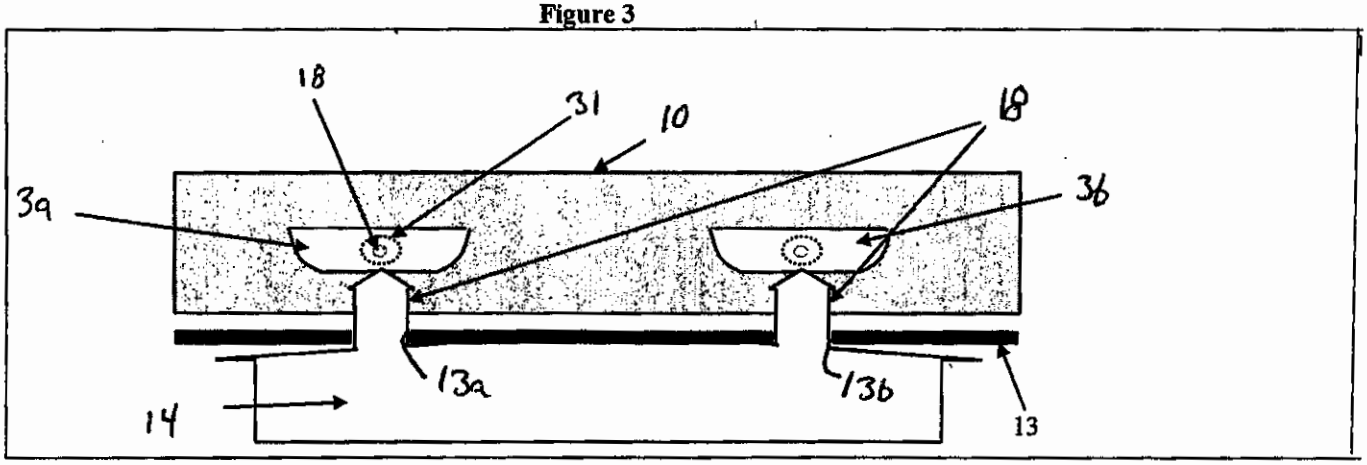


**Figure 4**

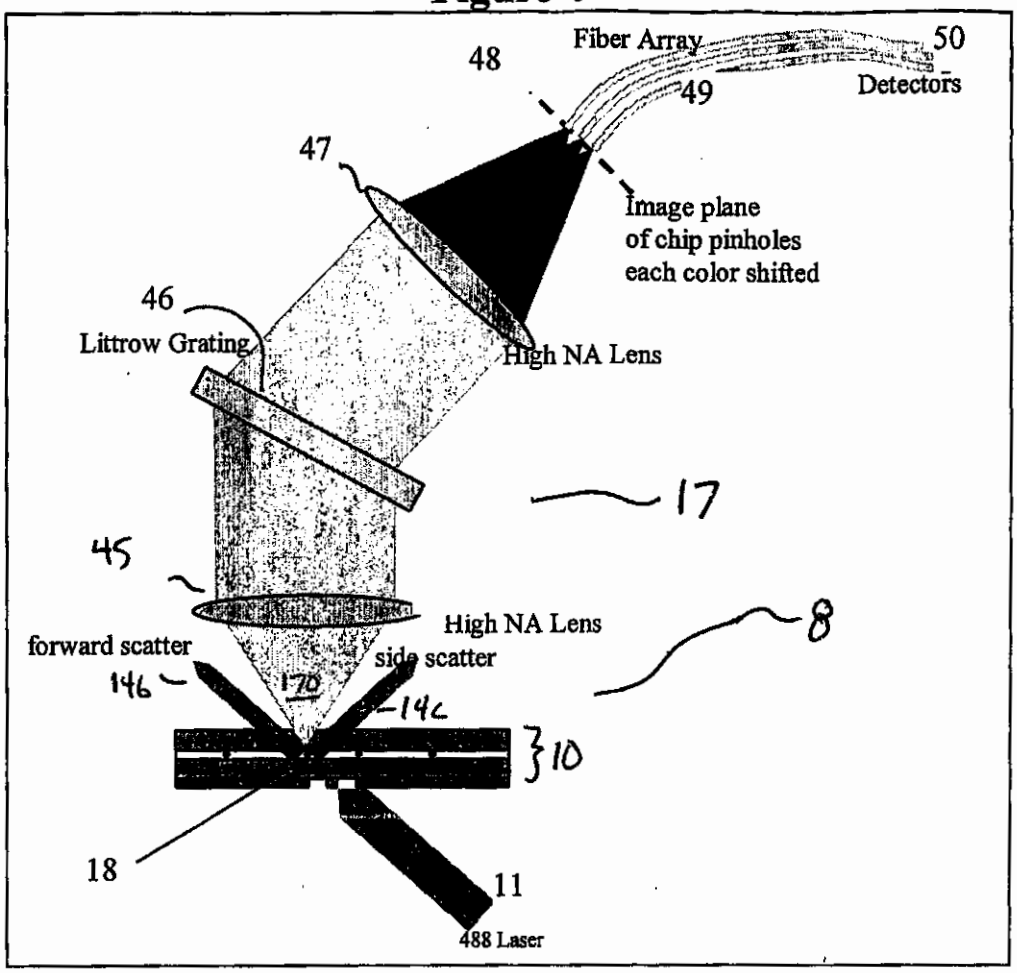
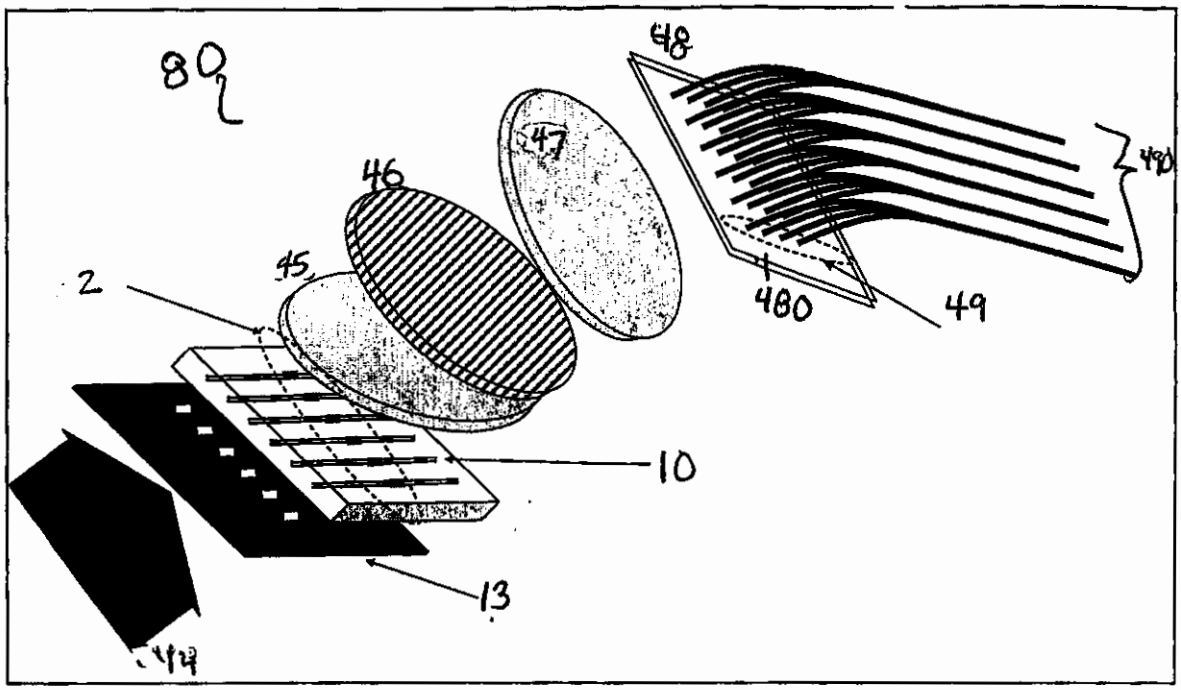

Fiber Array
50
48
49
Detectors
47
Image plane
of chip pinholes
each color shifted
46
Littrow Grating
High NA Lens
17
45
High NA Lens
8
forward scatter
side scatter
146
170
14c
10
18
11
488 Laser

**FIGURE 5**



# Figure 6

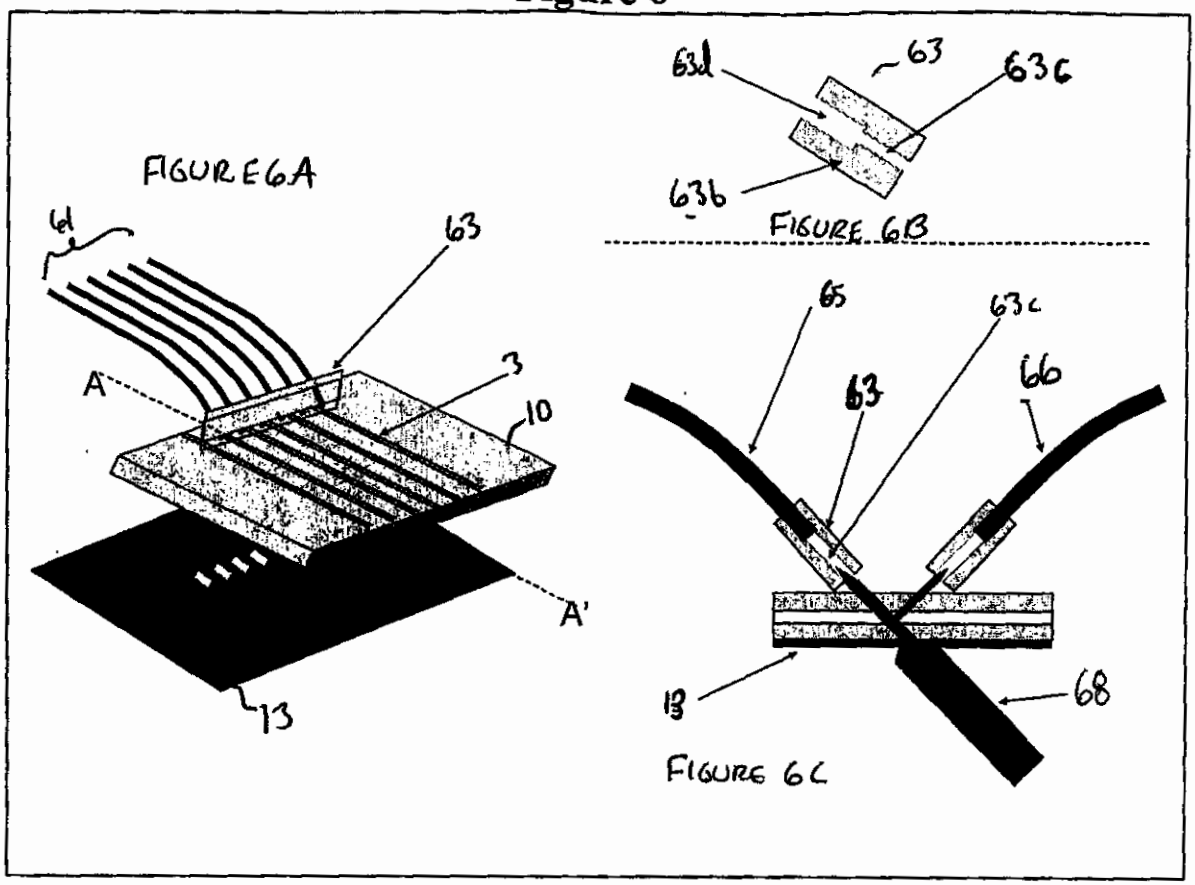

FIGURE 6A
61
63
A
3
10
A'
13
63d
63
63c
63b
FIGURE 6B
65
63c
63
66
13
68
FIGURE 6C

**Figure 7**

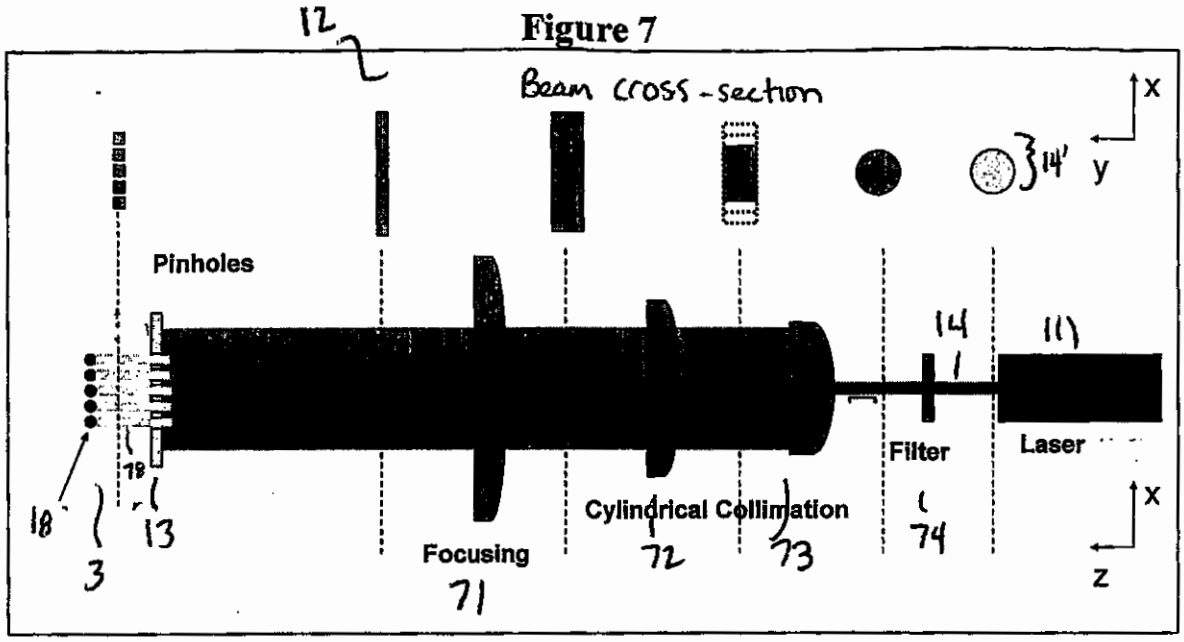
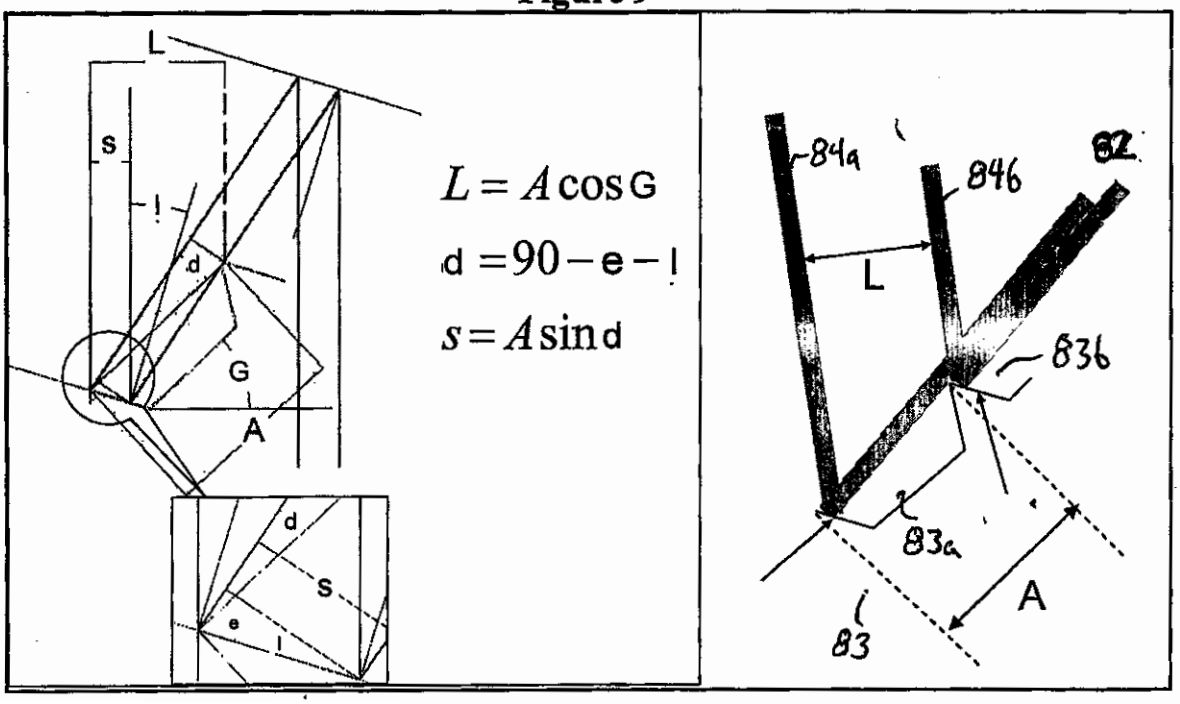



**Figure 9**



## Figure 10

| Spot Width | Groove Spacing | Groove Inclination, G | Incident Angle, I |
|---|---|---|---|
| 30 | 540 | 22.6 | 32.2 |
| 50 | 550 | 24.7 | 30.1 |
| 70 | 560 | 27.2 | 27.9 |
| 100 | 575 | 29.7 | 25 |

## FIGURE 8

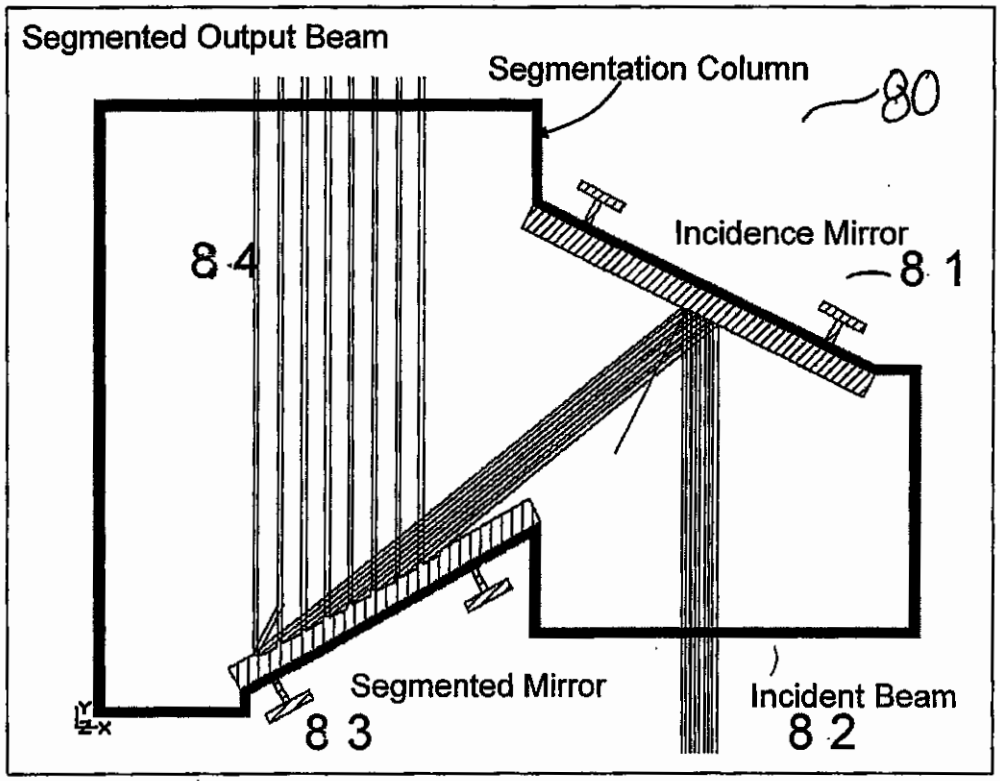


**Figure 11**

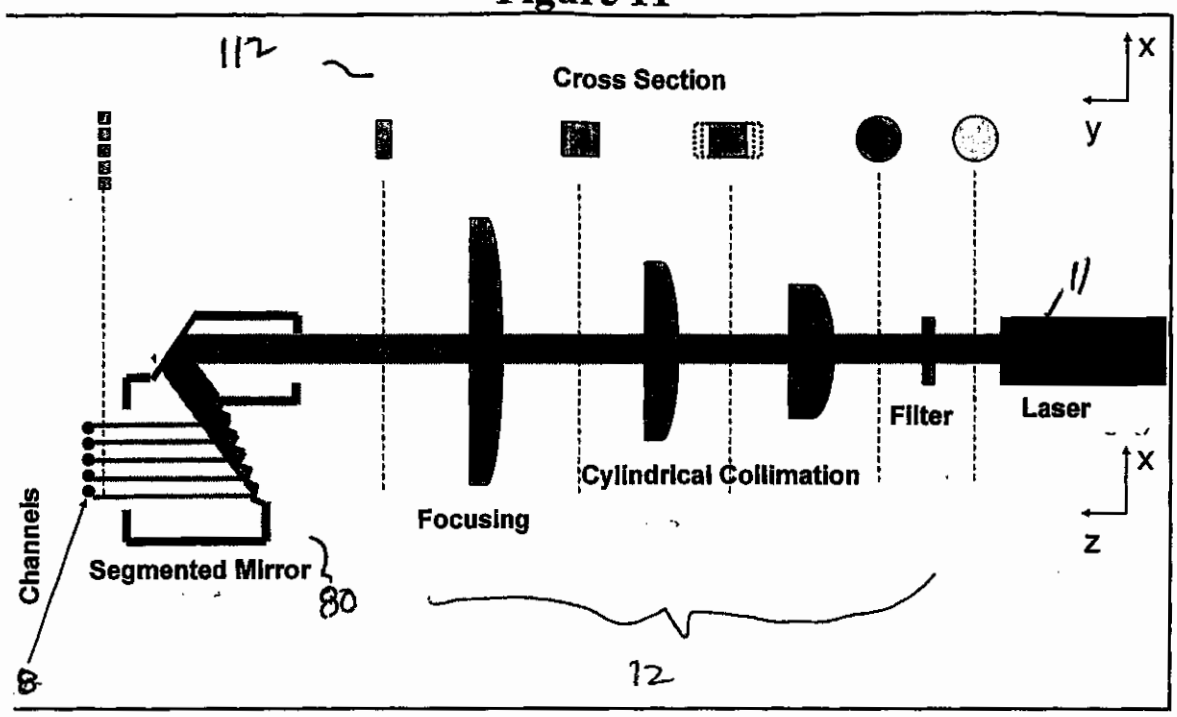
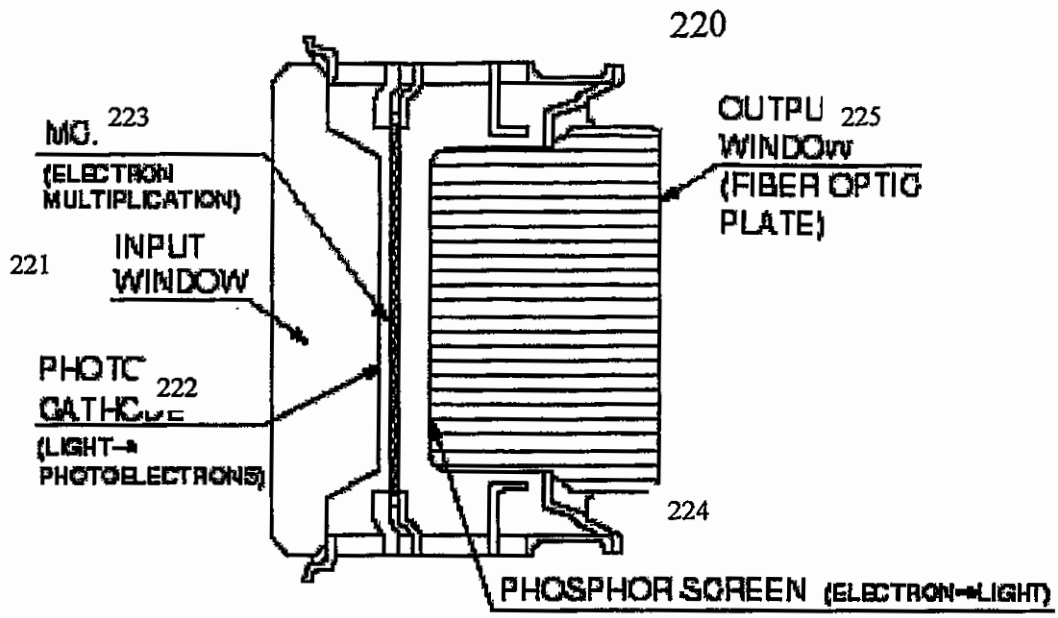

112
Cross Section
x
y
11
Filter
Laser
Cylindrical Collimation
Focusing
x
z
Channels
Segmented Mirror
80
12

**FIGURE 12**


220
MC. 223
(ELECTRON MULTIPLICATION)
221
INPUT WINDOW
PHOTC 222
(LIGHT→ PHOTOELECTRONS)
OUTPU 225
WINDOw
(FIBER OPTIC PLATE)
224
PHOSPHOR SCREEN (ELECTRON→LIGHT)