FIG.1

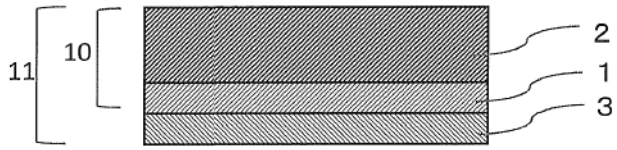


FIG.2A

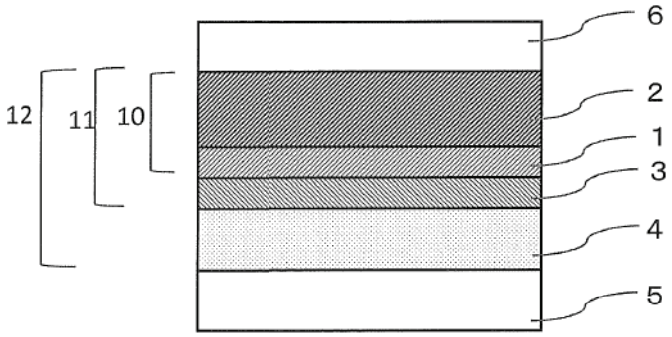


FIG.2B

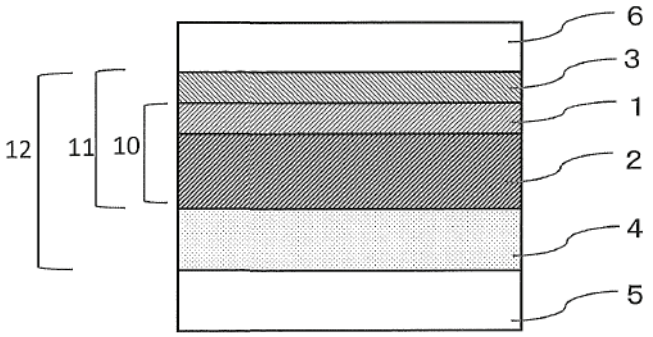


FIG.3A

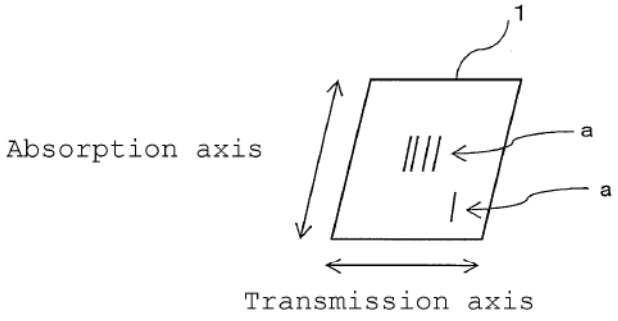
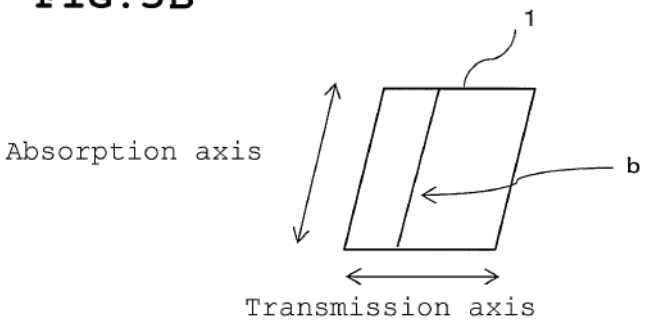

1
Absorption axis
a
a
Transmission axis

FIG.3B


1
Absorption axis
b
Transmission axis

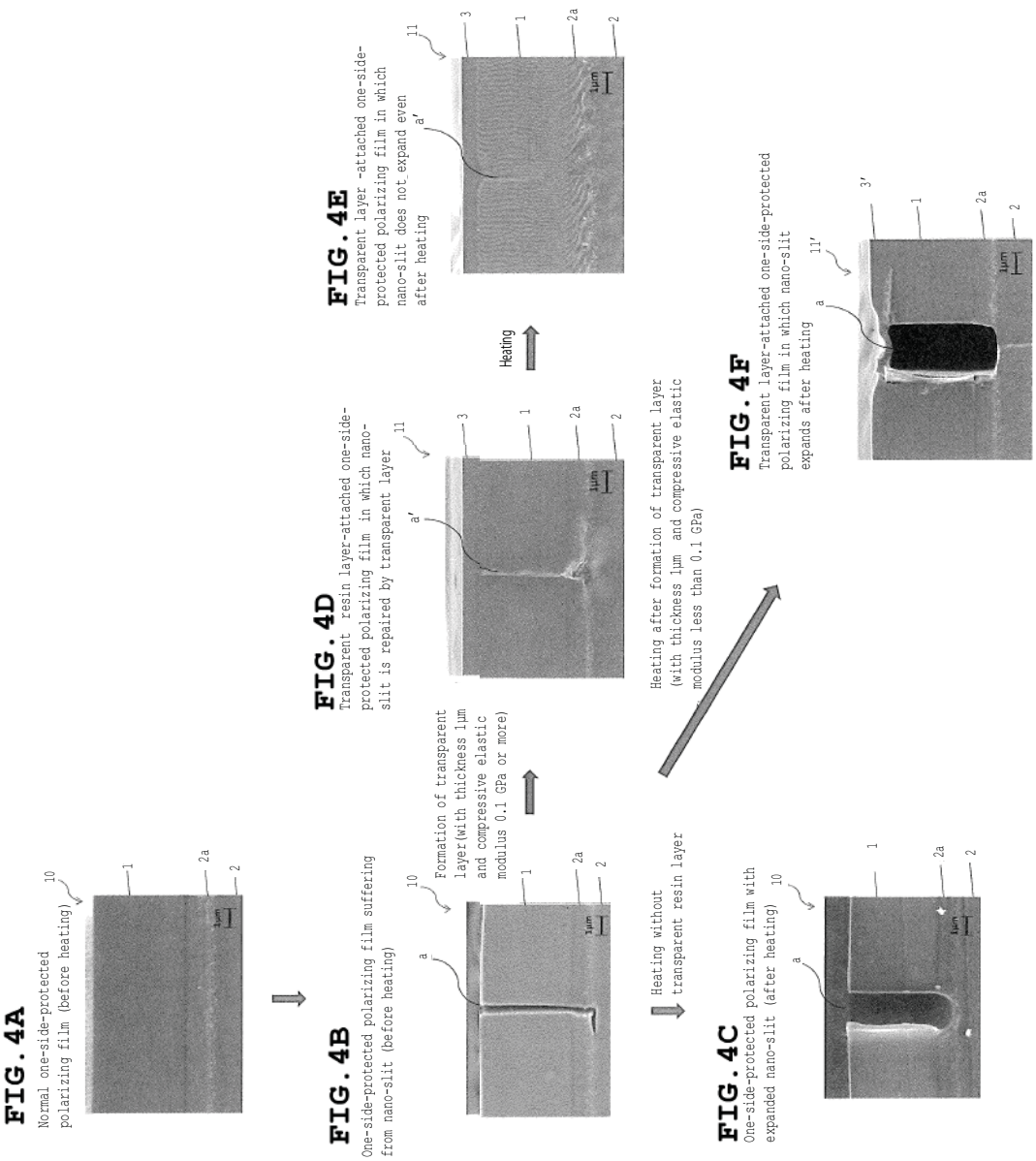


FIG. 4A
Normal one-side-protected polarizing film (before heating)
10
1
2a
2
1μm
FIG. 4B
One-side-protected polarizing film suffering from nano-slit (before heating)
10
a
Formation of transparent layer(with thickness 1μm and compressive elastic modulus 0.1 GPa or more)
Heating without transparent resin layer
FIG. 4C
One-side-protected polarizing film with expanded nano-slit (after heating)
10
a
FIG. 4D
Transparent resin layer-attached one-side-protected polarizing film in which nano-slit is repaired by transparent layer
11
a'
3
Heating after formation of transparent layer (with thickness 1μm and compressive elastic modulus less than 0.1 GPa)
Heating
FIG. 4E
Transparent layer -attached one-side-protected polarizing film in which nano-slit does not expand even after heating
11
a'
FIG. 4F
Transparent layer-attached one-side-protected polarizing film in which nano-slit expands after heating
11'
a
3'

FIG.5A

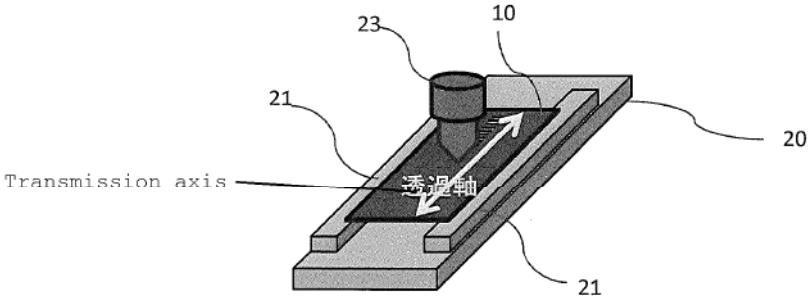


FIG.5B

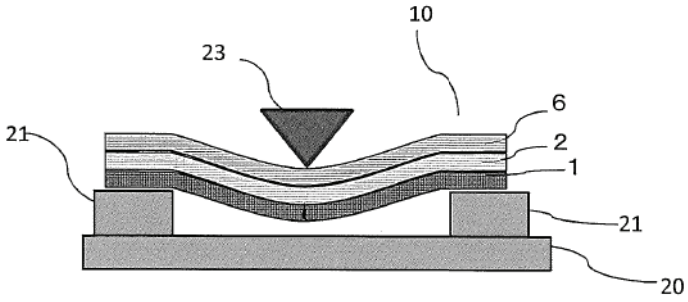


FIG. 6A

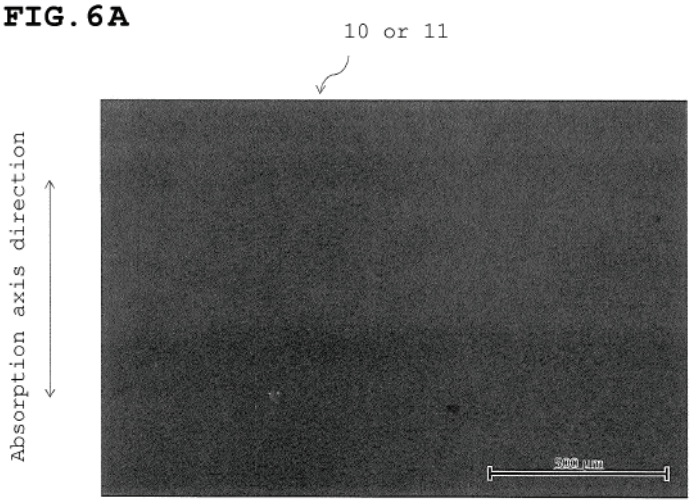


FIG. 6B

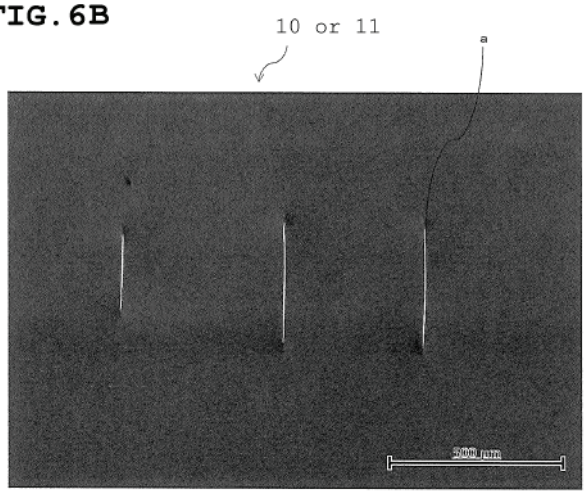


FIG. 7

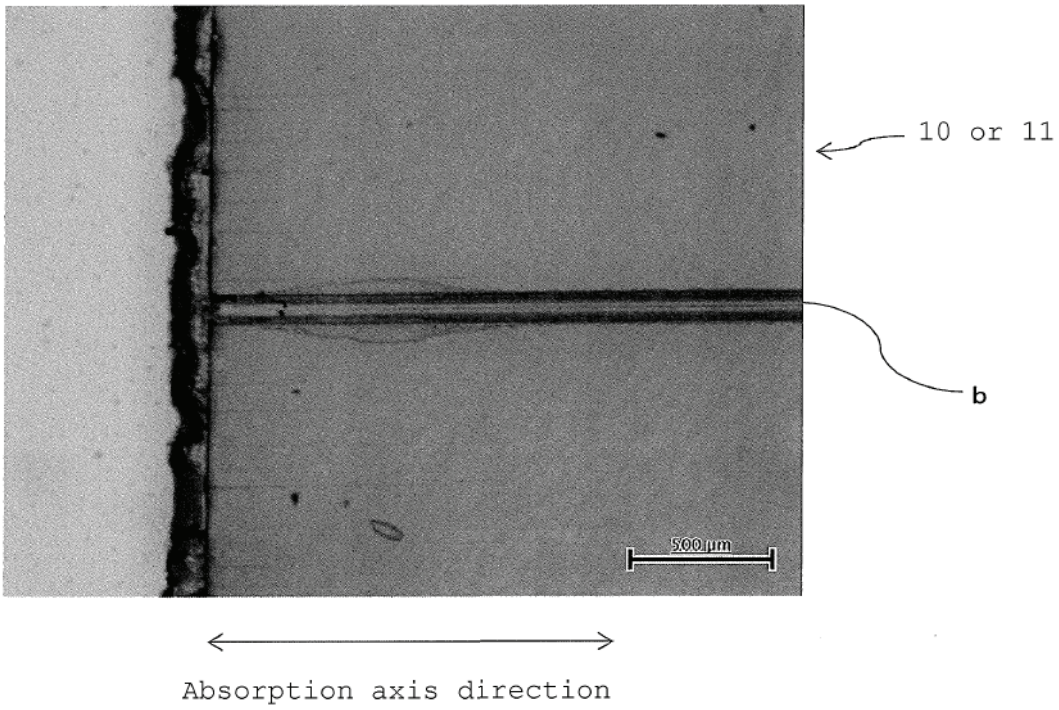
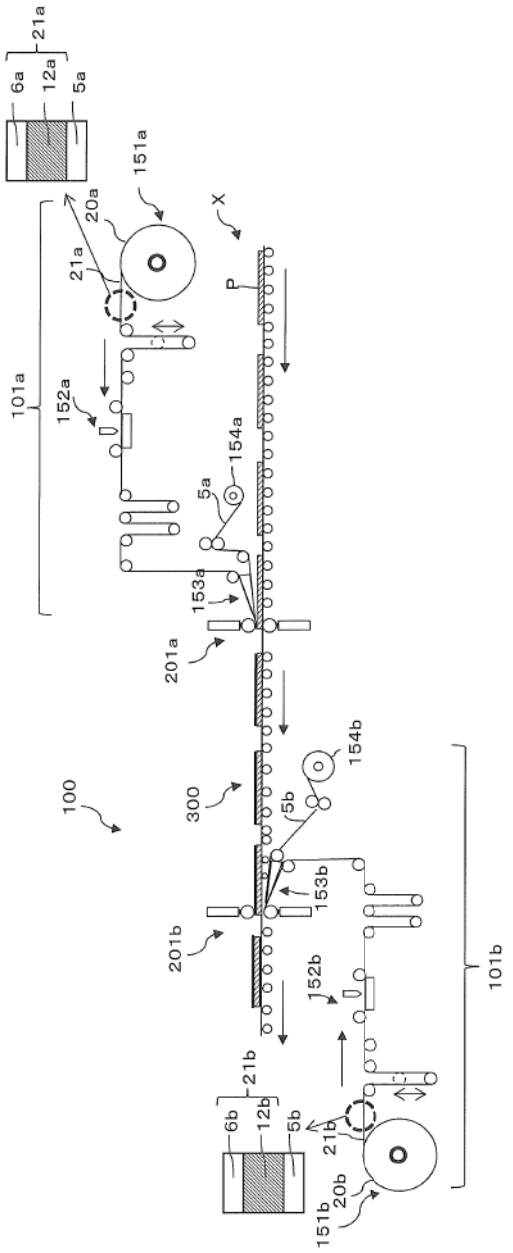


FIG.8


6a
12a
5a
21a
151a
20a
21a
X
P
101a
152a
154a
5a
153a
201a
100
300
154b
5b
153b
201b
152b
101b
21b
6b
12b
5b
21b
151b
20b