FIG.1

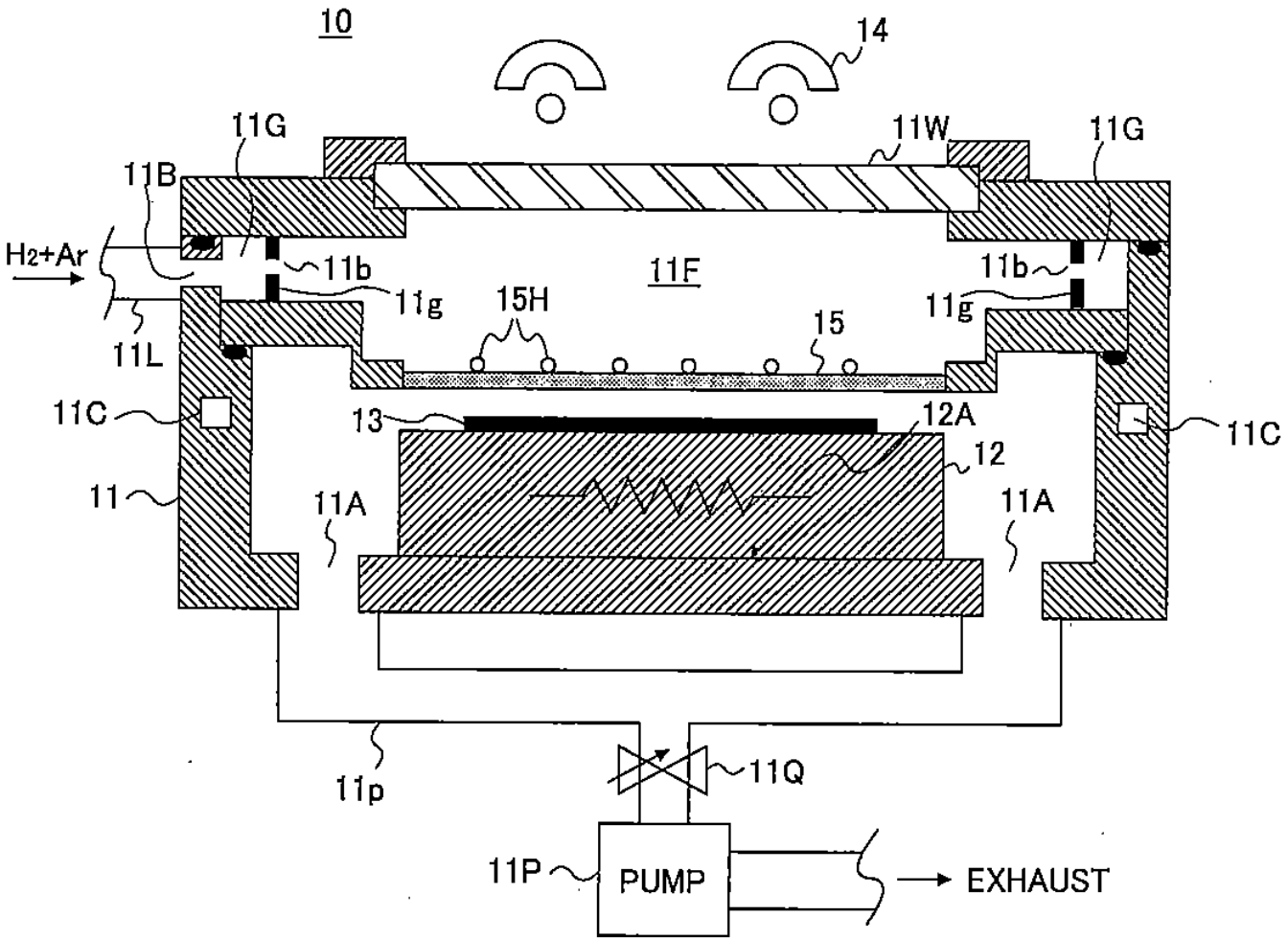

10
14
11G
11W
11G
11B
H2+Ar
11b
11g
11F
11b
11g
15H
15
11L
11C
13
12A
11C
12
11
11A
11A
11p
11Q
11P
PUMP
EXHAUST

FIG.2A

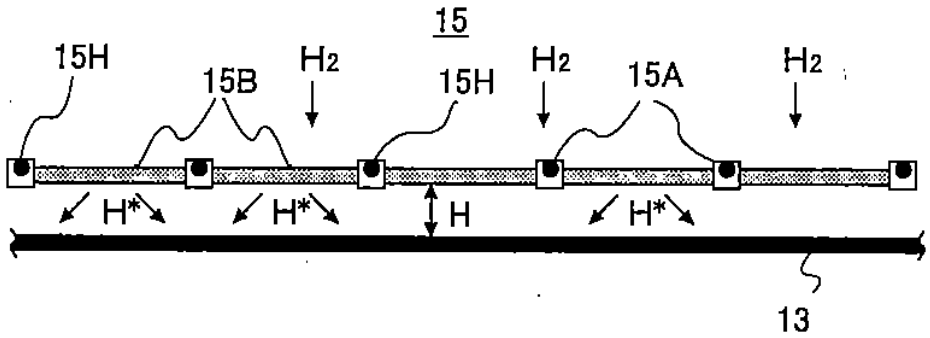


FIG.2B

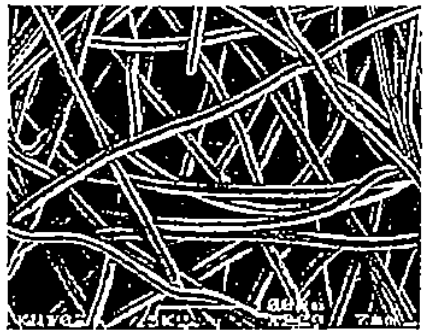


FIG.3

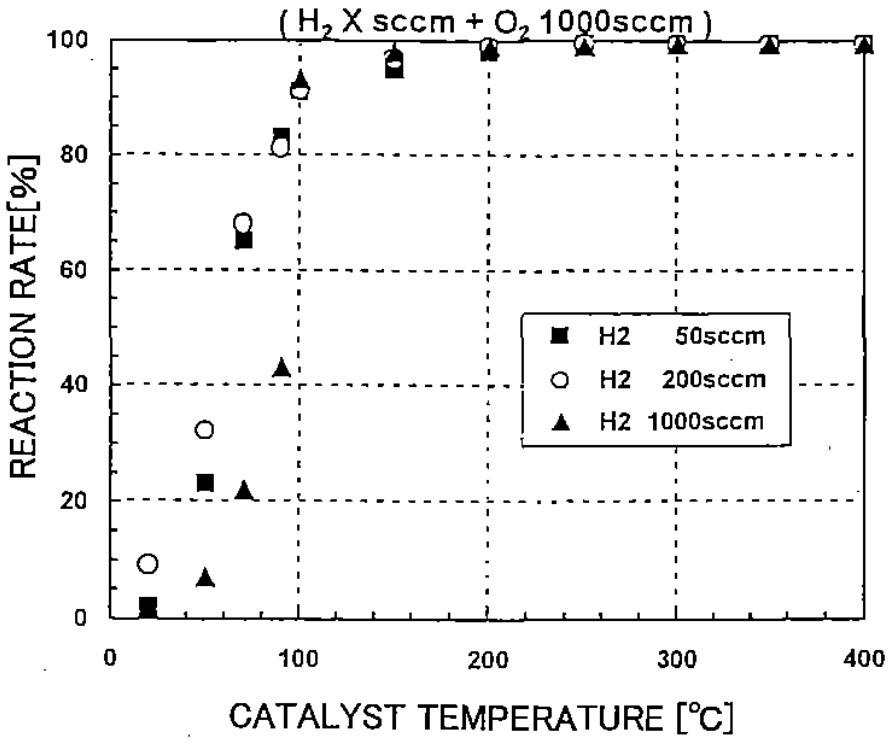

(H2 X sccm + O2 1000sccm)
REACTION RATE[%]
CATALYST TEMPERATURE [℃]
H2 50sccm
H2 200sccm
H2 1000sccm
0
20
40
60
80
100
0
100
200
300
400

FIG.4

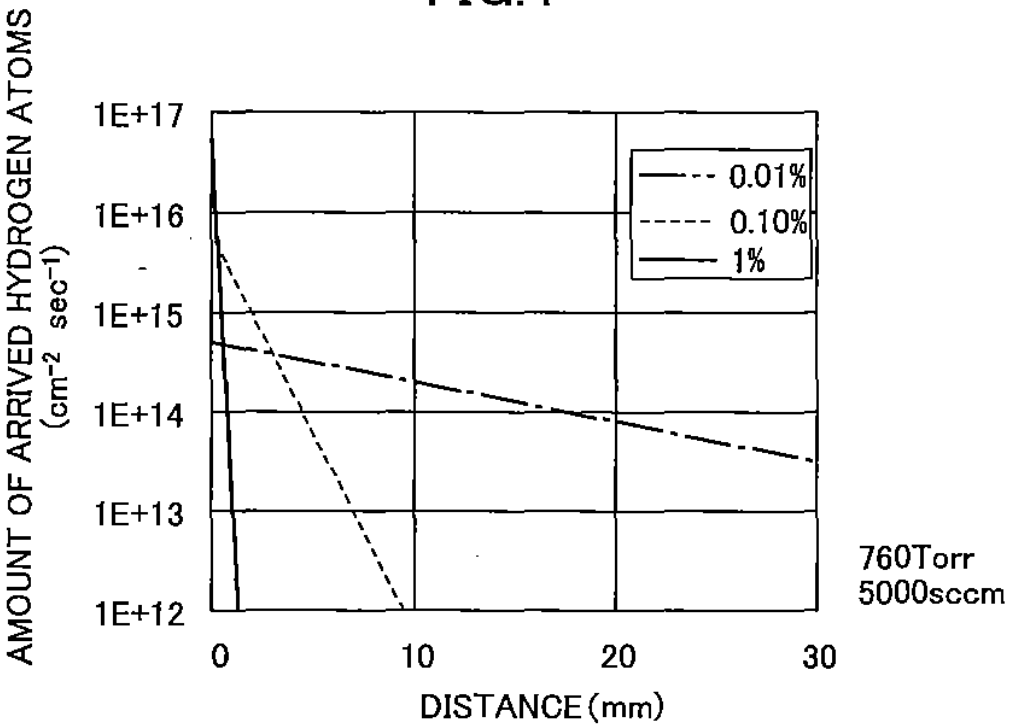
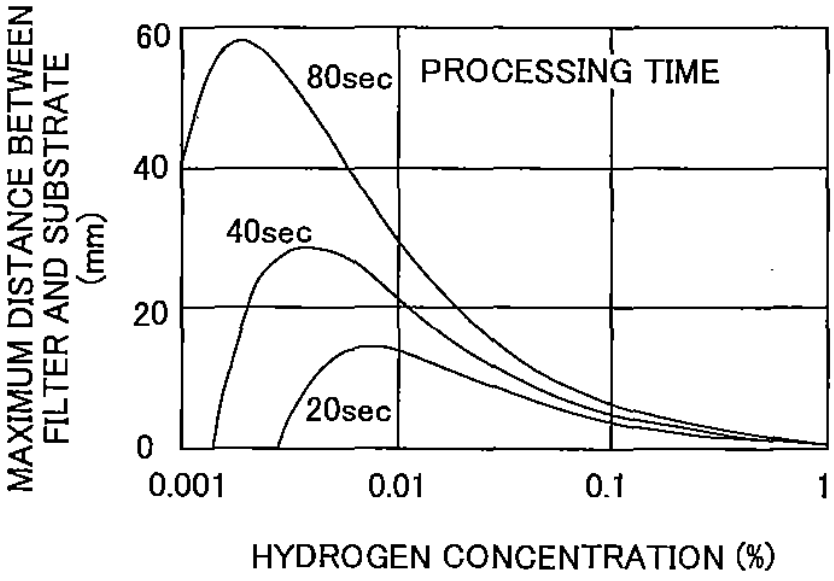

AMOUNT OF ARRIVED HYDROGEN ATOMS
(cm-2 sec-1)
1E+17
1E+16
1E+15
1E+14
1E+13
1E+12
0
10
20
30
DISTANCE (mm)
0.01%
0.10%
1%
760Torr
5000sccm

FIG.5


MAXIMUM DISTANCE BETWEEN
FILTER AND SUBSTRATE
(mm)
60
40
20
0
0.001
0.01
0.1
1
80sec
PROCESSING TIME
40sec
20sec
HYDROGEN CONCENTRATION (%)

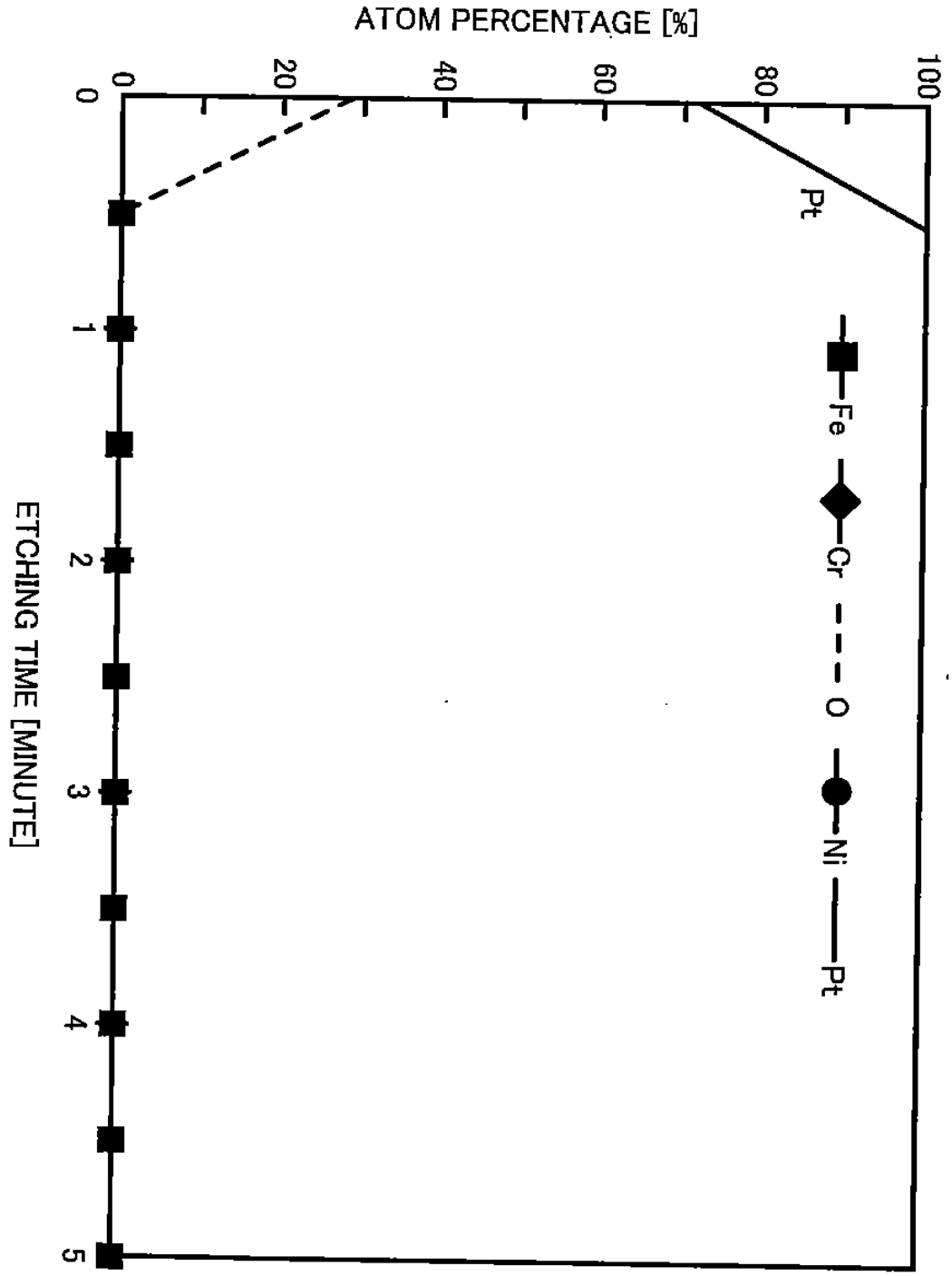

ATOM PERCENTAGE [%]
0
20
40
60
80
100
ETCHING TIME [MINUTE]
0
1
2
3
4
5
Pt
Fe
Cr
O
Ni
Pt

FIG.6

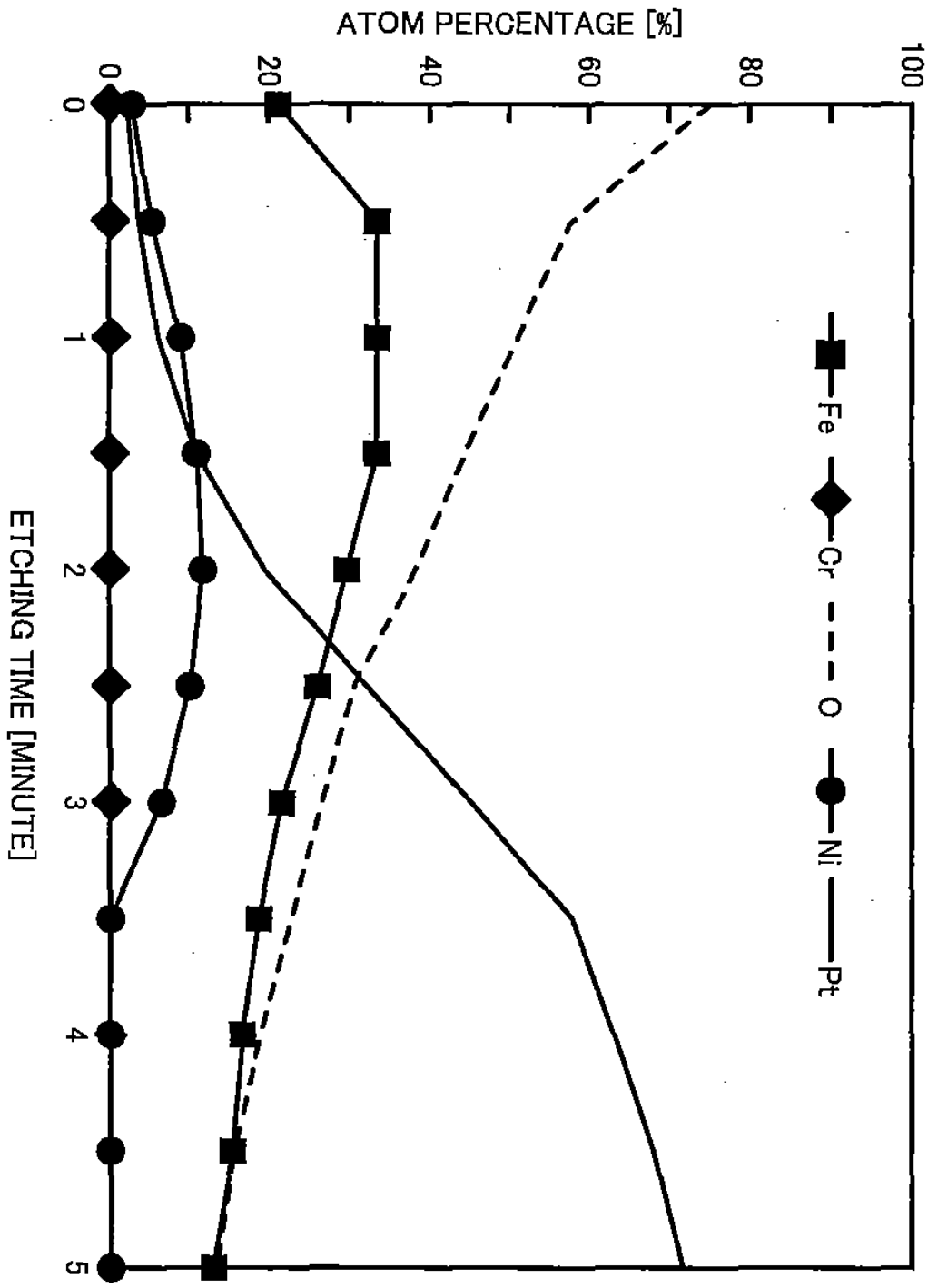

ATOM PERCENTAGE [%]
0
20
40
60
80
100
ETCHING TIME [MINUTE]
0
1
2
3
4
5
Fe
Cr
O
Ni
Pt

FIG.7

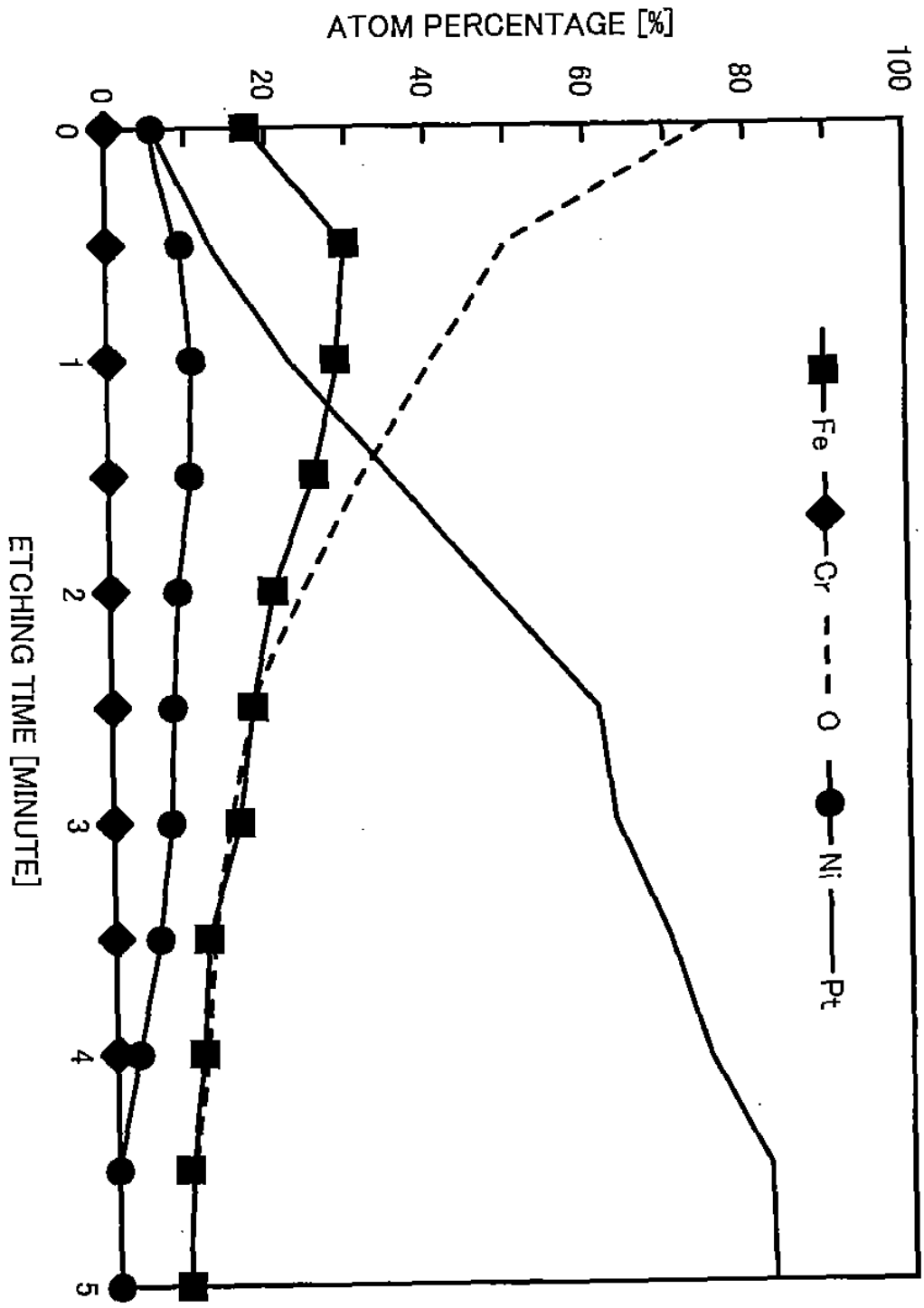

ATOM PERCENTAGE [%]
0
20
40
60
80
100
ETCHING TIME [MINUTE]
0
1
2
3
4
5
Fe
Cr
O
Ni
Pt

FIG.8

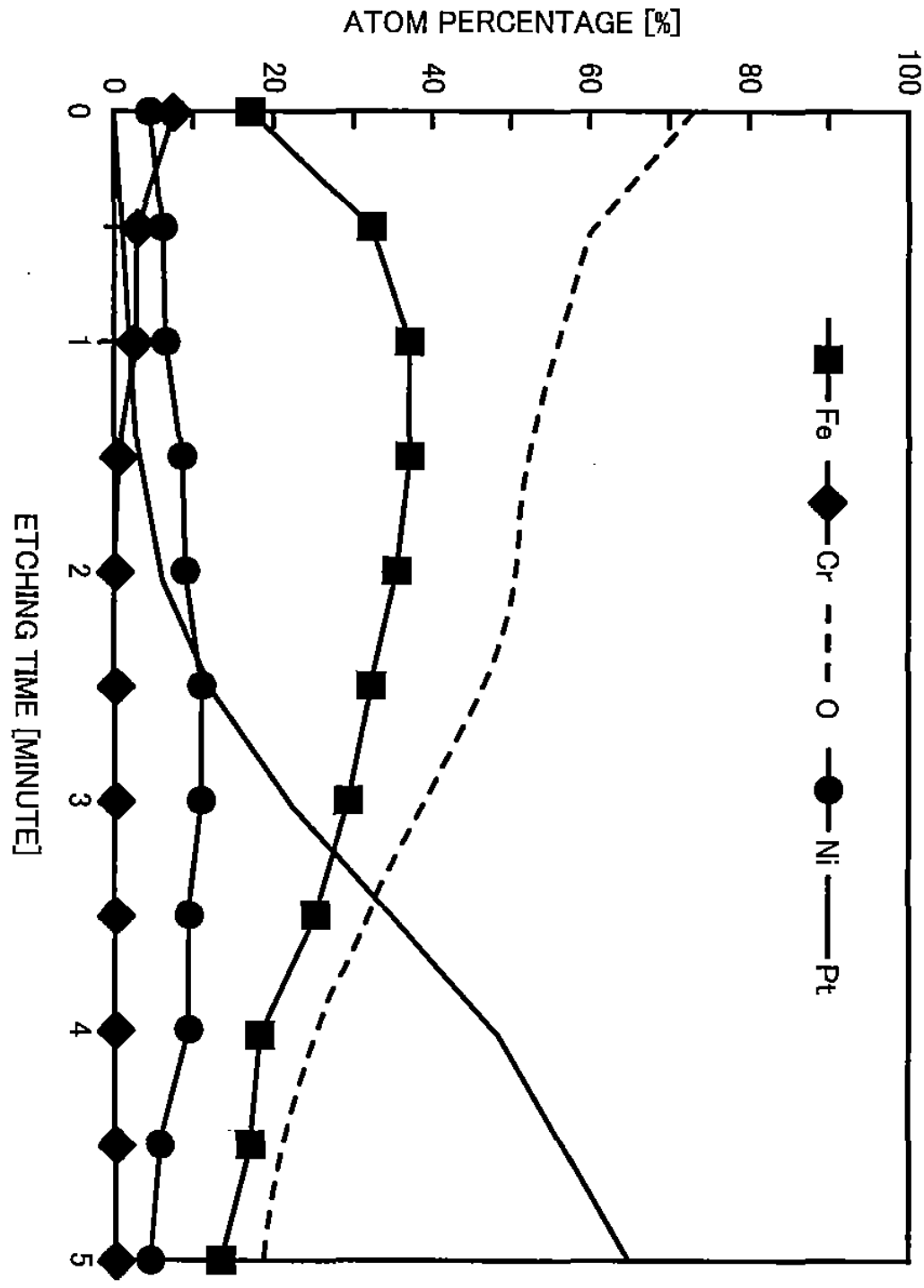

ATOM PERCENTAGE [%]
0
20
40
60
80
100
ETCHING TIME [MINUTE]
0
1
2
3
4
5
Fe
Cr
O
Ni
Pt

FIG.9

FIG.10A

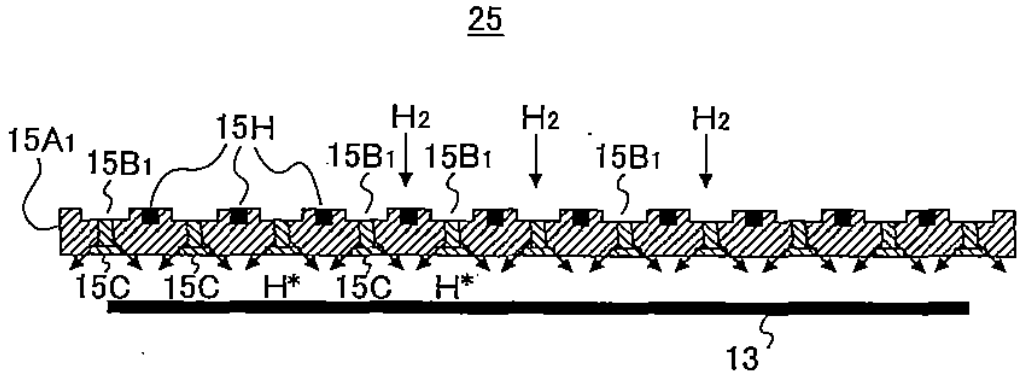


FIG.10B

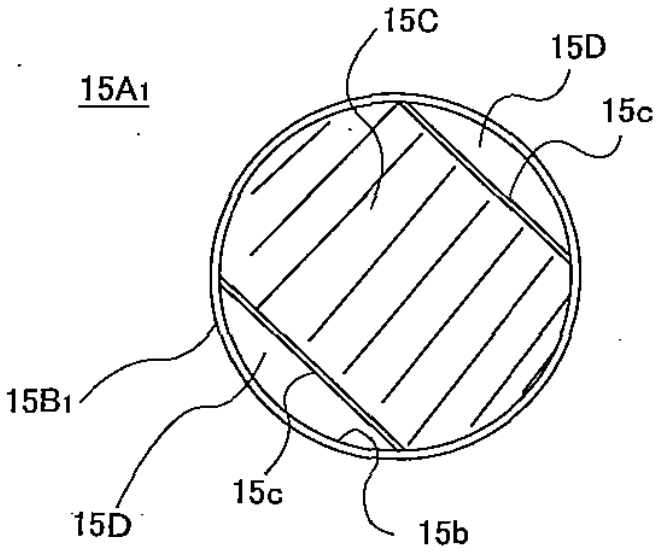


FIG.11

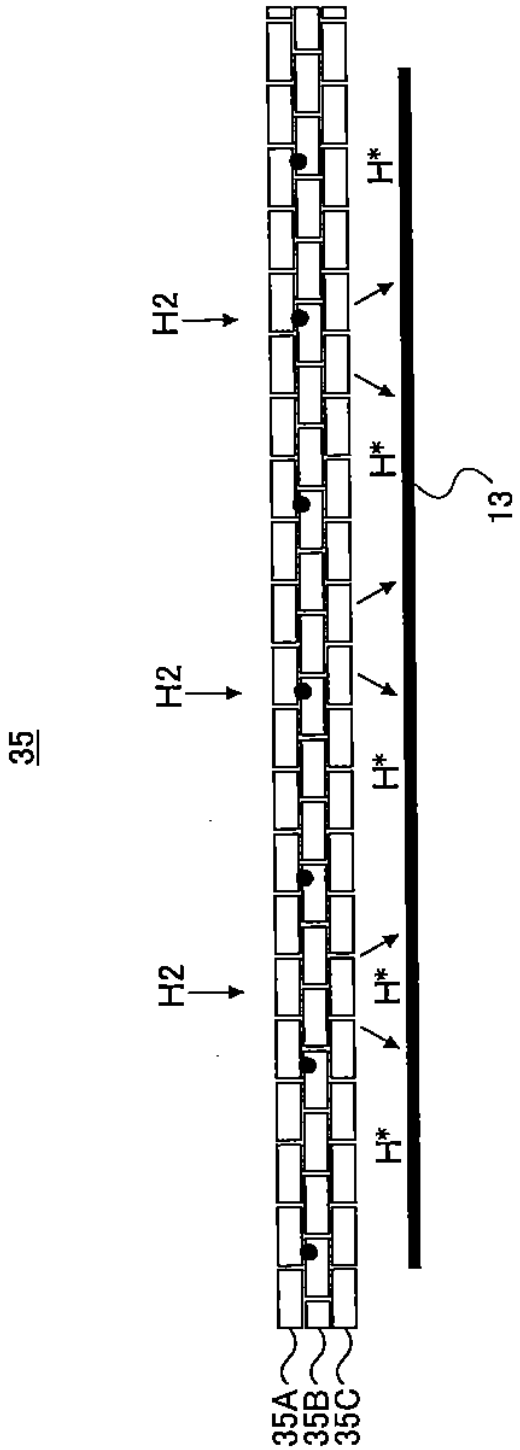
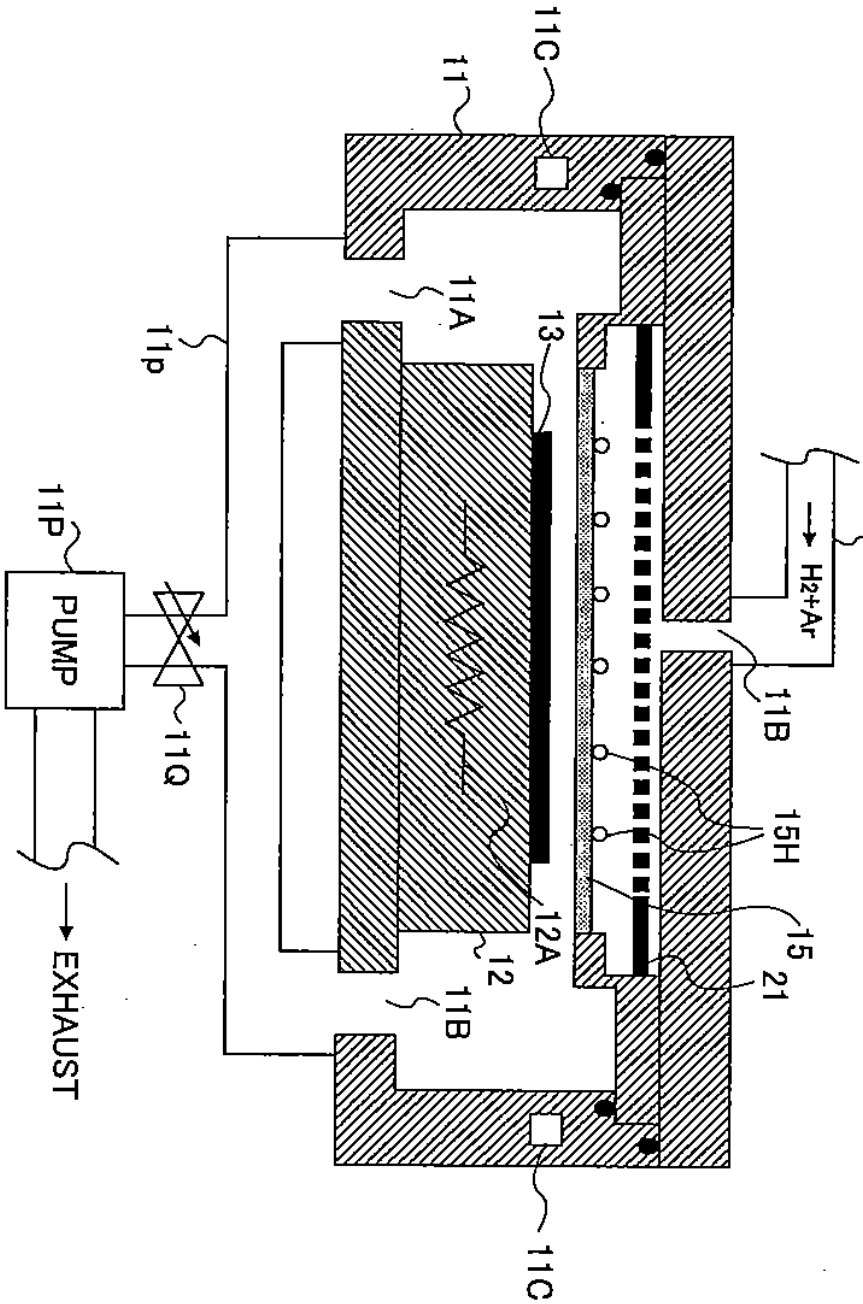


FIG.12


20
11
11C
11A
11p
13
11L
H2+Ar
11B
15H
15
21
12A
12
11B
11C
11P
PUMP
11Q
EXHAUST

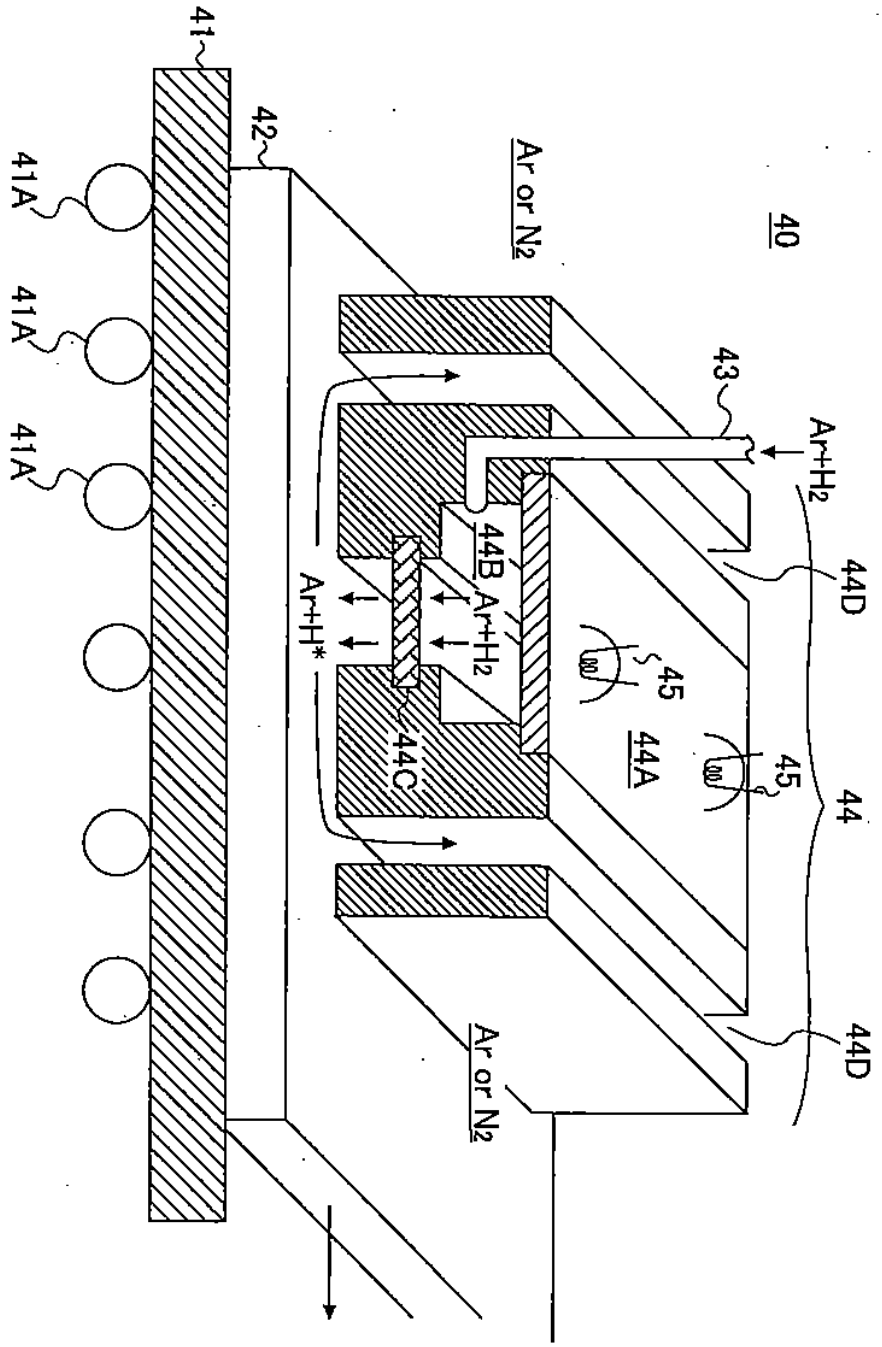

40
41
42
41A
41A
41A
Ar or N2
43
Ar+H2
44D
44B
Ar+H2
Ar+H*
44C
45
44A
45
44
Ar or N2
44D

FIG.13

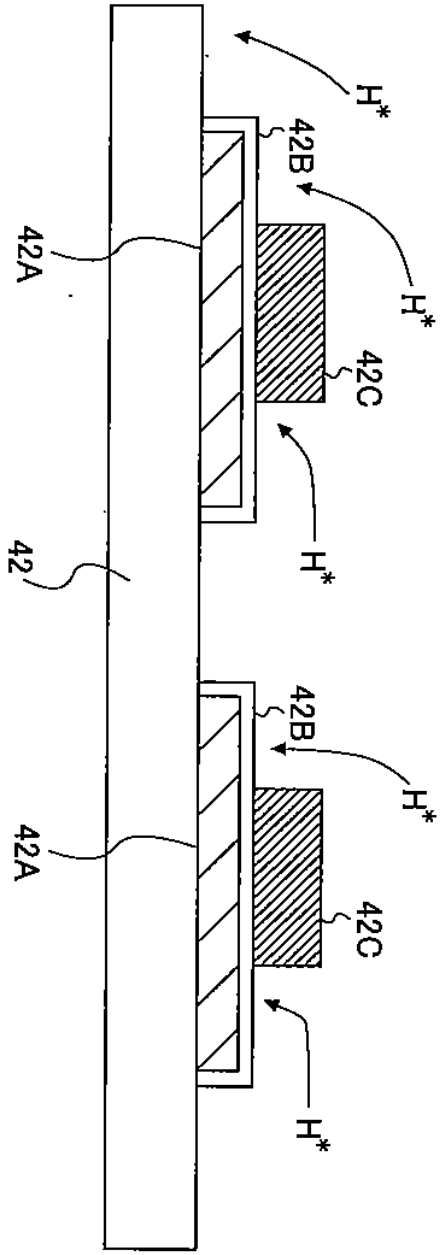


FIG.14