

FIG. 1

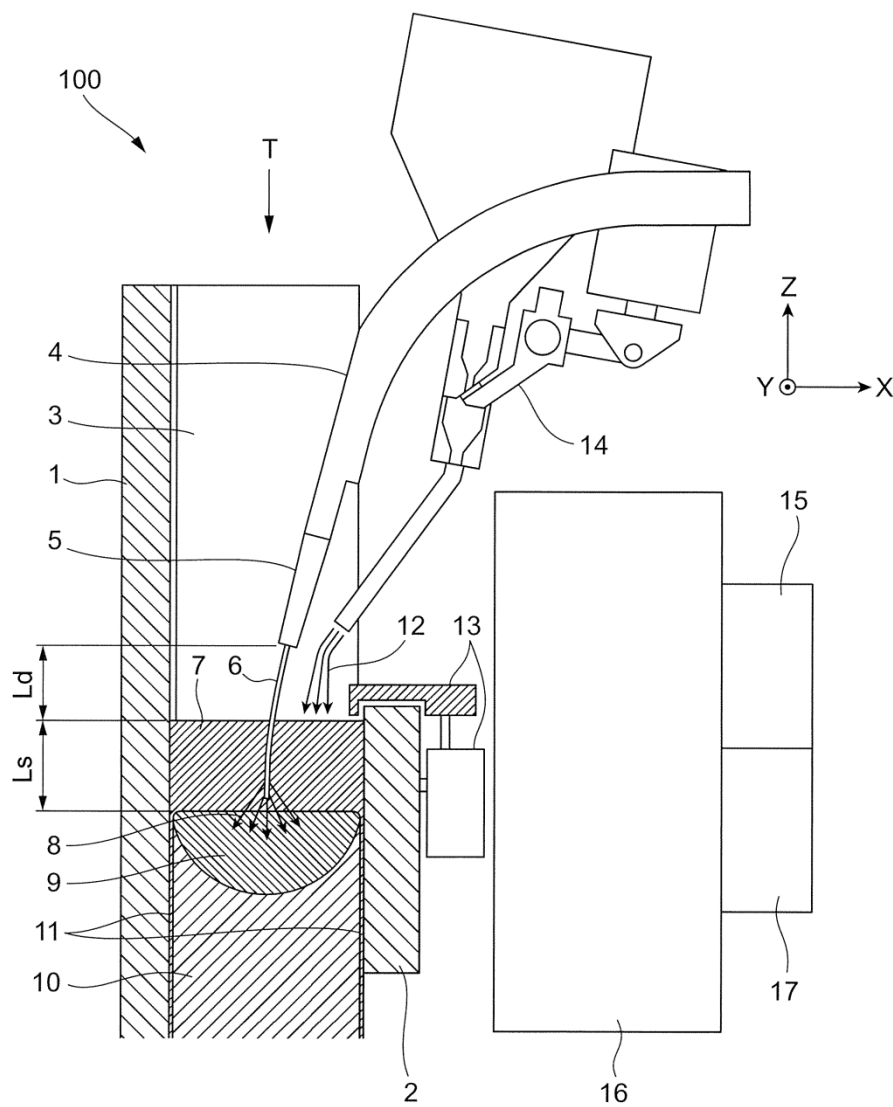


FIG. 2

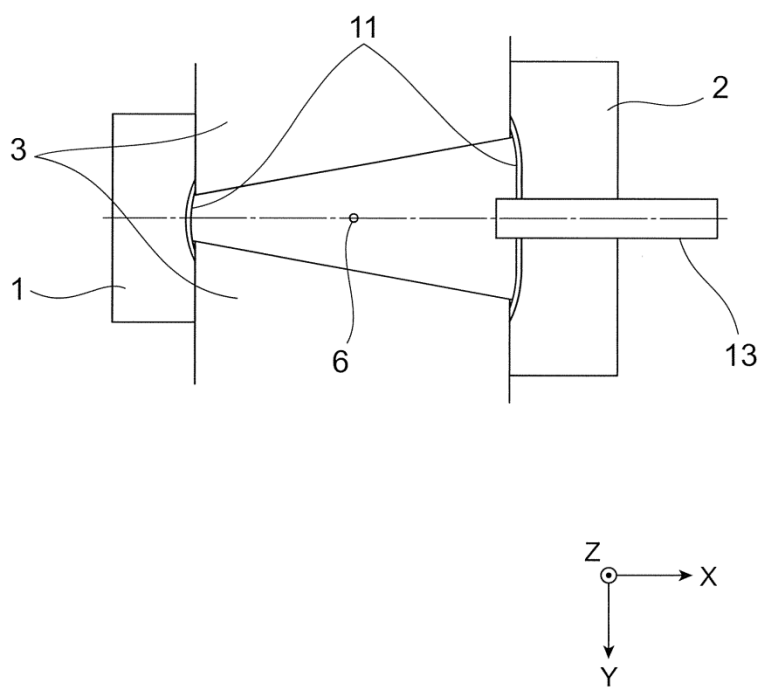


FIG. 3A

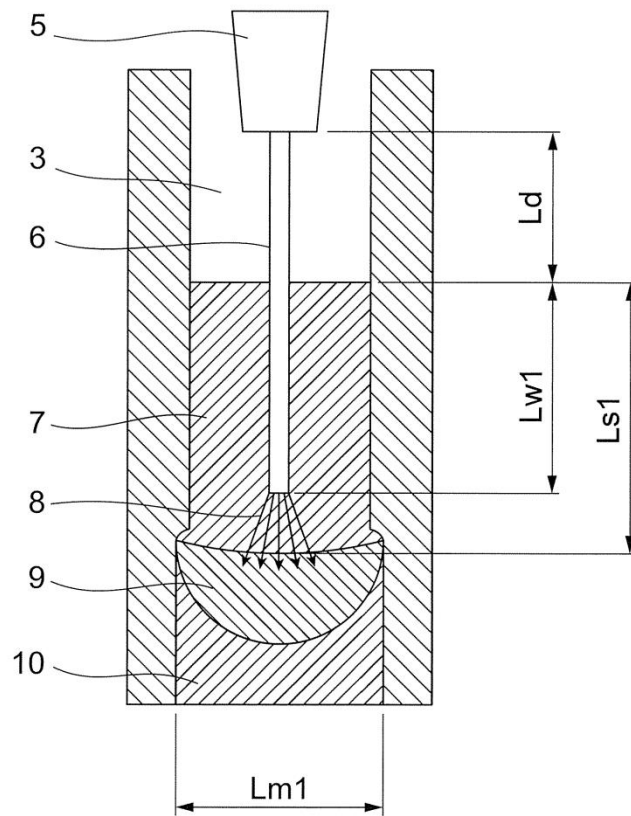


FIG. 3B

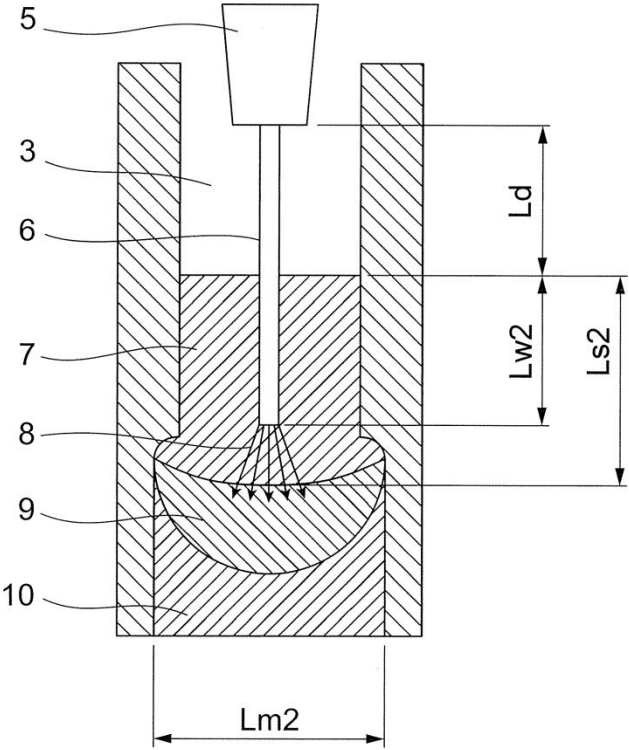


FIG. 3C

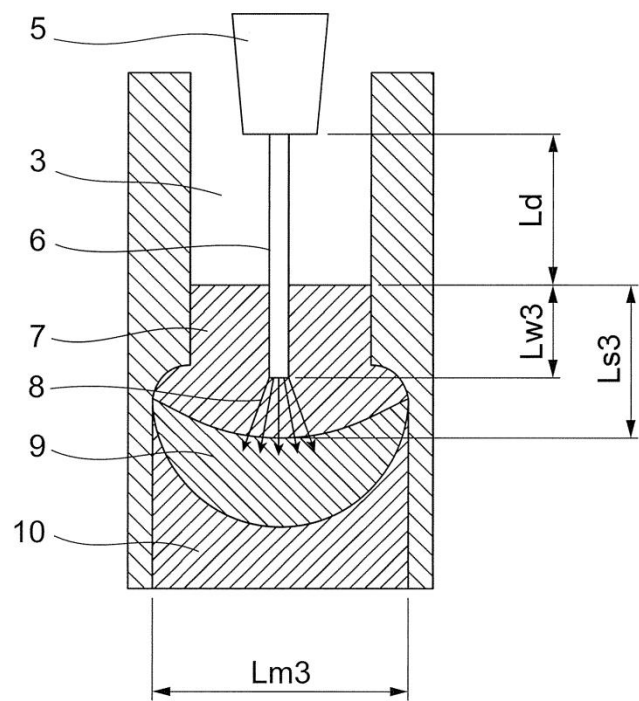


FIG. 4

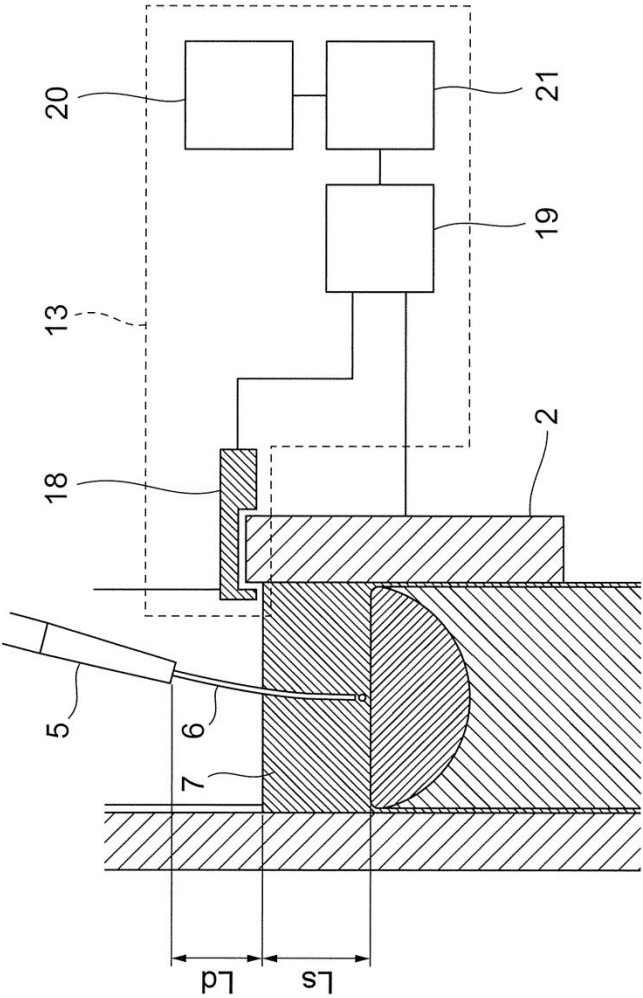


FIG. 5

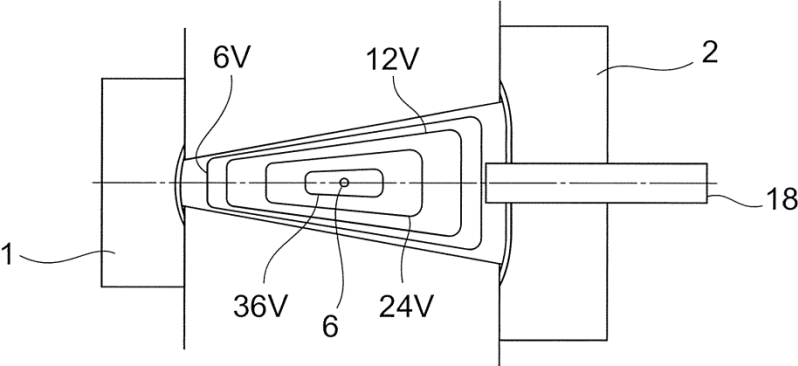


FIG. 6B

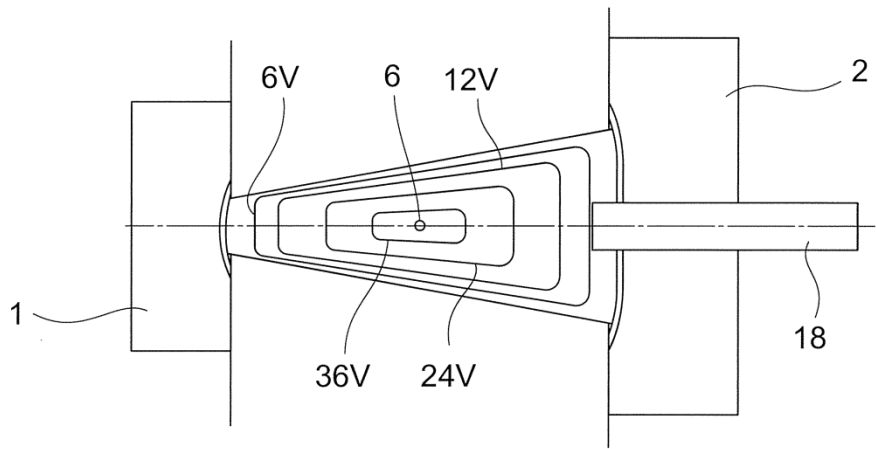


FIG. 6C

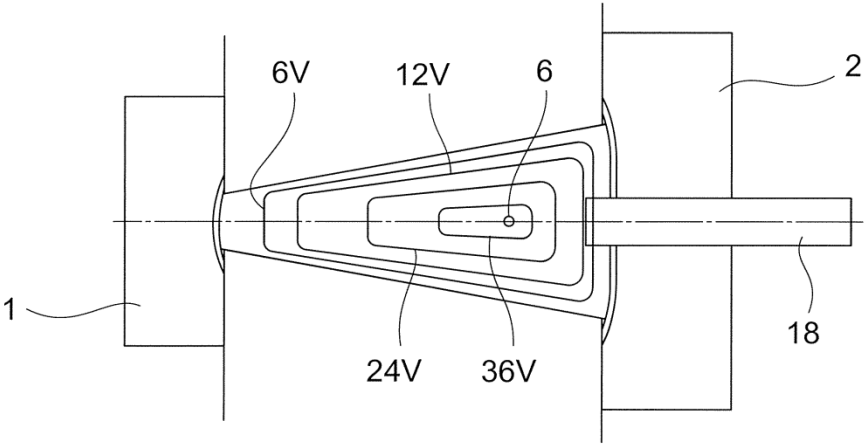


FIG. 7

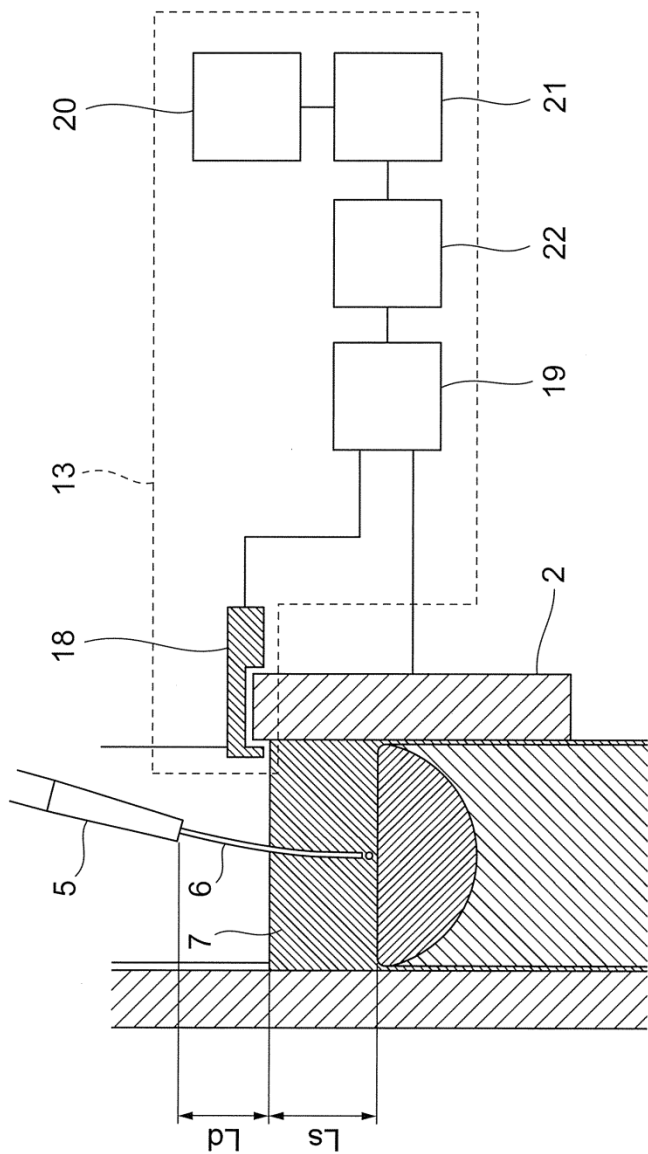


FIG. 8

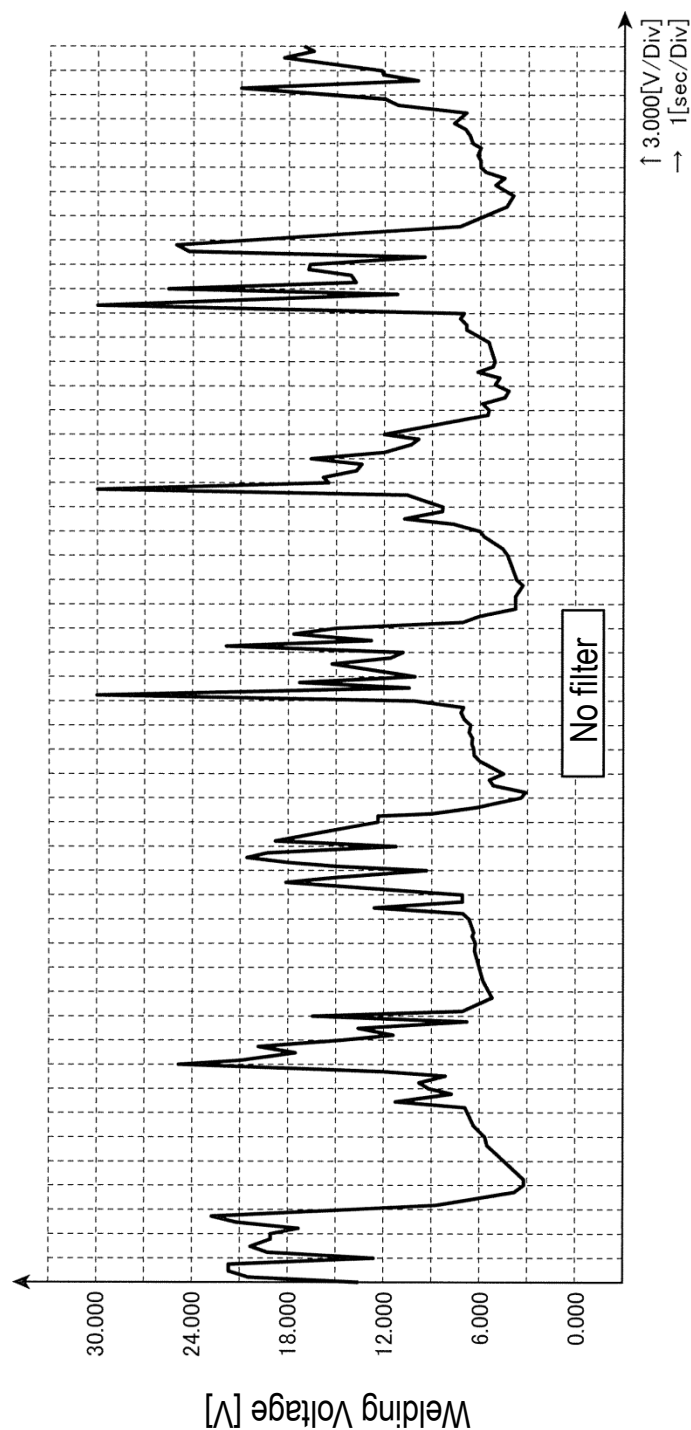


FIG. 9

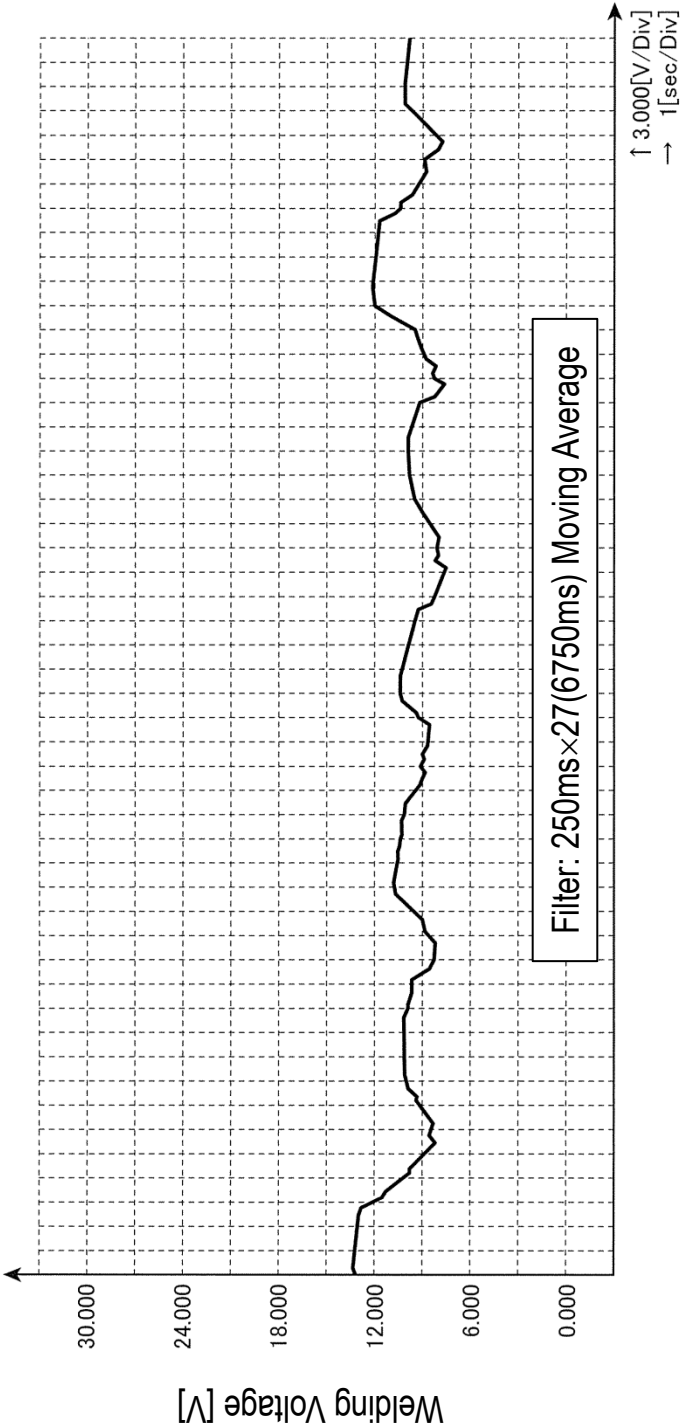


FIG. 10

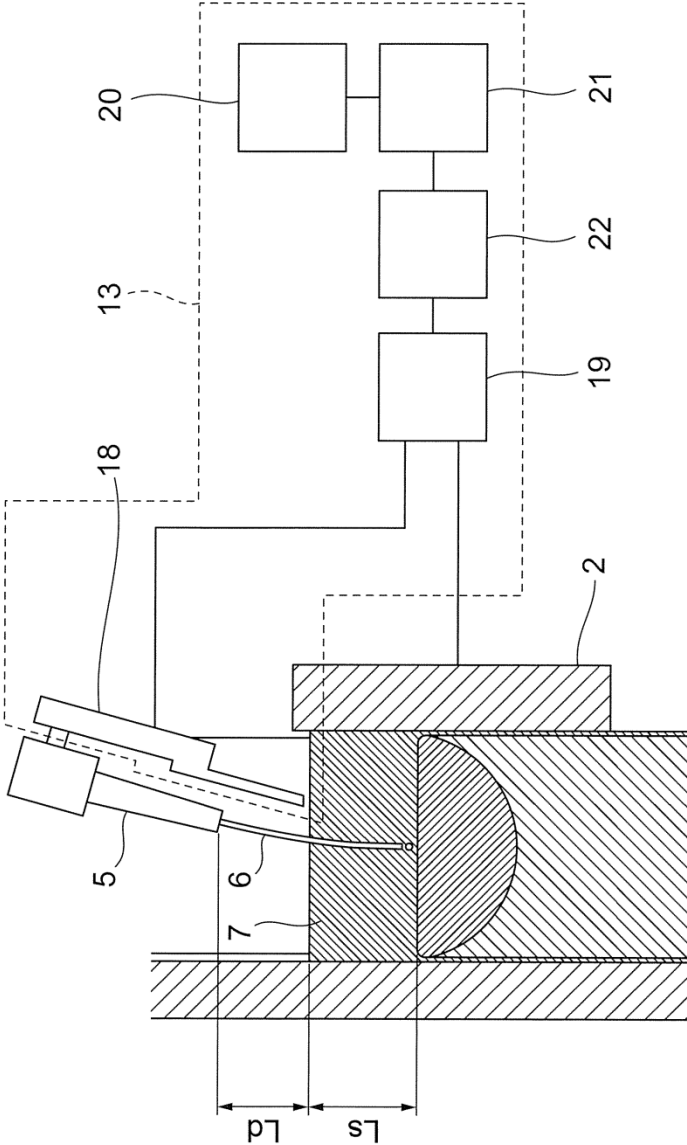


FIG. 12

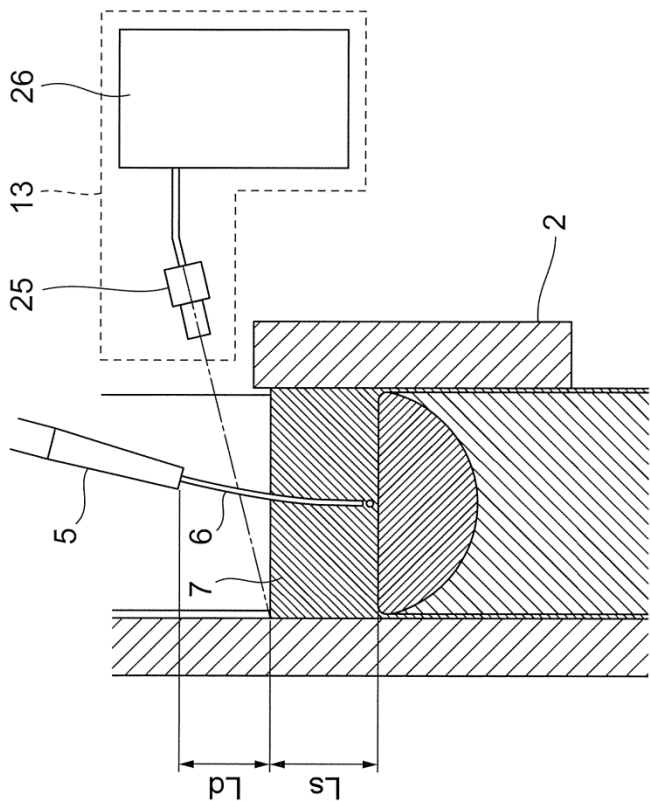


FIG. 13A

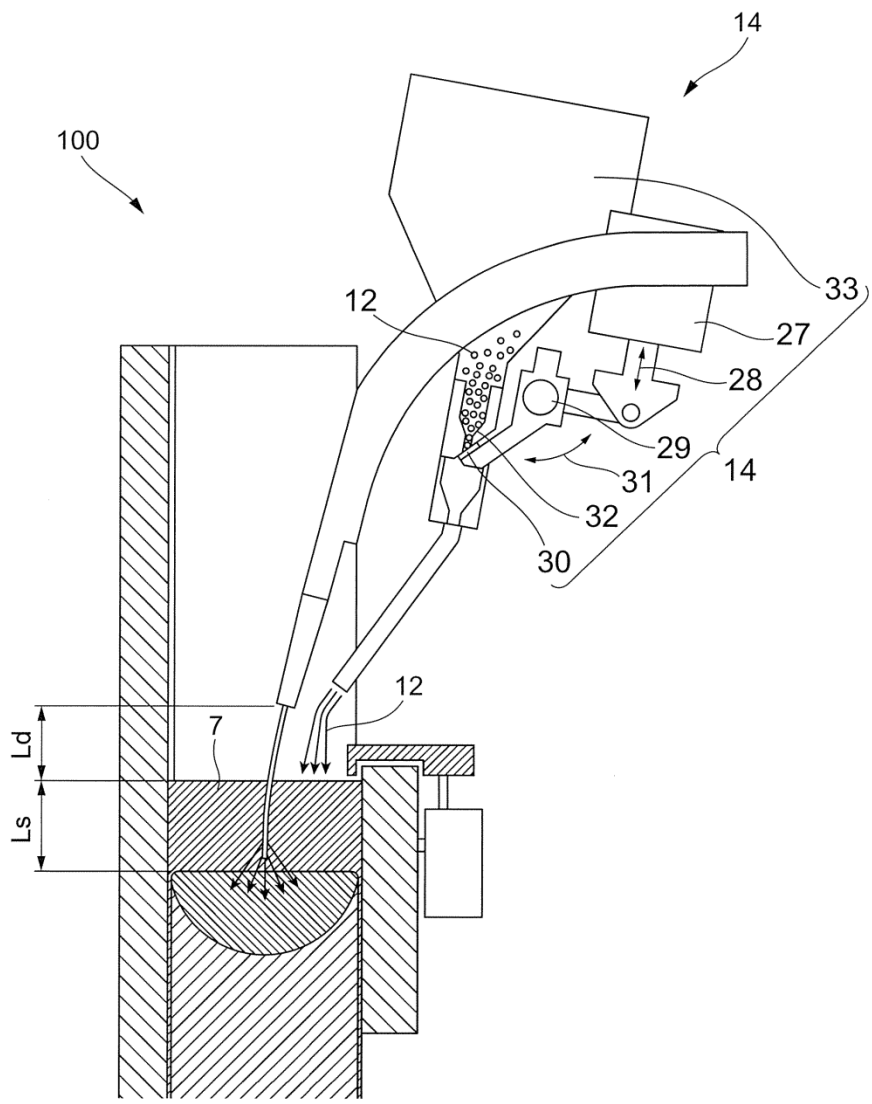


FIG. 13B

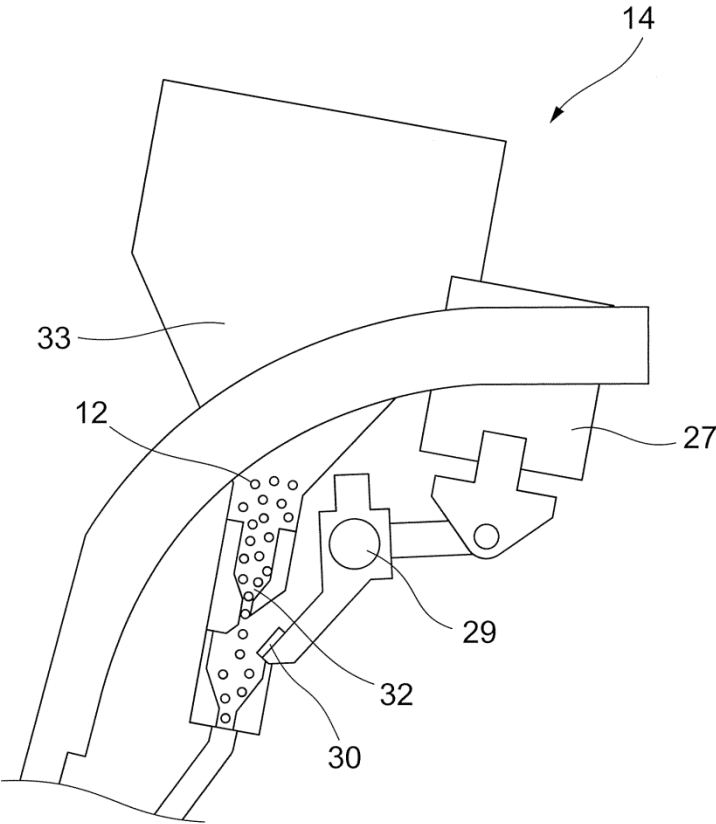


FIG. 14

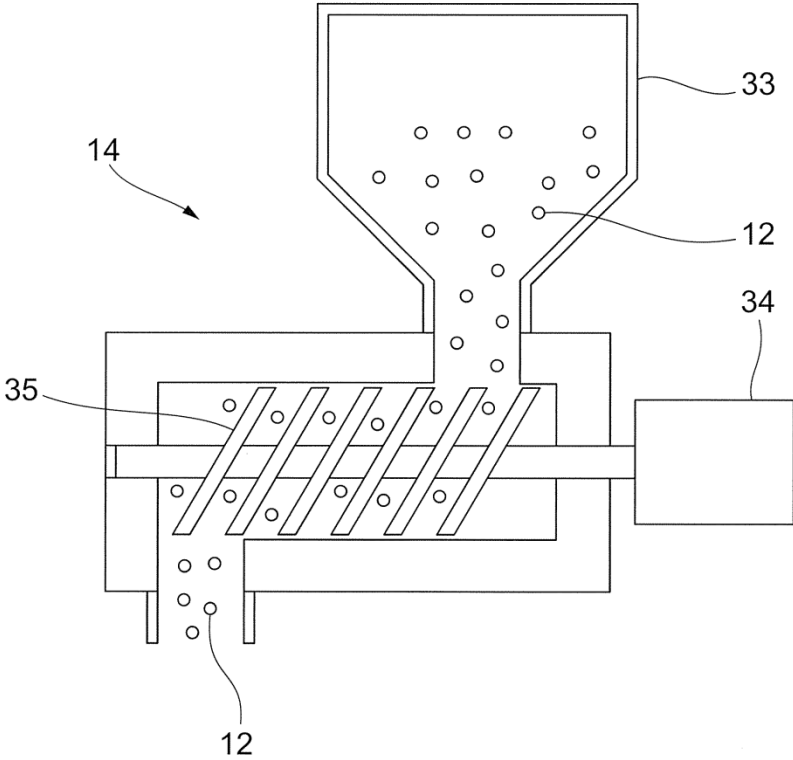


FIG. 15

Distance after welding was stable		0mm	100mm	200mm	300mm	400mm	500mm
Comparative Example	Arc Occurrence	A	A	A	B	Impossible to weld	Impossible to weld
	Surface Bead Width	35mm	38mm	43mm	47mm	Impossible to weld	Impossible to weld
	Penetration	A	A	A	A	-	-
Example	Arc Occurrence	A	A	A	A	A	A
	Surface Bead Width	35mm	36mm	35mm	35mm	36mm	35mm
	Penetration	A	A	A	A	A	A

Arc occurred: B, No arc occurred: A

There was penetration failure: B, There was no penetration failure: A

FIG. 16

Slag Bath Depth	10mm or less	20mm	25mm	30mm	40 to 60mm	90mm or more
Arc Occurrence	B	A	A	A	A	A
Surface Bead Width	43mm or more	37mm	35mm	34mm	33 to 30mm	24mm
Penetration	A	A	A	A	A	B
Toughness	B	A	A	A	A	B
Remarks	Slag bath became insufficient and arc occurred. Shielding failure occurred and toughness was degraded.					When slag bath was deep, penetration became shallow and penetration failure occurred.

Arc occurred: B, No arc occurred: A
There was penetration failure: B, There was no penetration failure: A
Toughness (-20°) ≥ 39J: A, Toughness (-20°) < 39J: B