

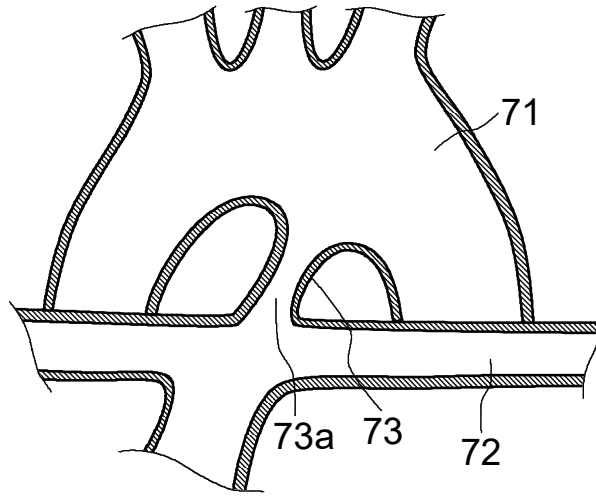


FIG. 1

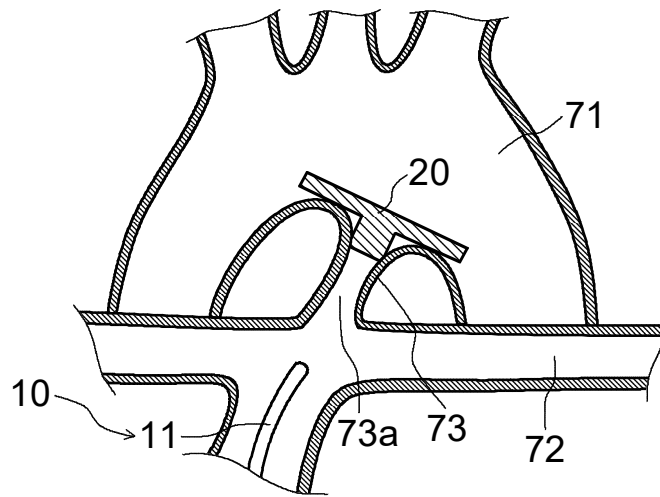
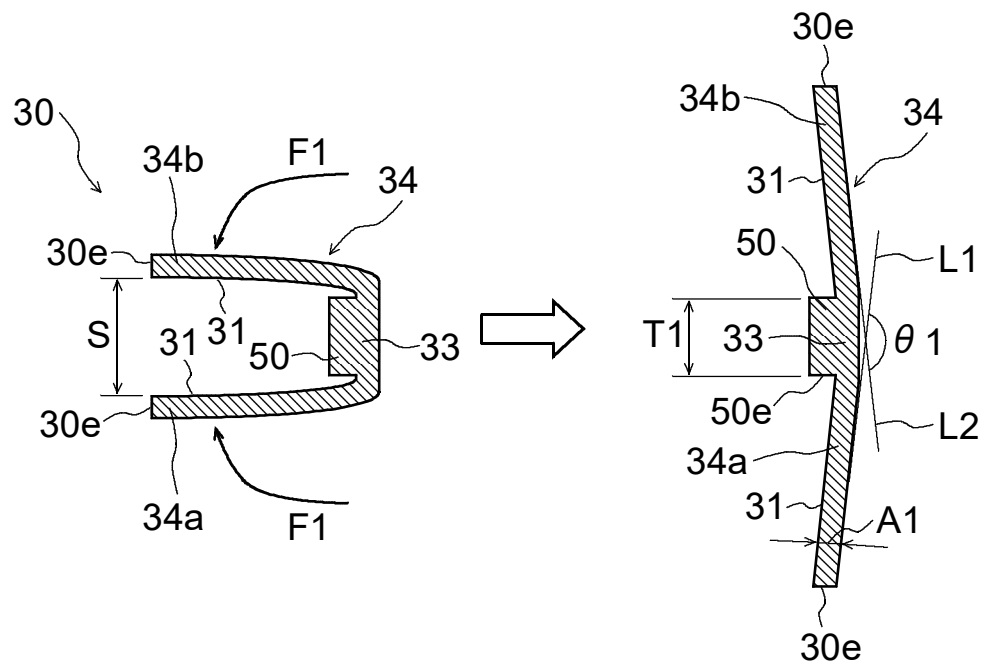


FIG. 2



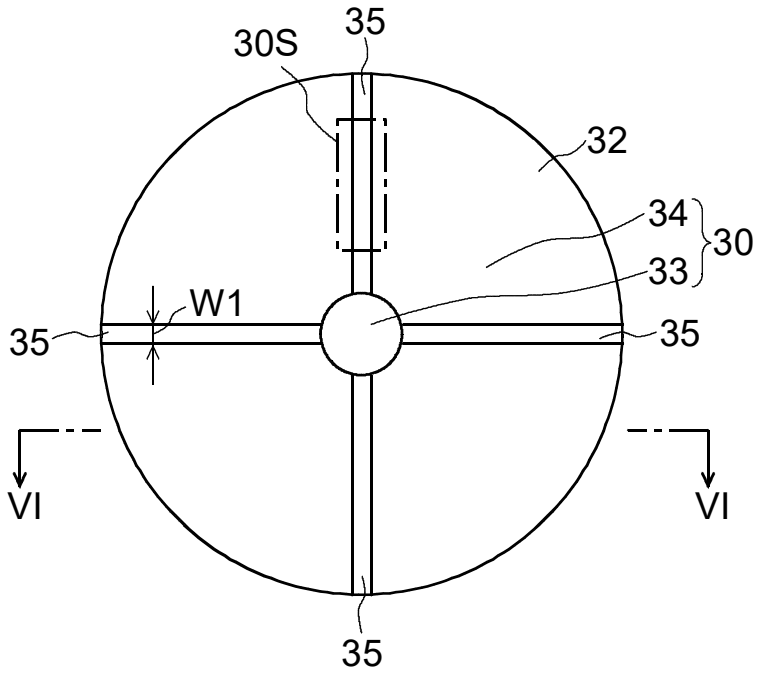


FIG. 5

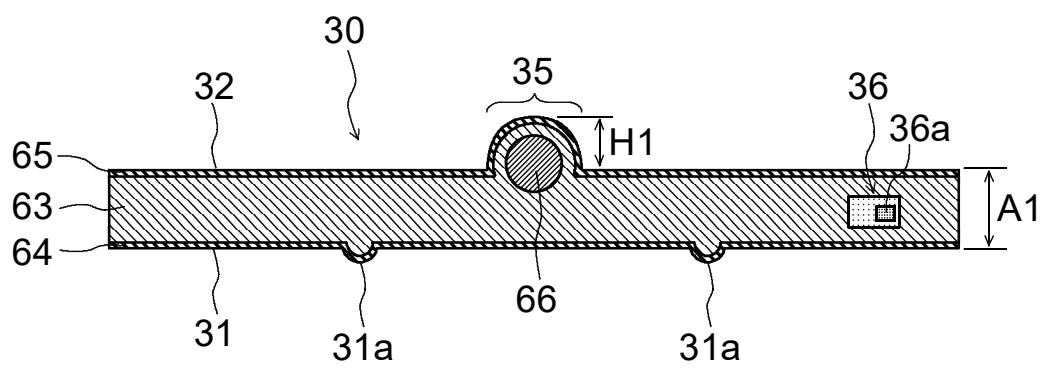


FIG. 6

			fluororesin				polyester		polyamide		urethane elastomer	silicone rubber	polyether-ketone
			PTFE	FEP	ETFE	PVDF	PET	elastomer	PC12	elastomer	TPU	SR	PEEK
tensile strength	MPa	JIS K 7162	28	25	40	50	60	40	39	60	50	50	100
tensile rupture strain	%	JIS K 7162	300	290	350	195	160	380	200	390	520	300	80
izod impact strength	J/m	JIS K 7110	155	not destroyed	not destroyed	not destroyed	3	not destroyed	54	not destroyed	not destroyed	not destroyed	88
impact resilience coefficient	%	JIS K 6225						60		55	50	50	
flexural modulus	GPa	JIS K 7171	0.56	0.34	1.05	1.3	3000	500	1400				3700
Hardness	R	JIS K 7202-2	20	50	50	106	101		106				98

FIG. 7

Material			carbon fiber	aramid fiber	polypara-phenylene benzobis-oxazole	polyarylate	nylon	ultra high molecular weight polyethylene fiber
			PAN		PBO	PAR		UPE
Example of Product			M55JB (TORAY, TORAYCA)	Kevlar49 (DU PONT-TORAY)	HM (TOYOBO, ZYLON)	UM (KURARAY, VECTRAN)	MXD6 (MITSUBISHI GAS, MX-Nylon)	SK71 (TOYOBO, IZANAS)
tensile strength	Mpa	JIS K 7162	3820	3000	5800	2800	650	4800
modulus of elasticity in tension	Gpa	JIS K 7162	588	112	270	104	6	170

FIG. 8

			fluororesin				polyamide
			ePTFE	PTFE	FEP	ETFE	P C 1 2
tensile strength	MPa	JIS K 7162	140	28	25	40	39
tensile rupture strain	%	JIS K 7162		300	290	350	200
izod impact strength	J/m	JIS K 7110		155	not destroyed	not destroyed	54
flexural modulus	GPa	JIS K 7171		0.56	0.34	1.05	1400
Hardness	R	JIS K 7202-2		20	50	50	106

FIG. 9

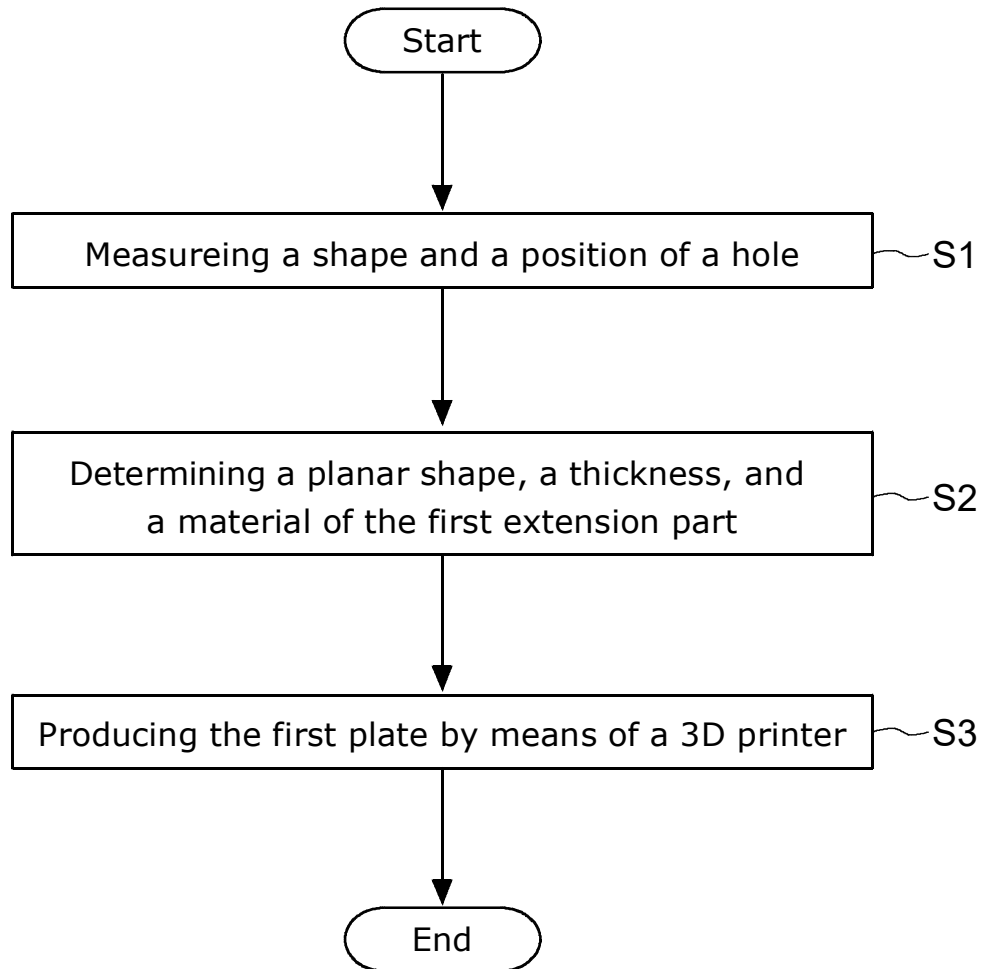


FIG. 10

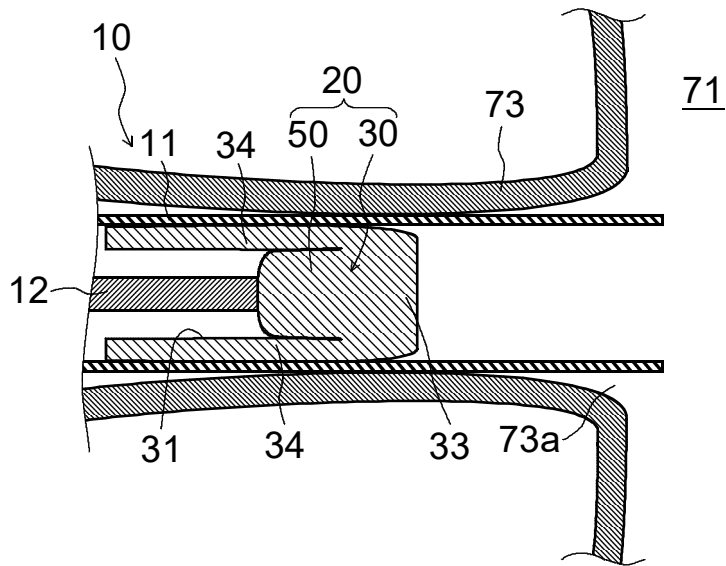


FIG. 11A

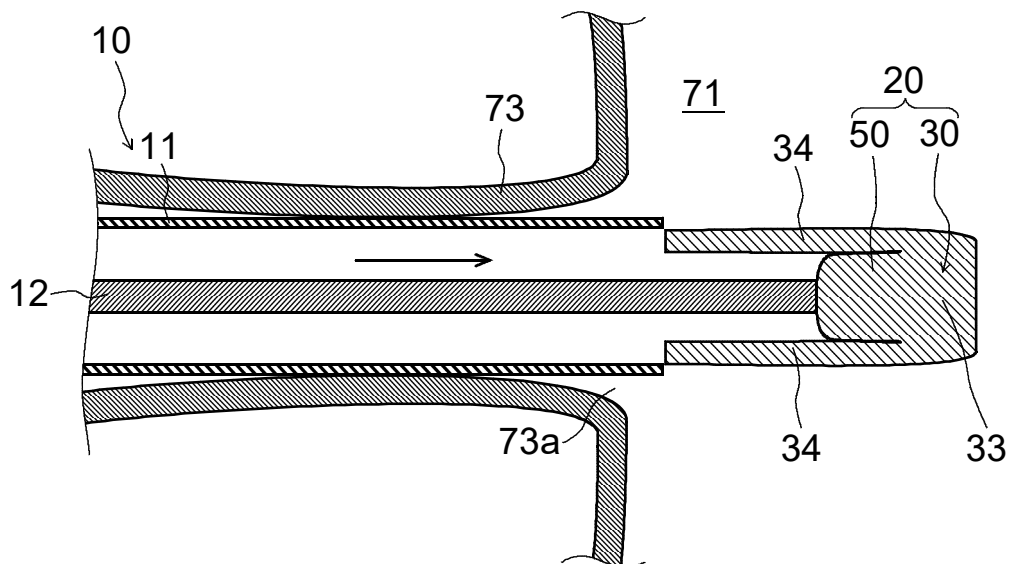


FIG. 11B

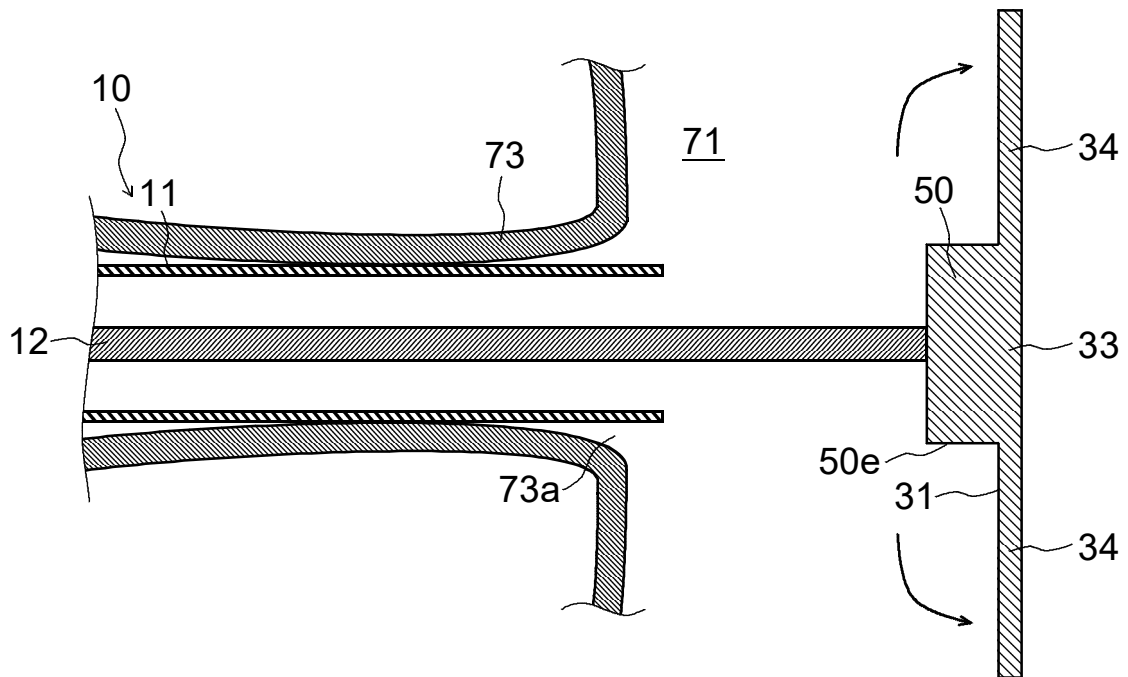


FIG. 11C

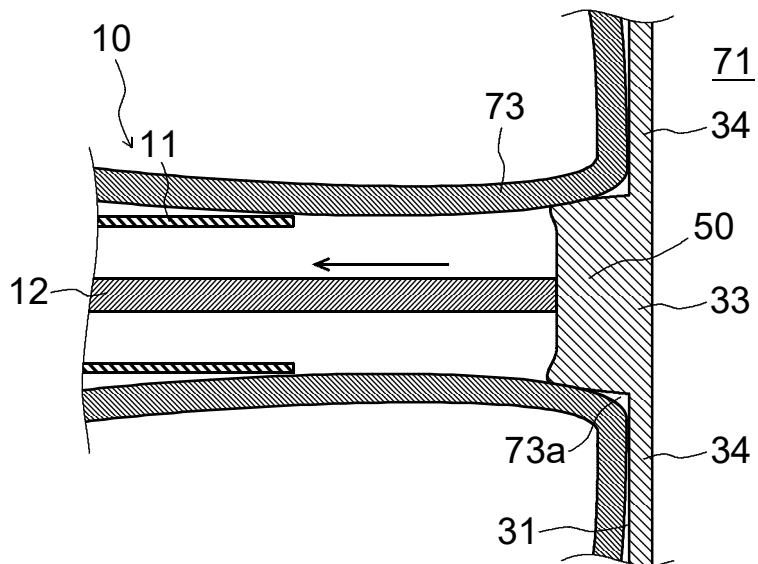


FIG. 11D

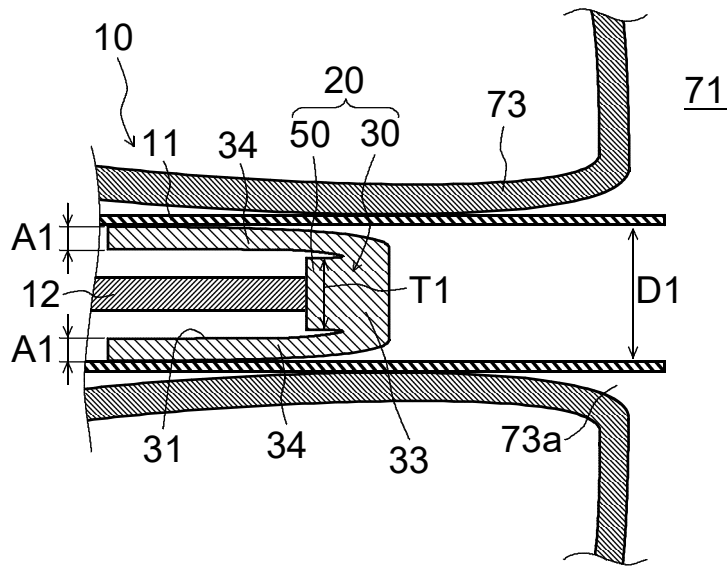


FIG. 12

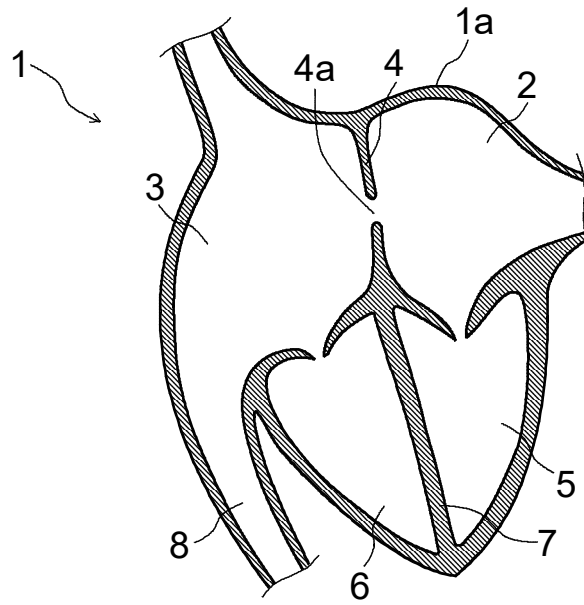


FIG. 13

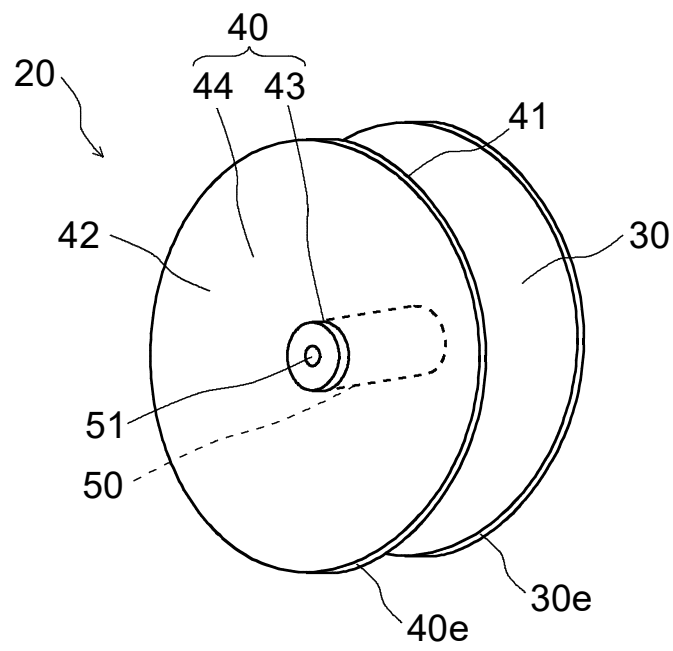


FIG. 14

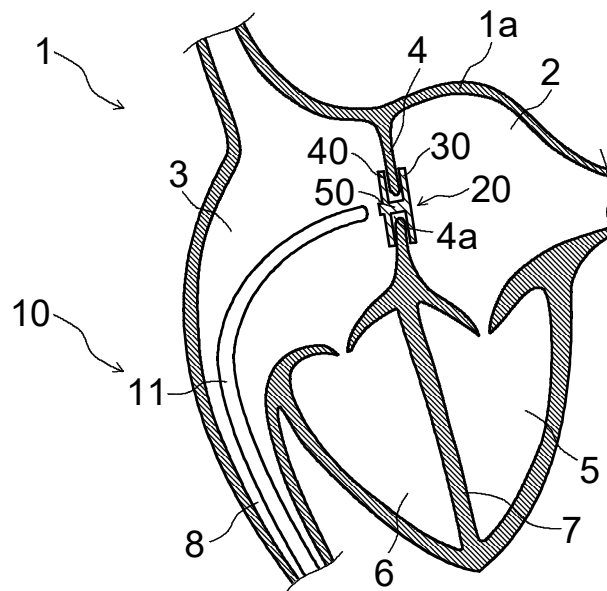


FIG. 15

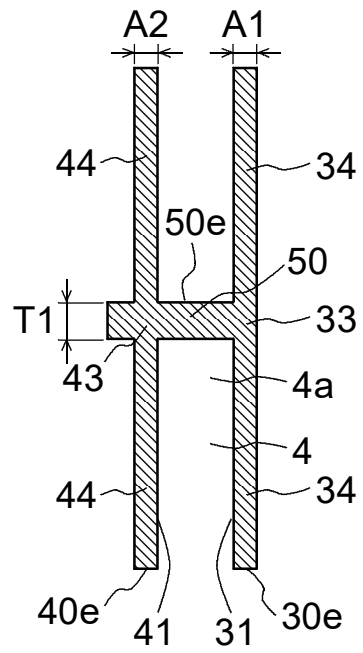


FIG. 16

FIG. 17B

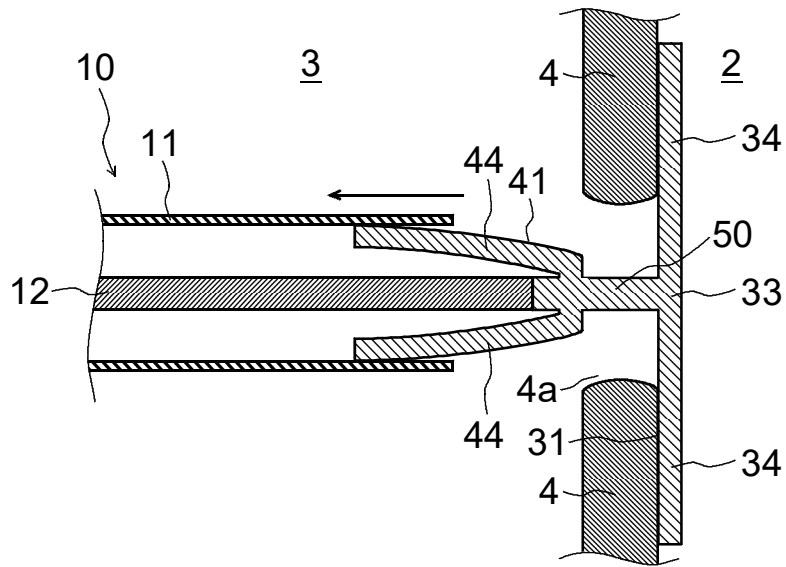


FIG. 17C

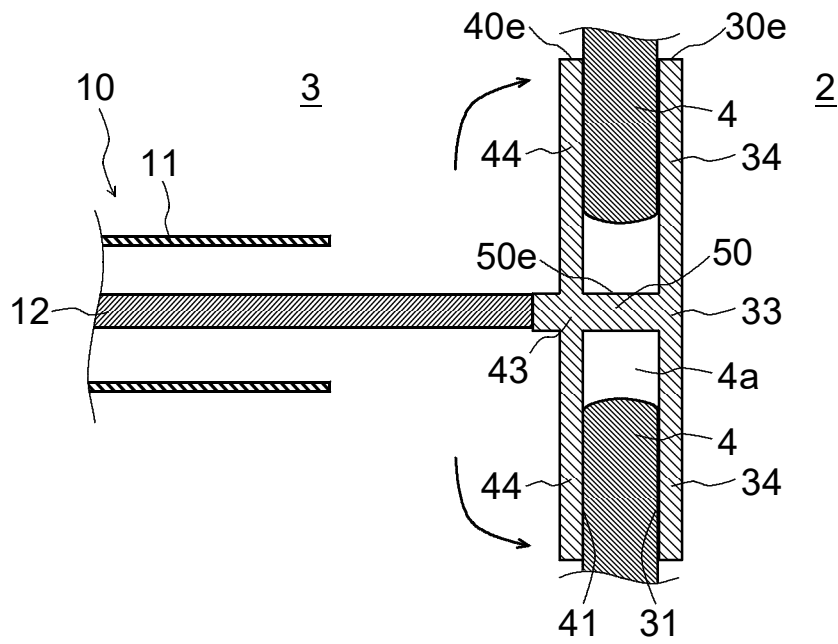


FIG. 17D

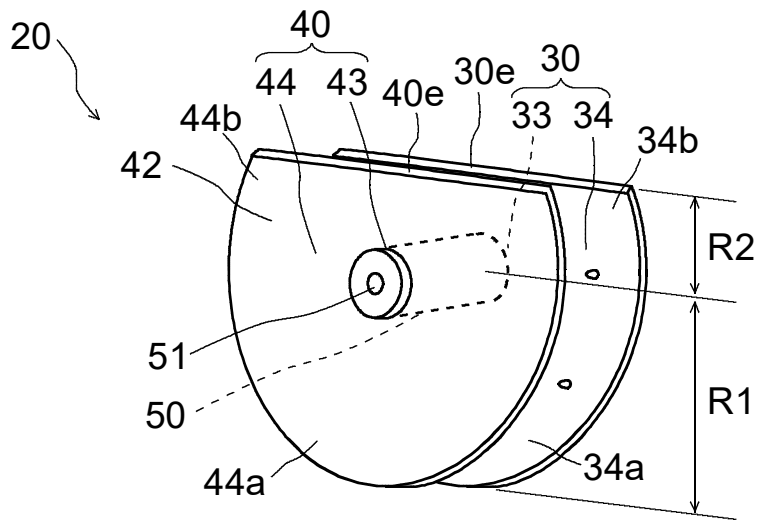


FIG. 19

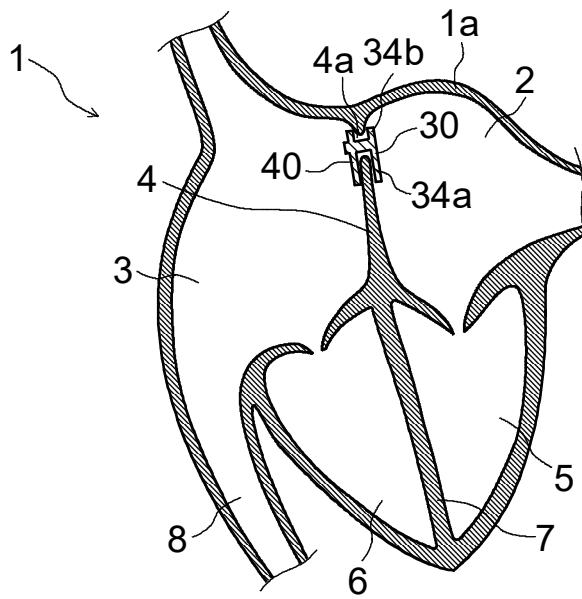


FIG. 20

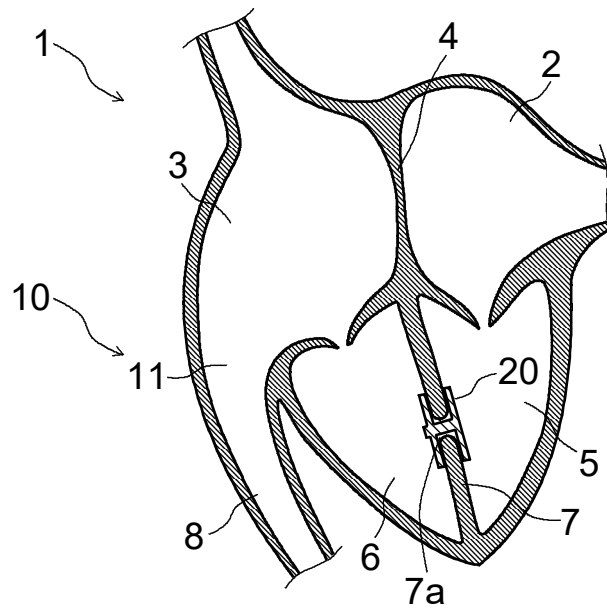


FIG. 21

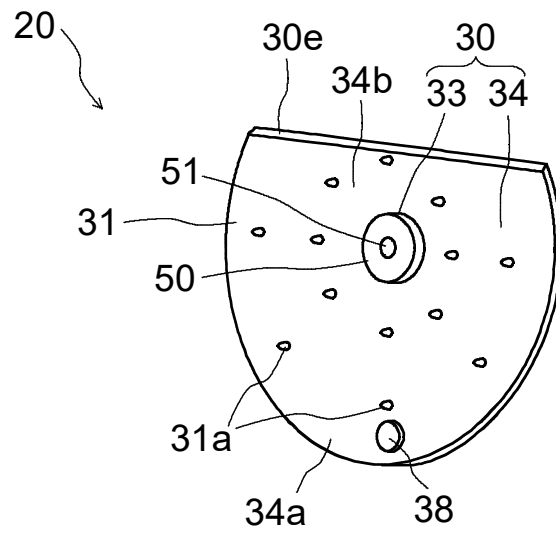


FIG. 22

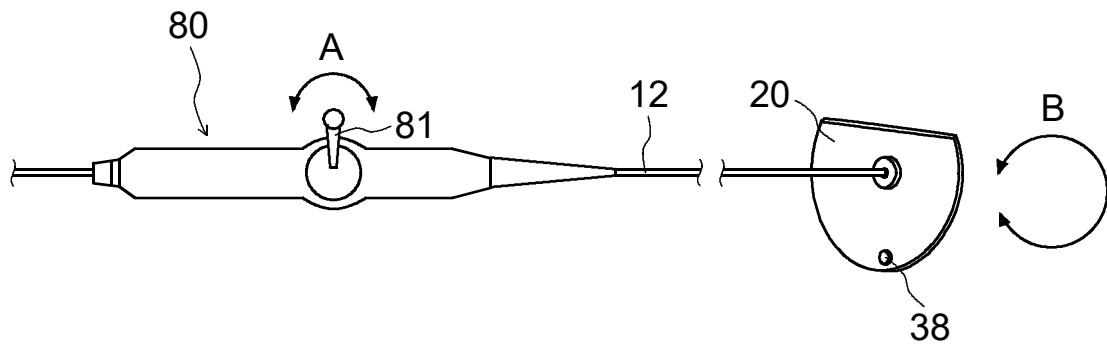


FIG. 23