

FIG. 1

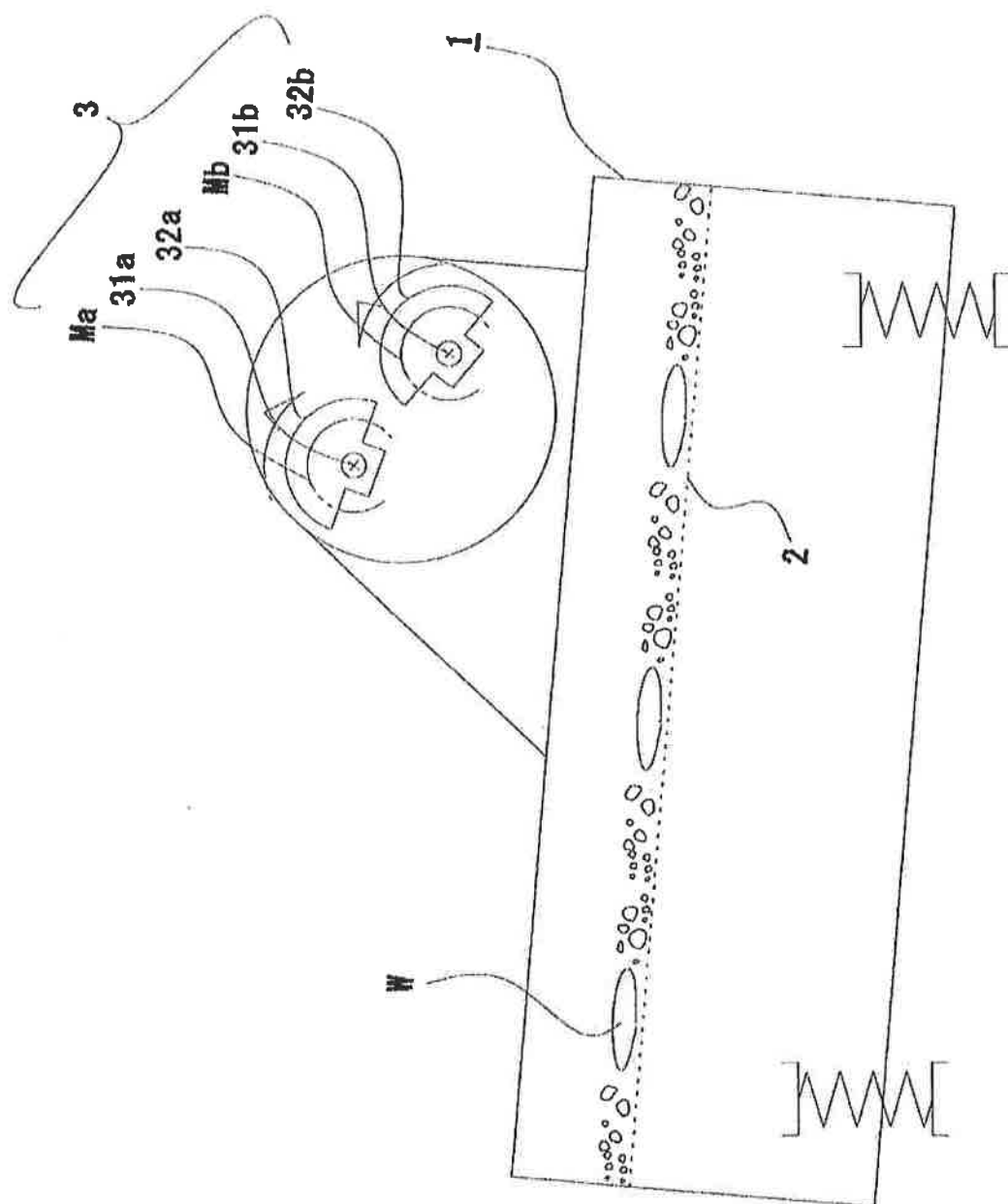


FIG. 2

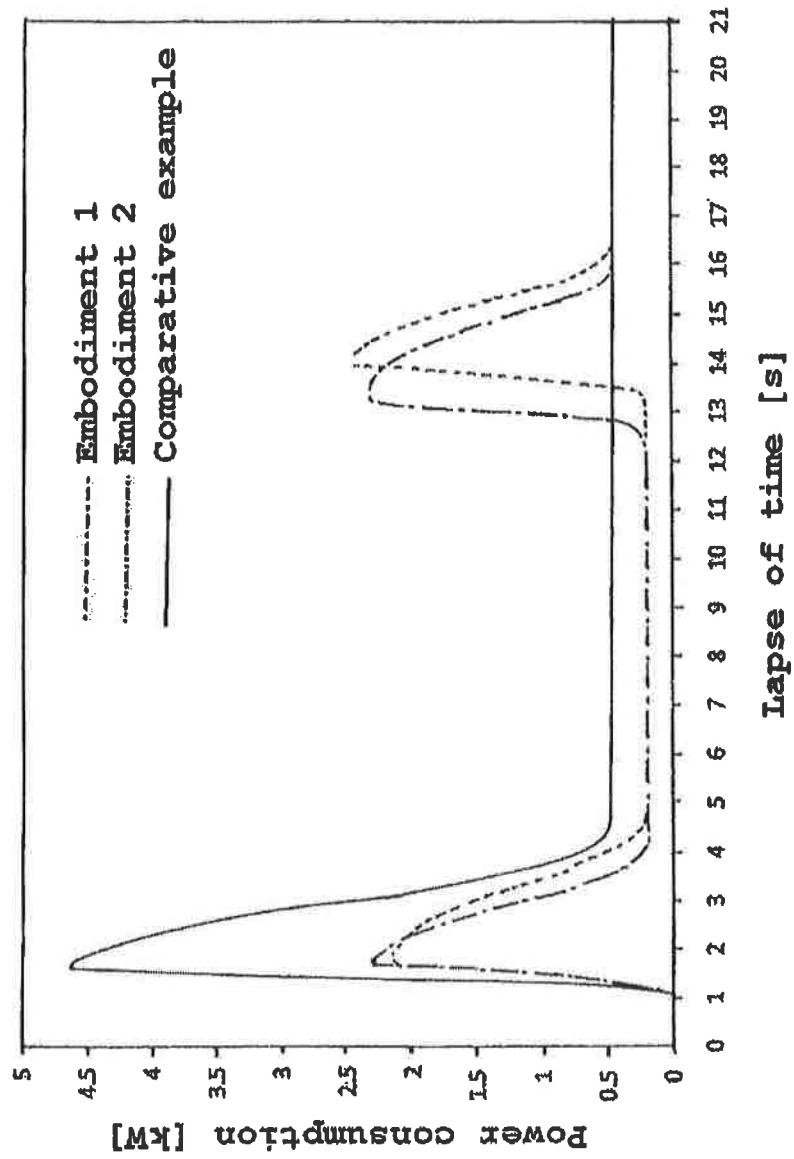


FIG. 3

(a) Stationary state

(b) Embodiment 3

(c) Embodiment 4

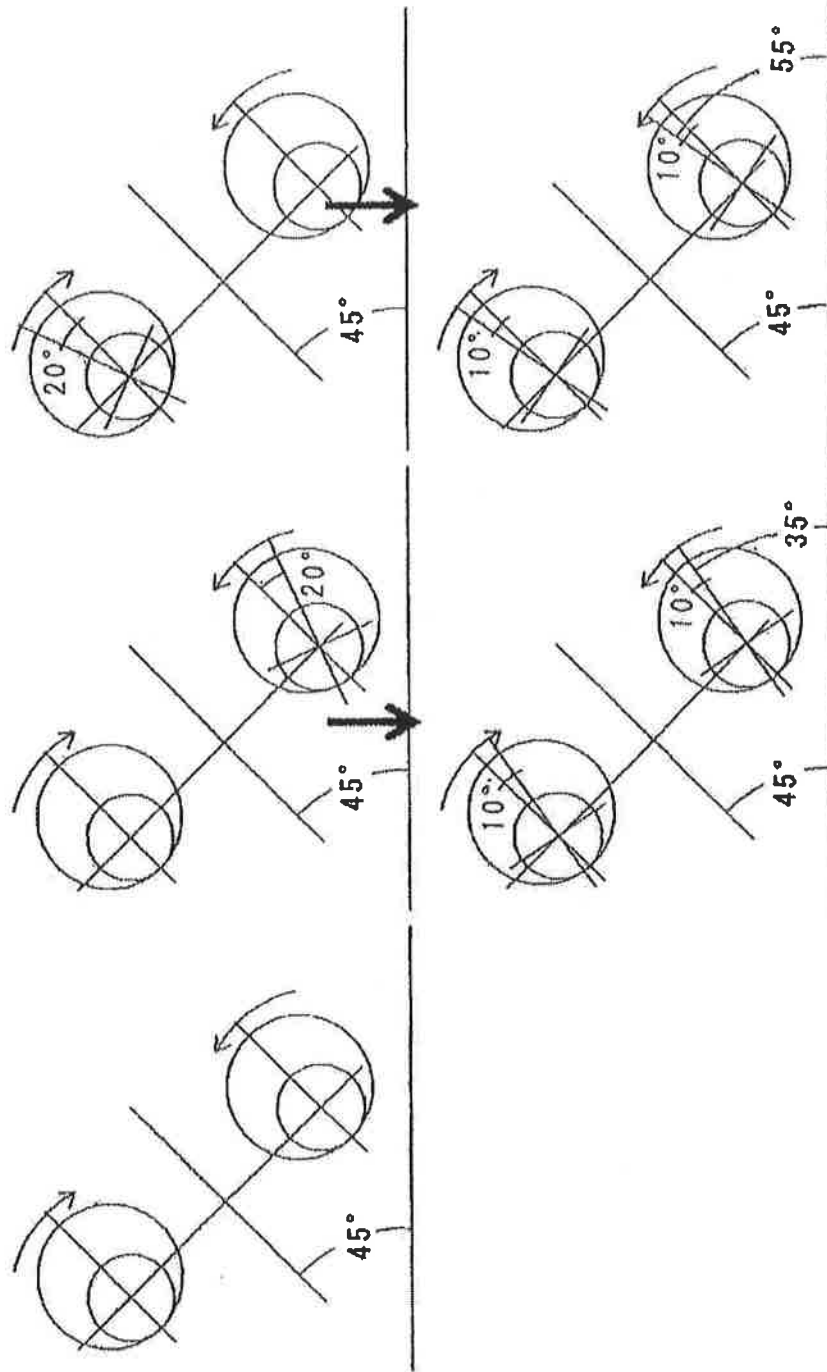


FIG. 4

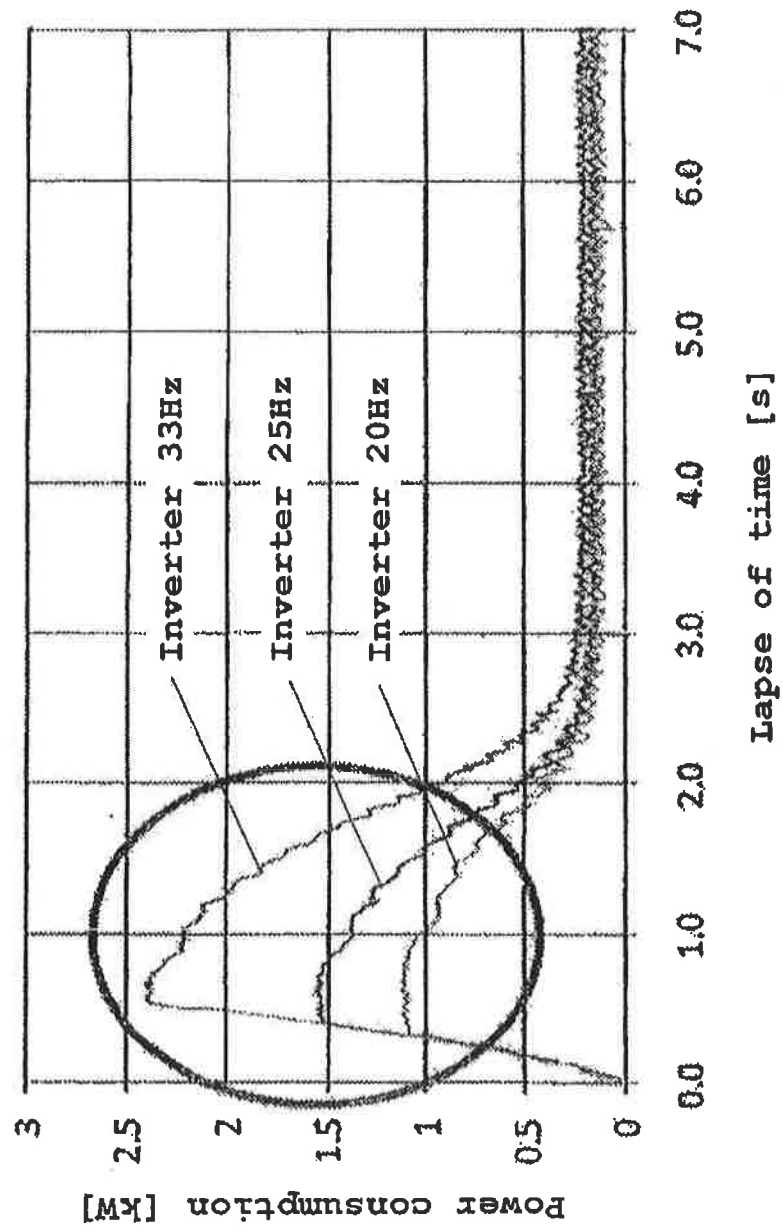


FIG. 5

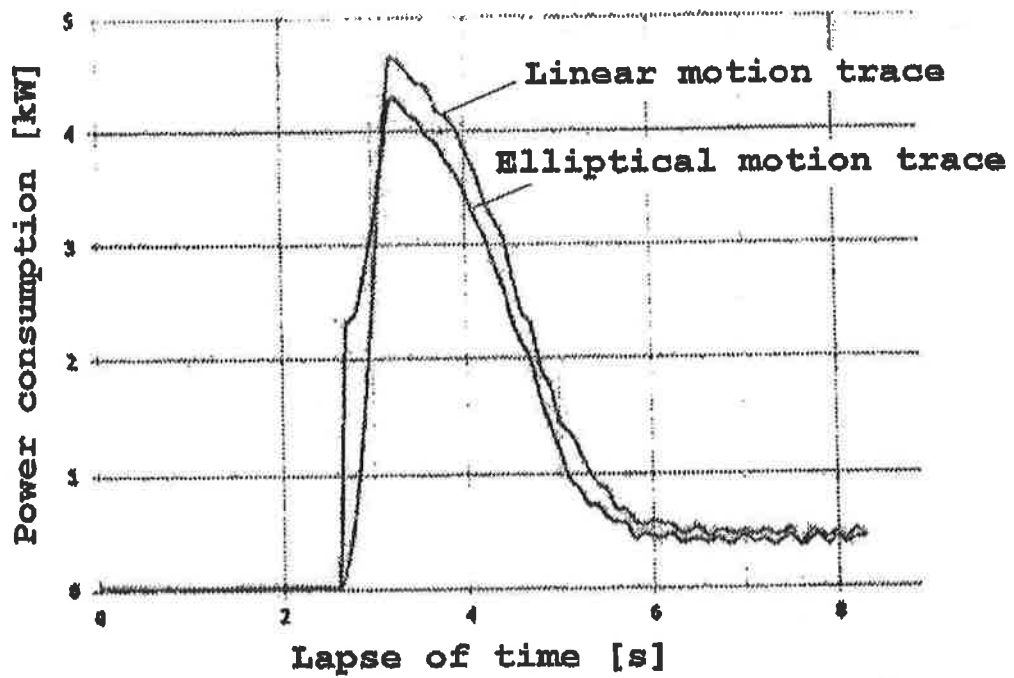


FIG. 6 (a-1) **FIG. 6 (a-2)** **FIG. 6 (a-3)**
Eccentric spindle 1 Eccentric spindle 2 Eccentric spindle 3

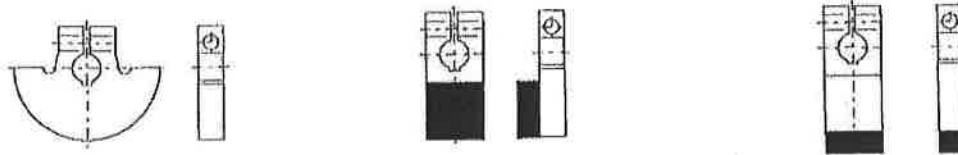
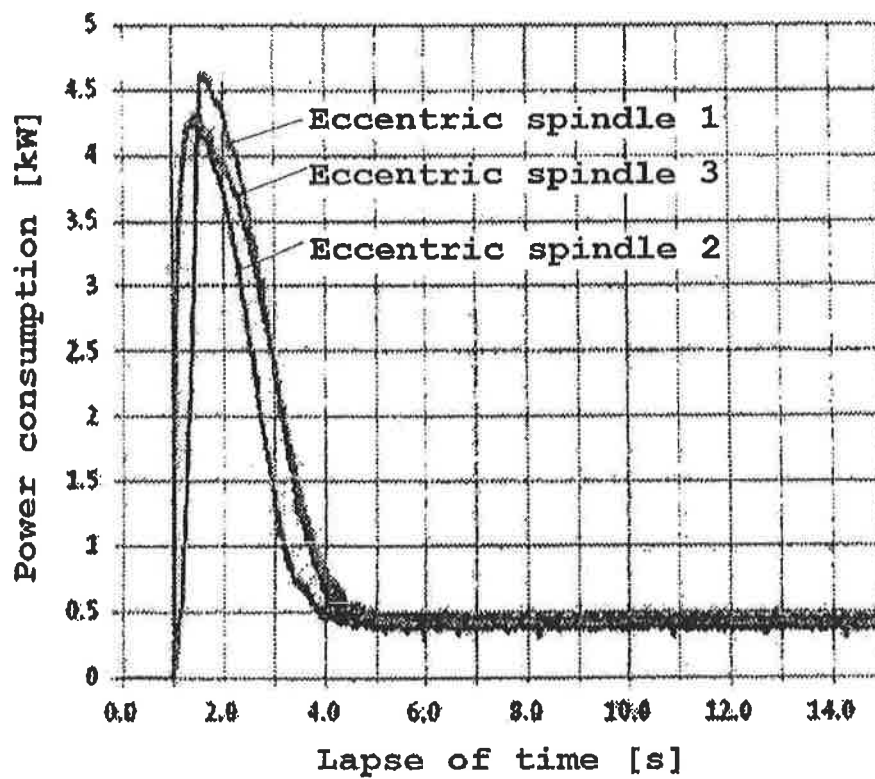


FIG. 6 (b)



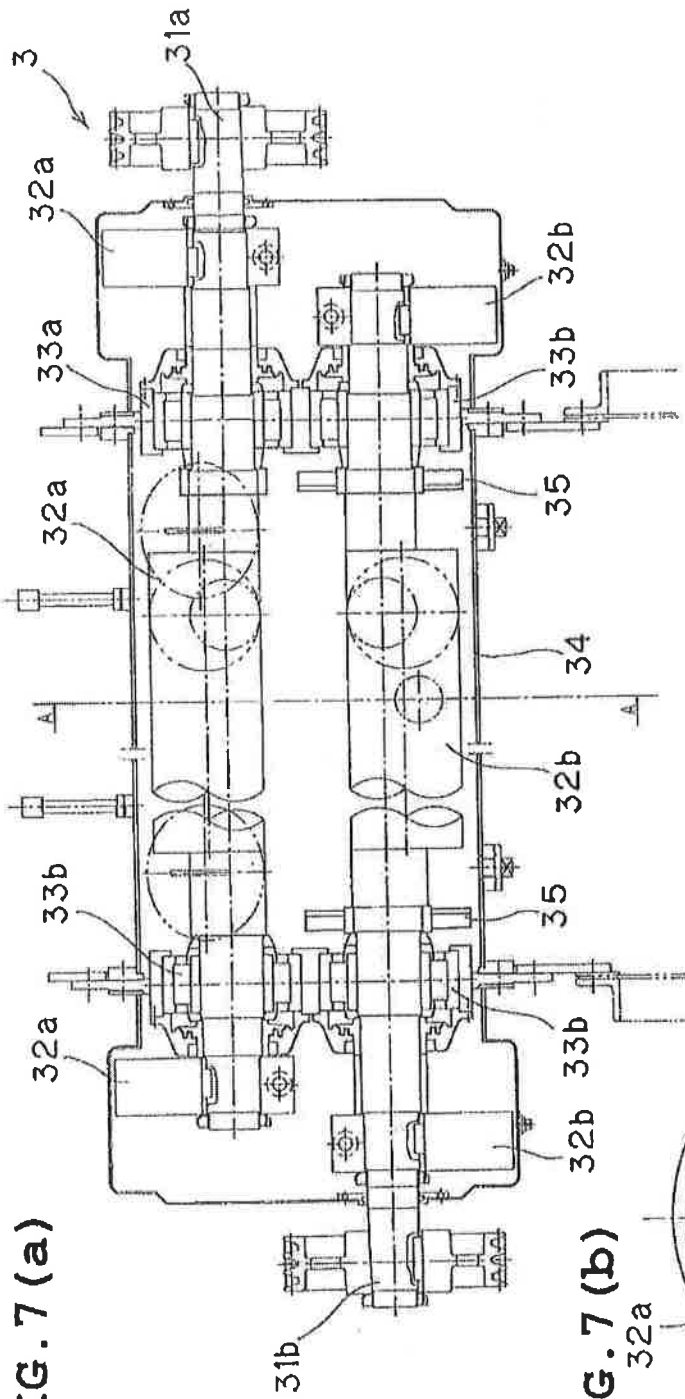


FIG. 7 (b)

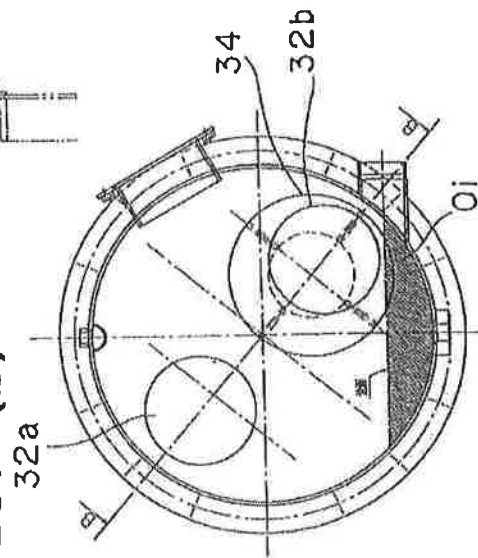


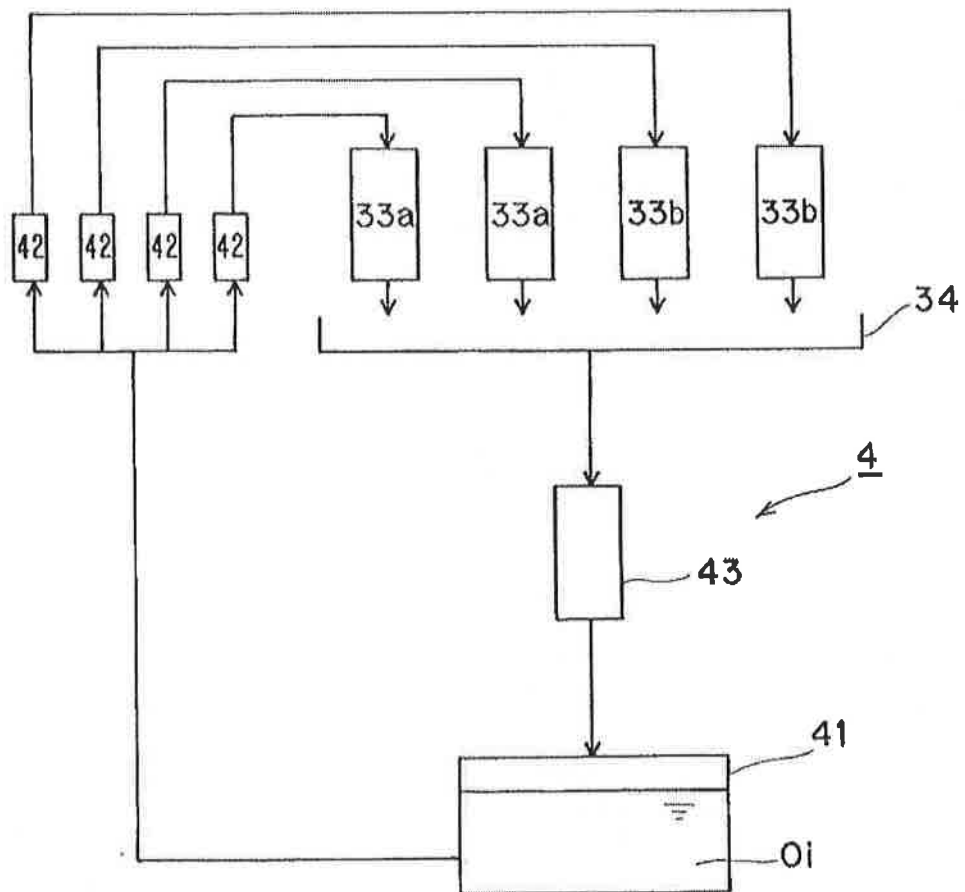
FIG. 8

FIG. 9(c)

Strokes of vibratory pump
(1 cycle)

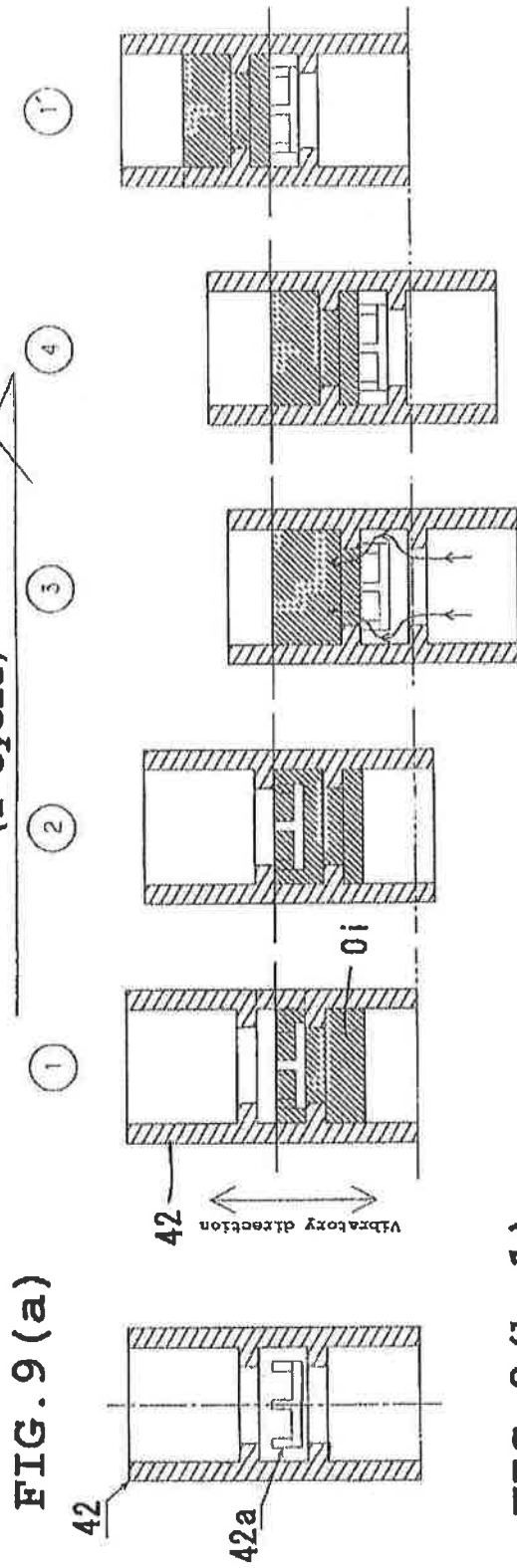


FIG. 9 (b-1)

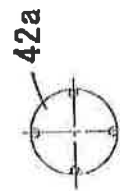


FIG. 9 (b-2)



FIG. 10

