

FIG.1

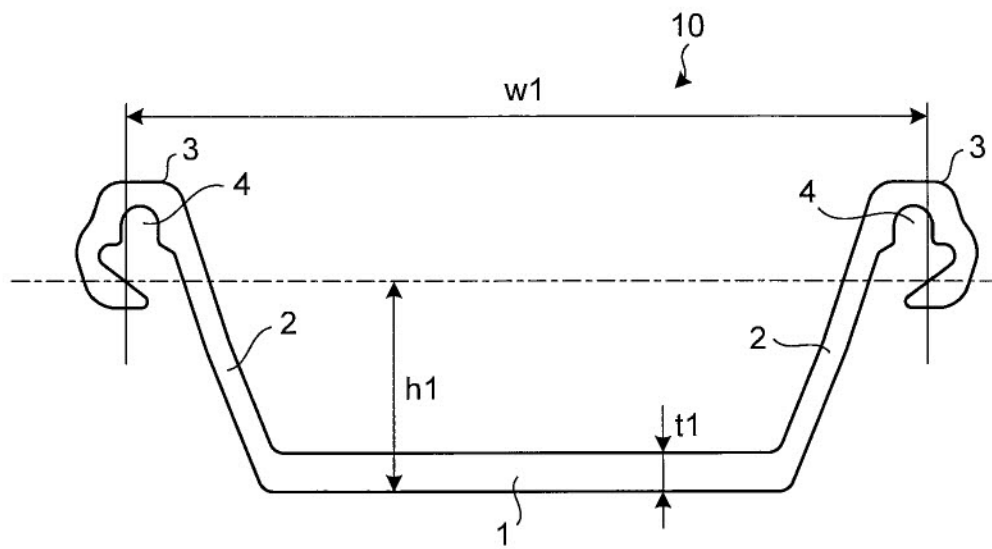


FIG.2

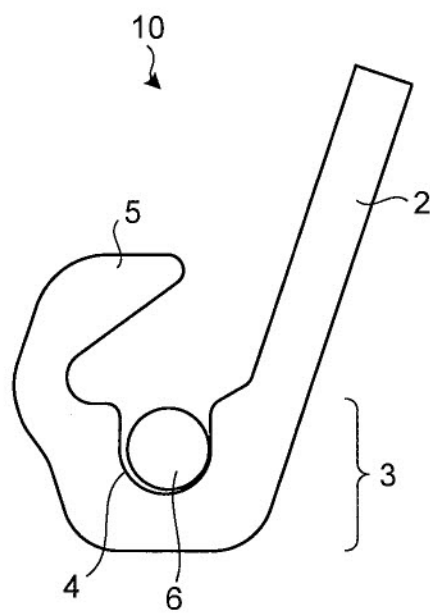


FIG.3

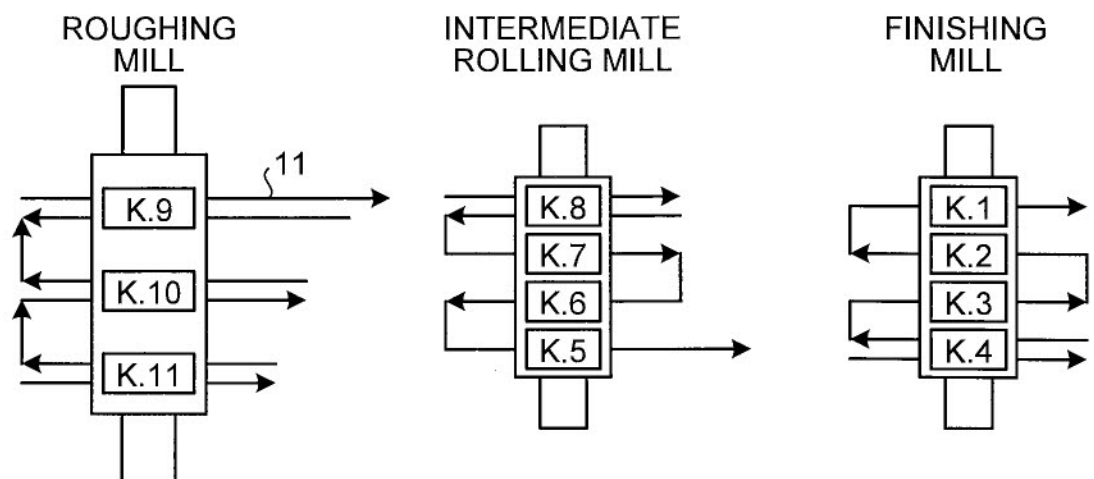


FIG.4

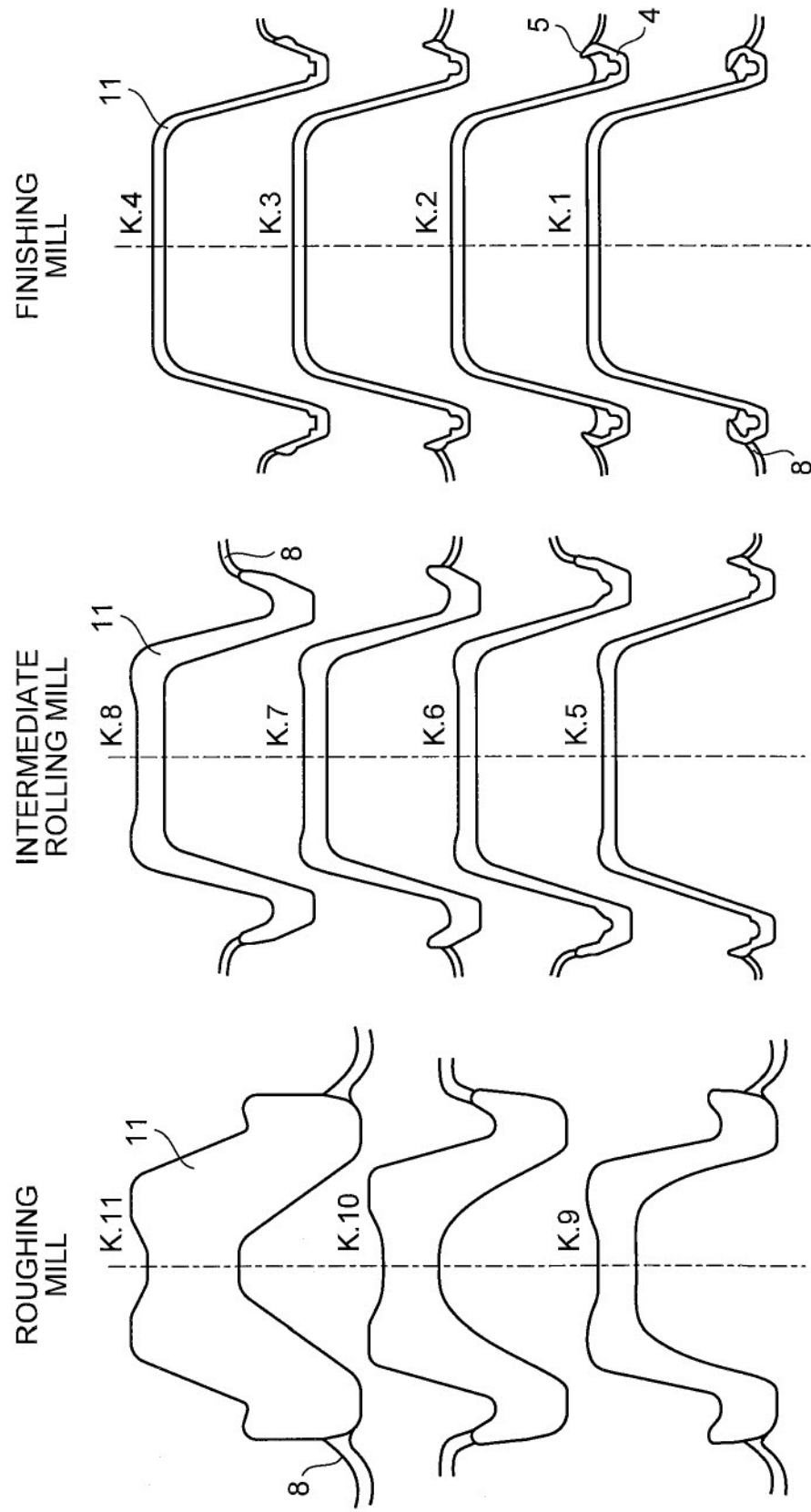


FIG.5

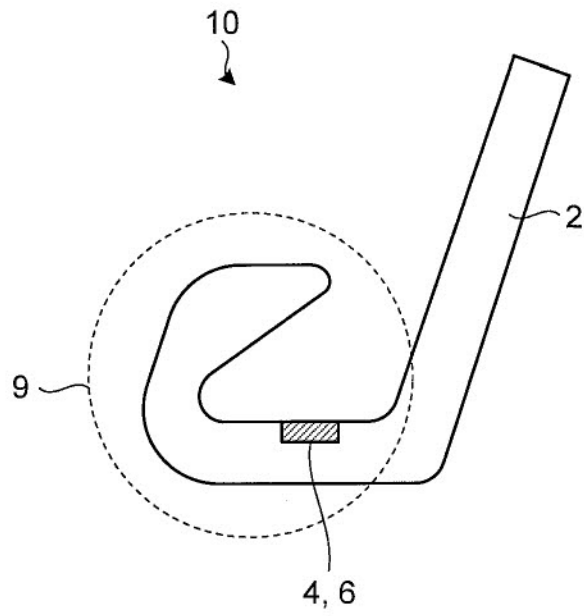


FIG.6

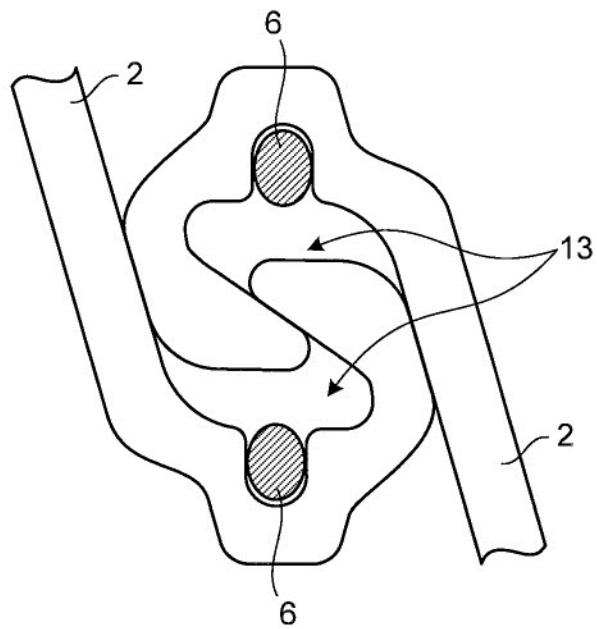


FIG.7A

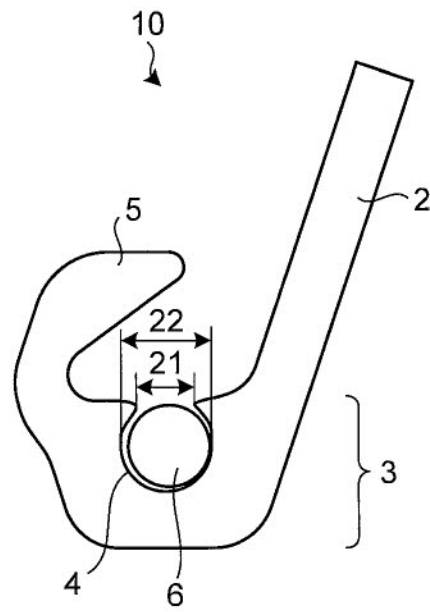


FIG.7B

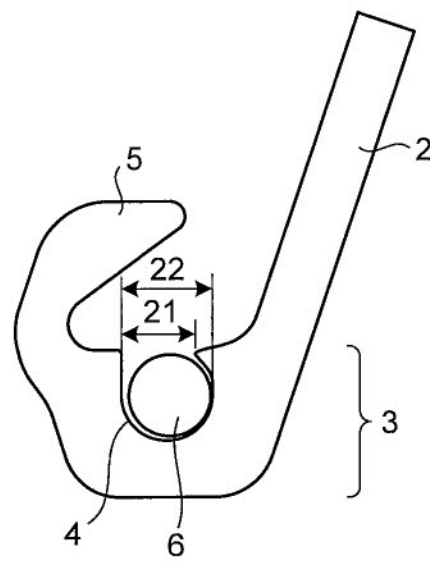


FIG.8A

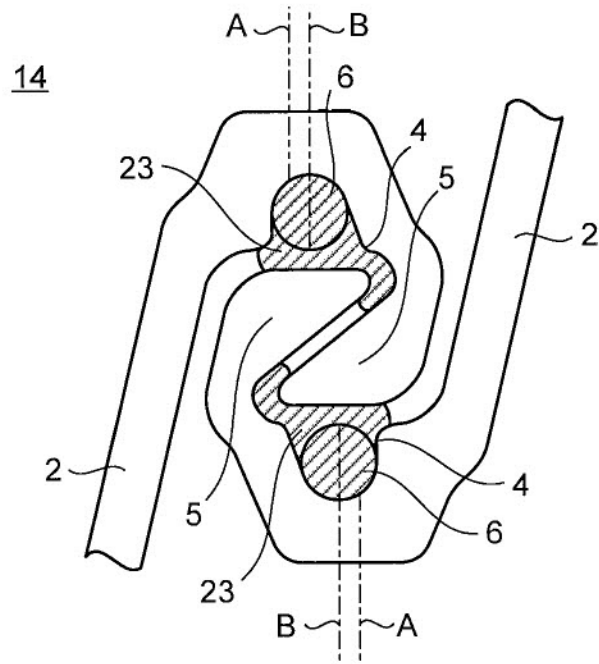


FIG.8B

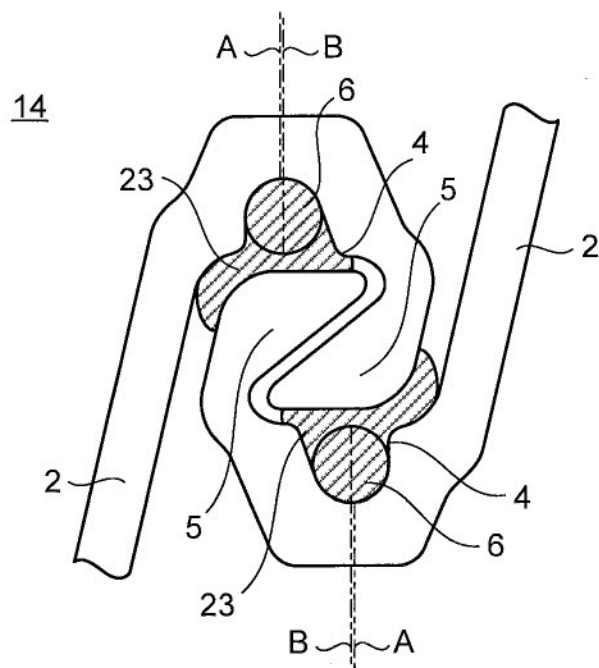


FIG.9

NUMBER	GROOVE SHAPE AND WATER CUT-OFF MATERIAL	FILLING FACTOR		REMARKS
		RATE OF SWELLING 300%	RATE OF SWELLING 500%	
1	10 mm ϕ	79	100	EXAMPLE 1
2	12 mm ϕ	100	100	EXAMPLE 2
3	3 mm $\times$ 10 mm RECESS	30	50	COMPARATIVE EXAMPLE

FIG.10

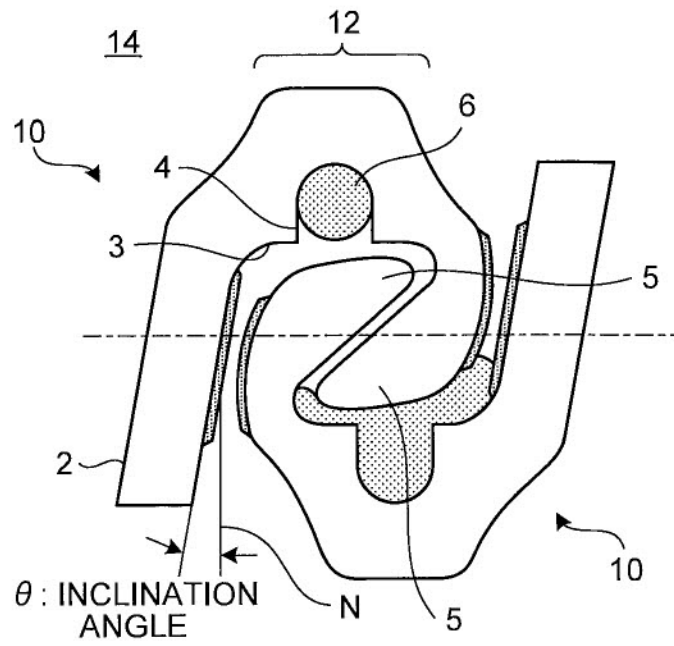


FIG.11

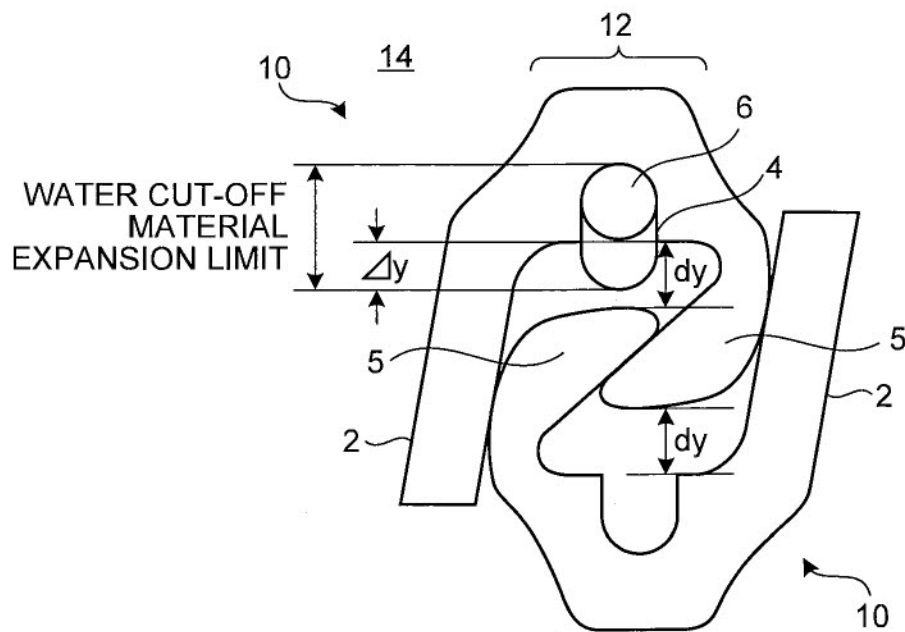


FIG.12

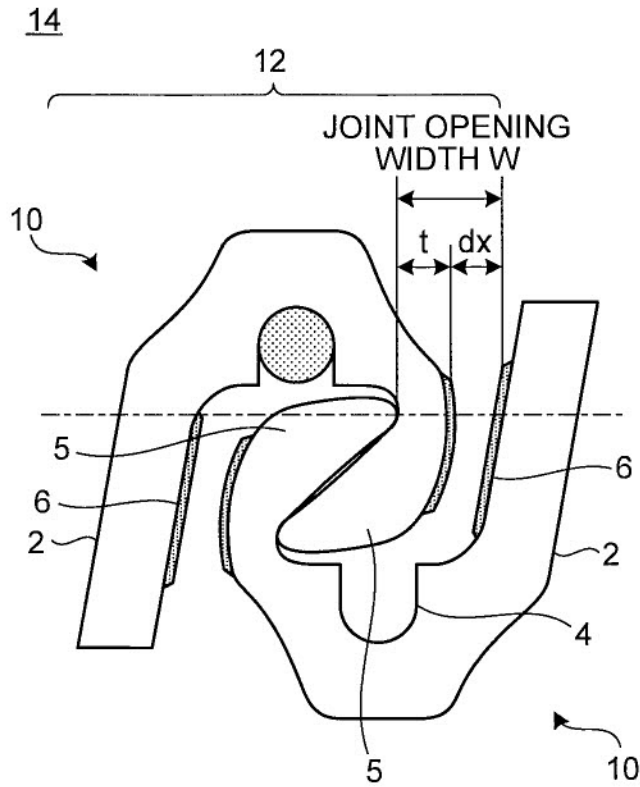


FIG.13

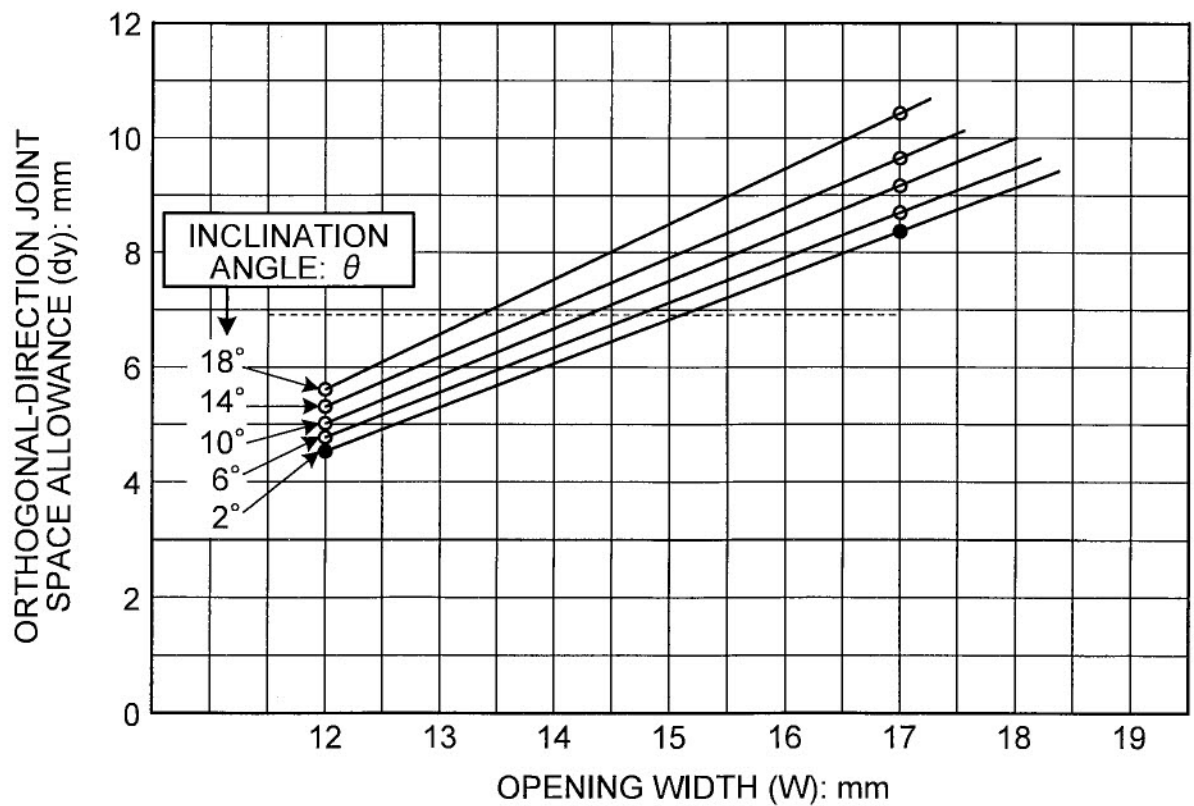


FIG.14

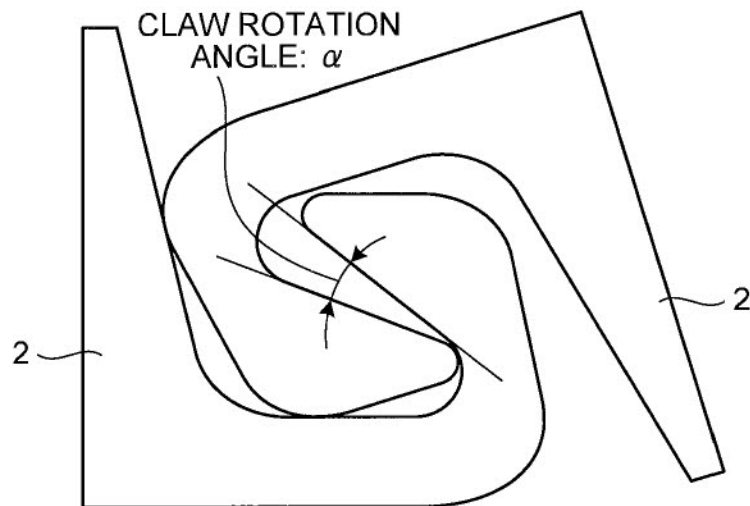


FIG.15

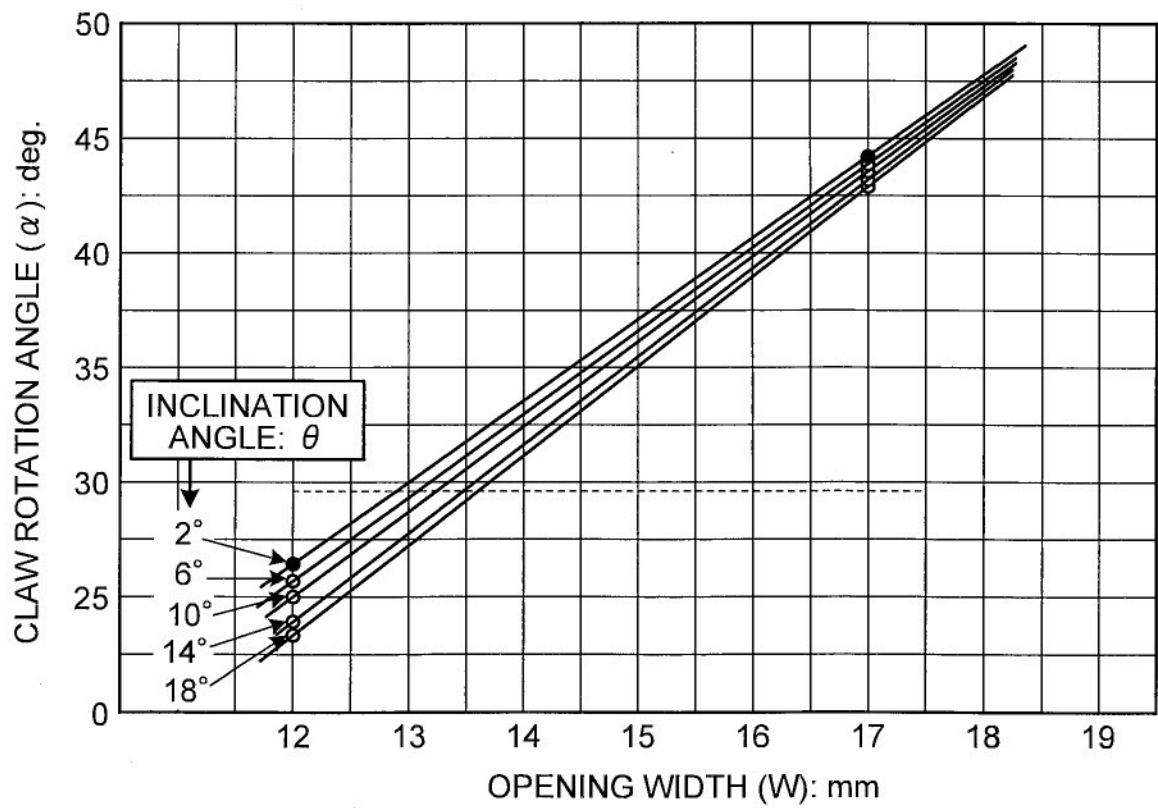


FIG.16

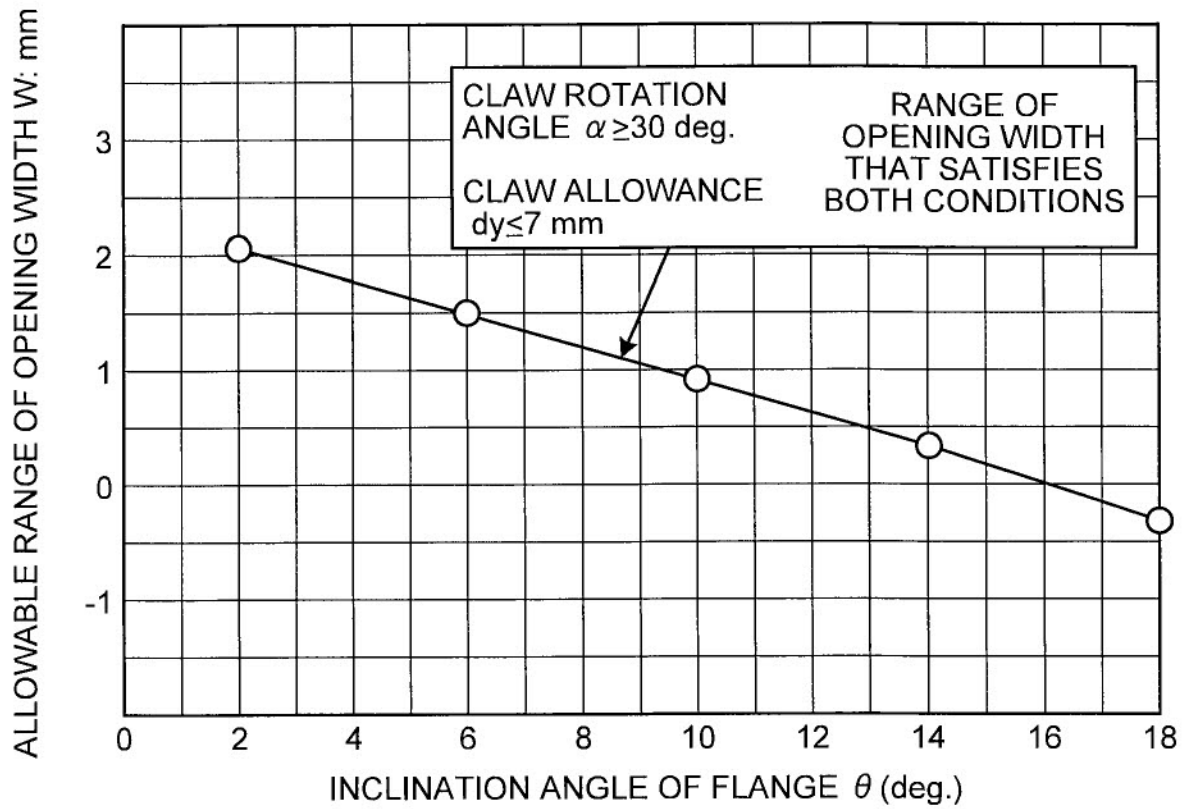


FIG.17

