

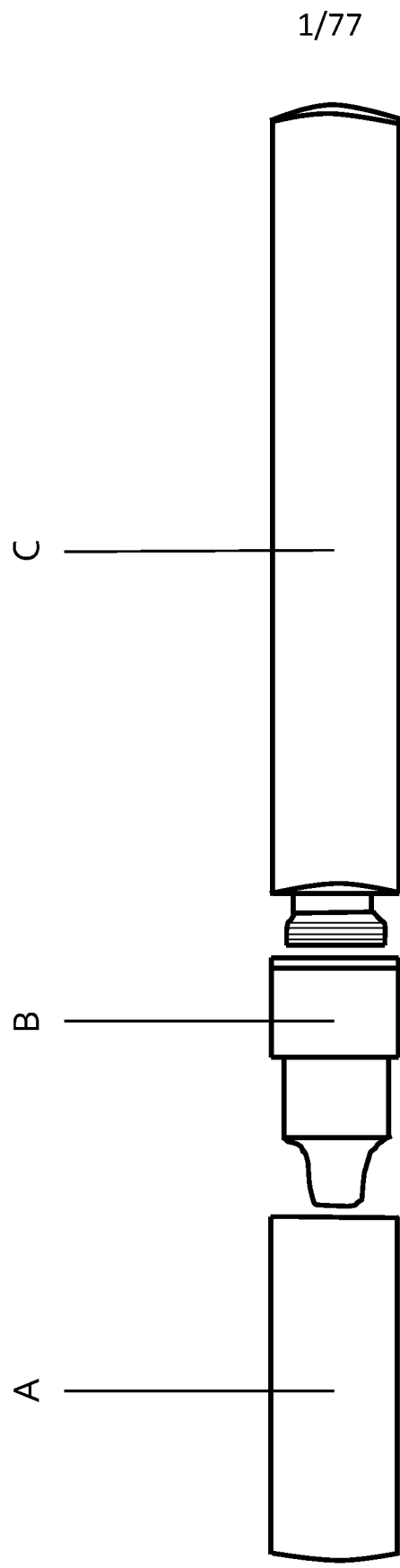


FIGURE 1 Prior art

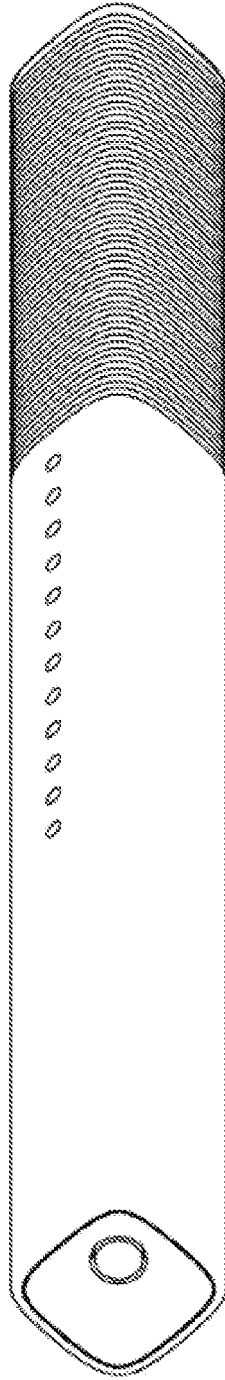


FIGURE 2

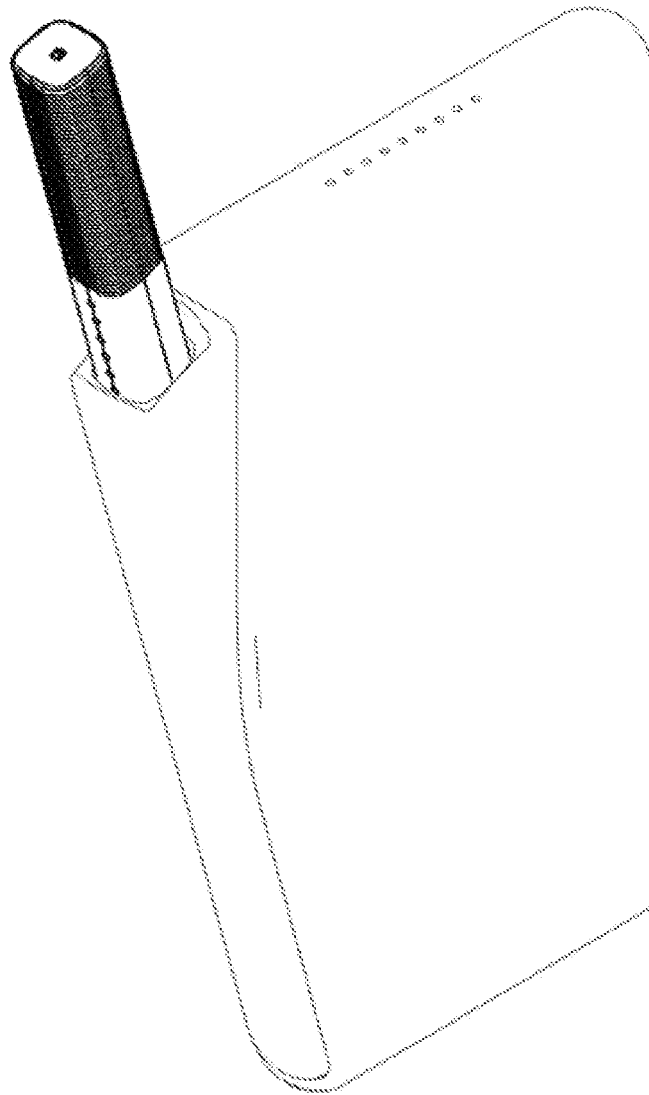


FIGURE 3

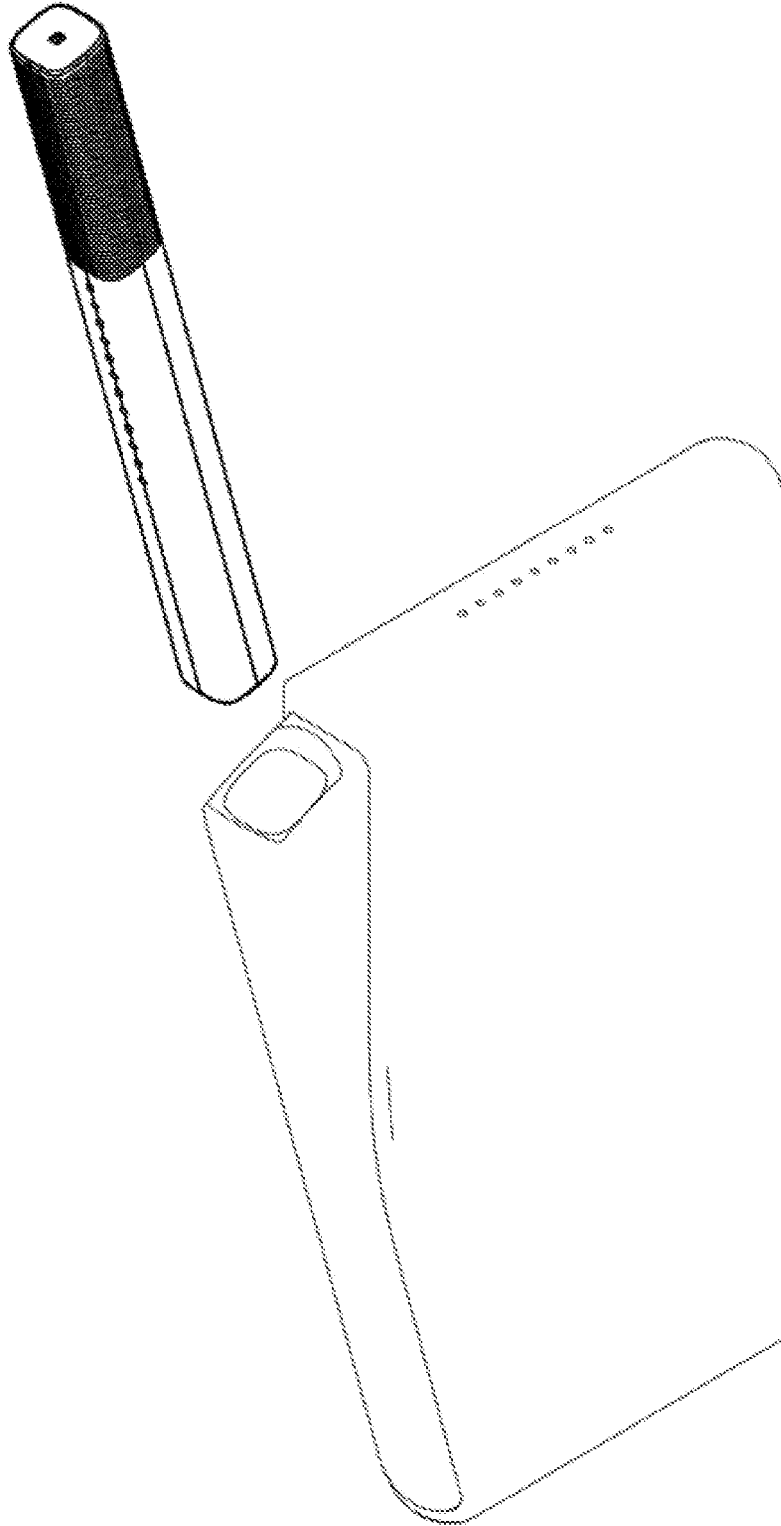


FIGURE 4

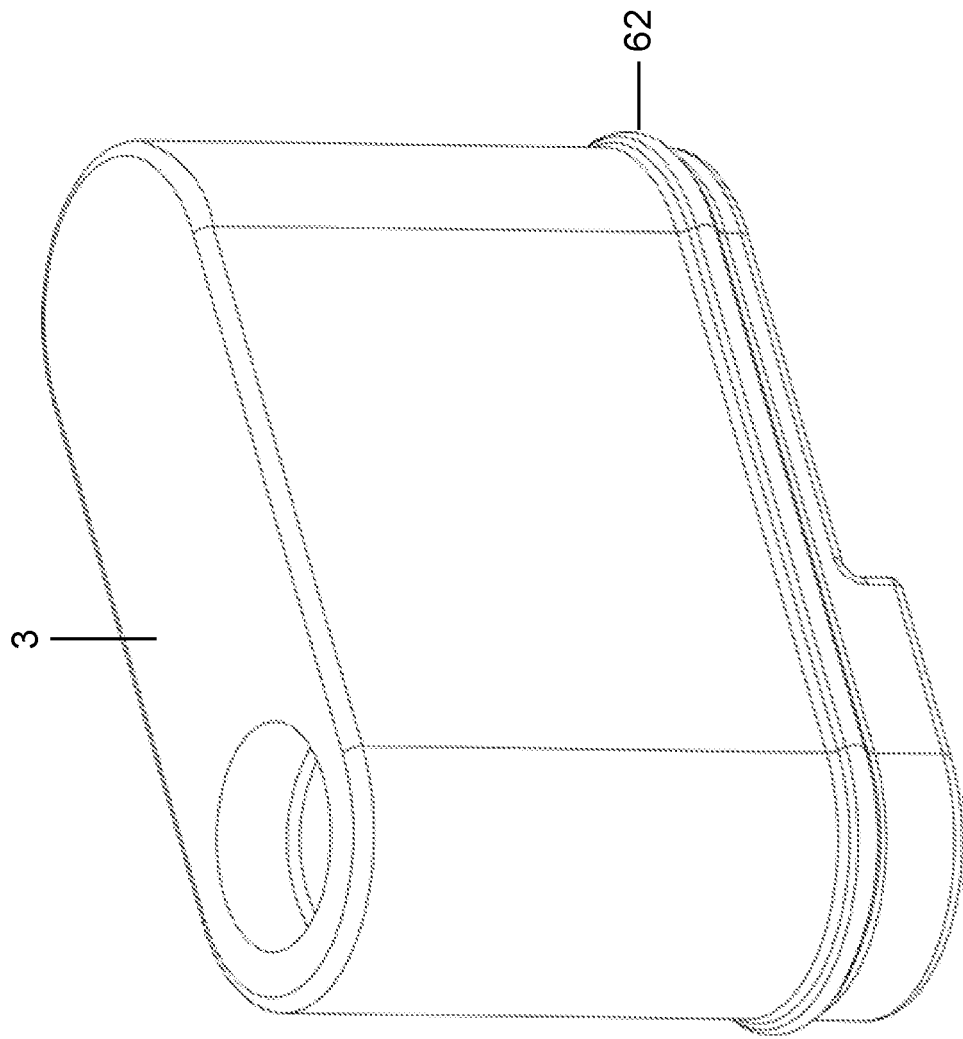


FIGURE 5

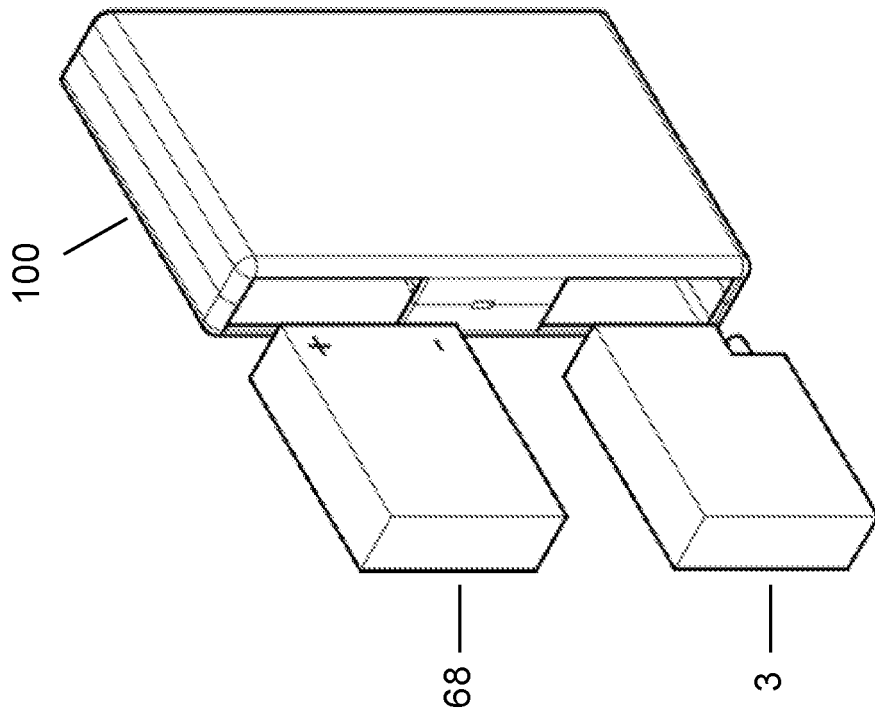


FIGURE 6A

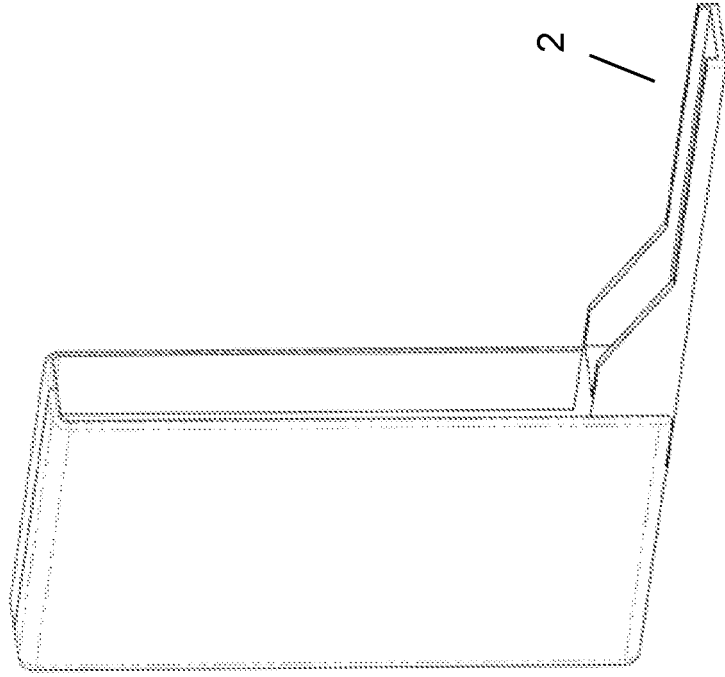


FIGURE 6B

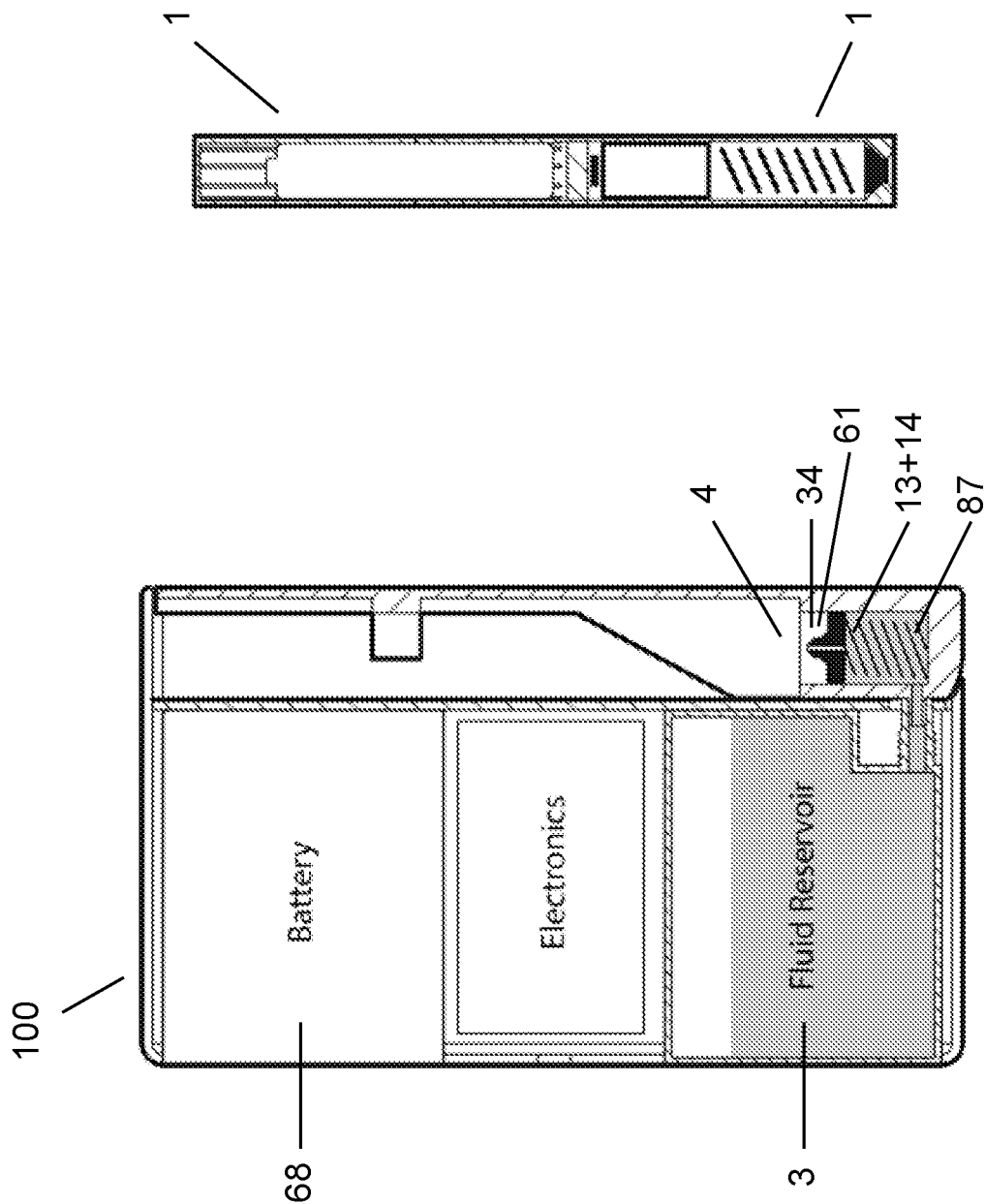


FIGURE 7

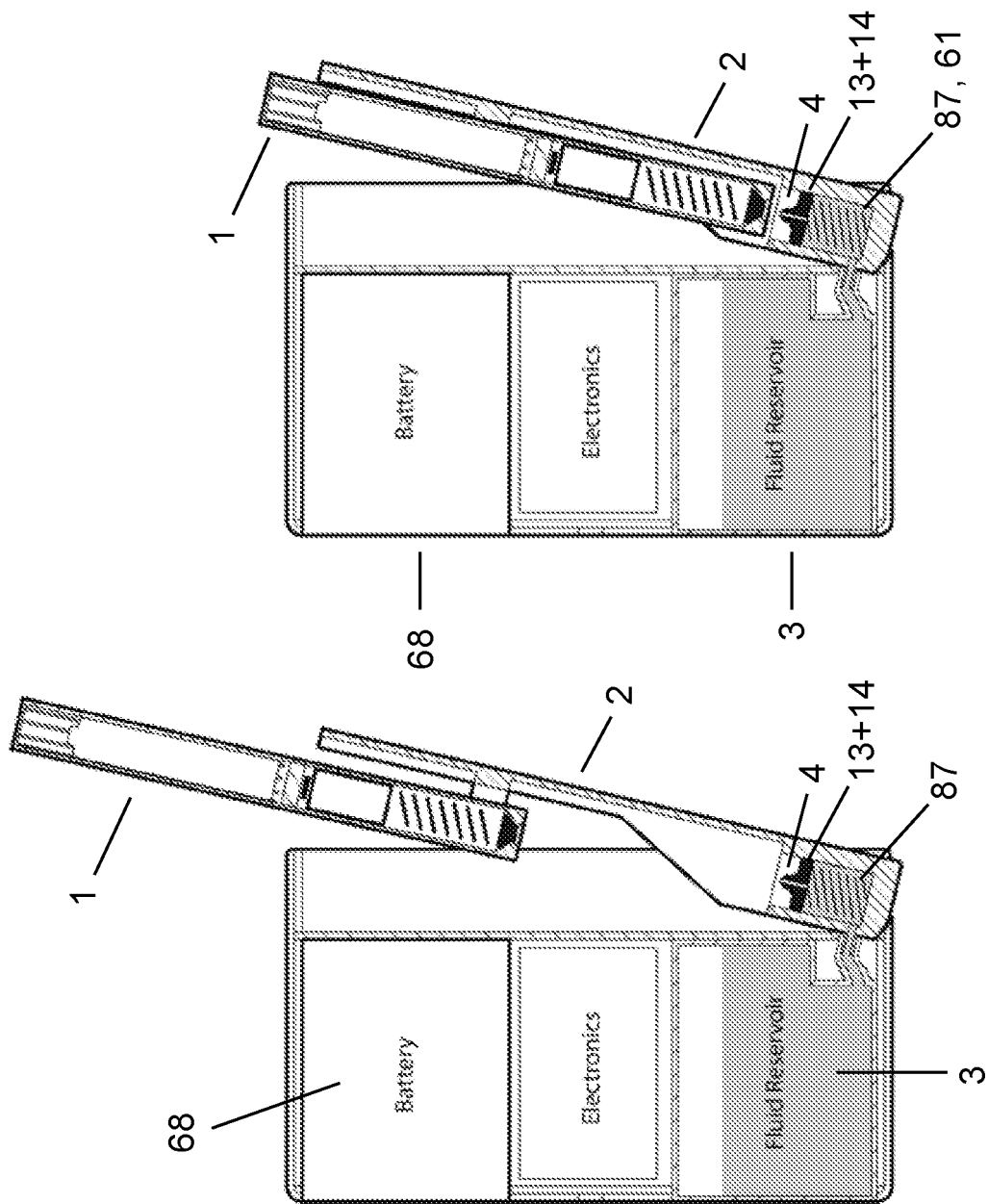


FIGURE 8

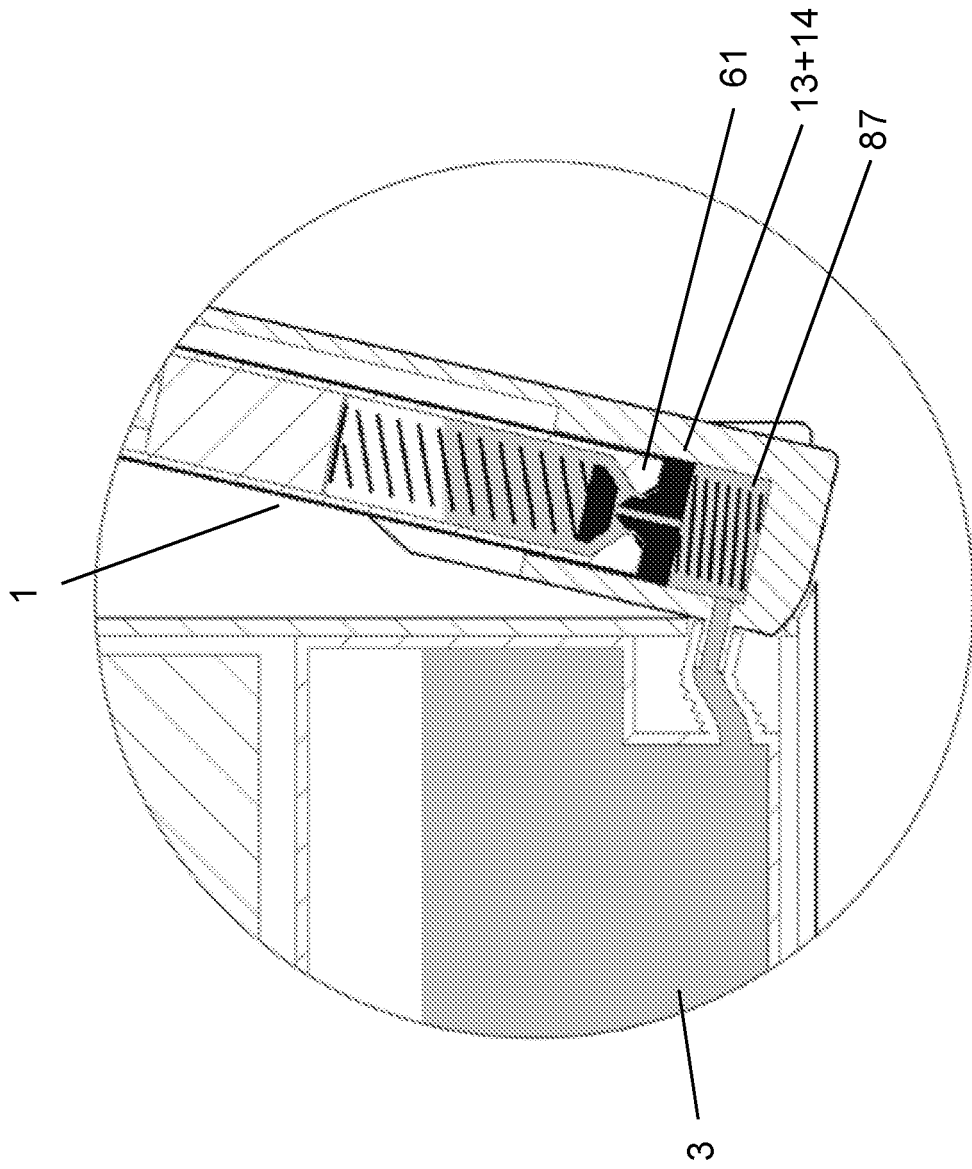


FIGURE 9

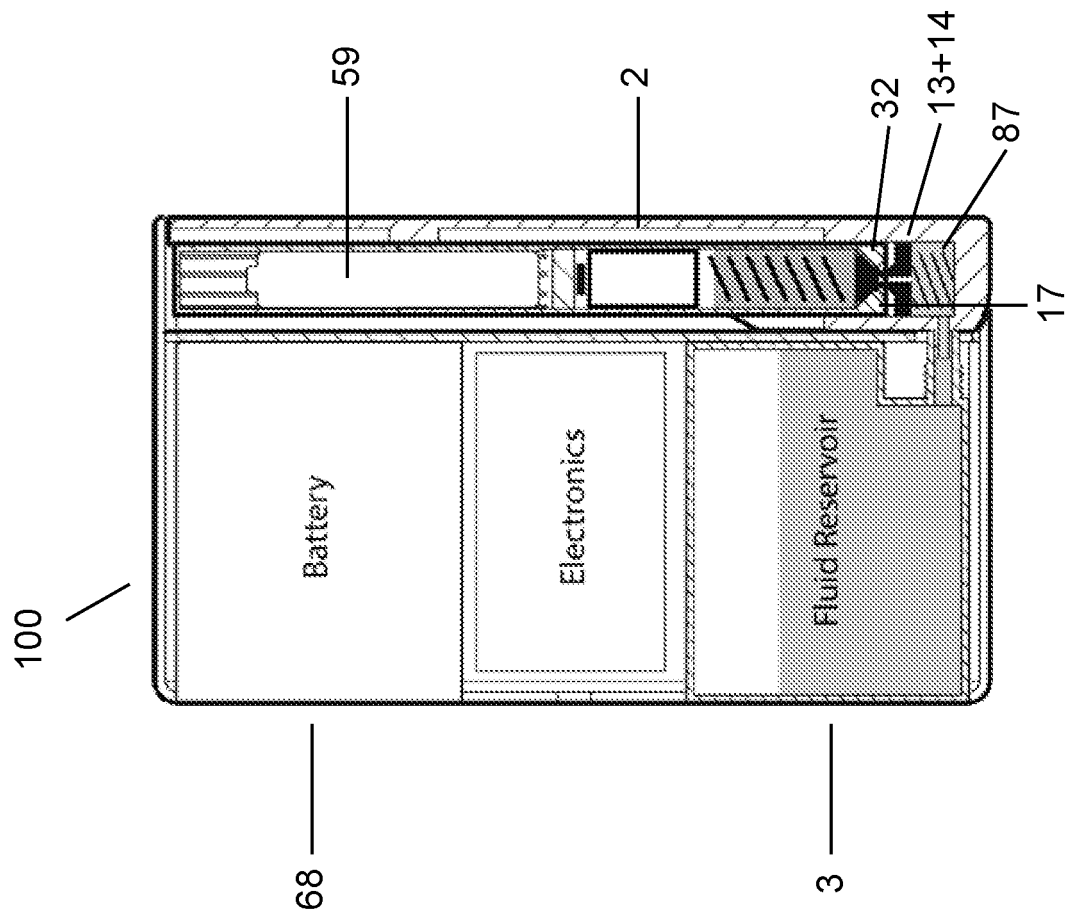


FIGURE 10

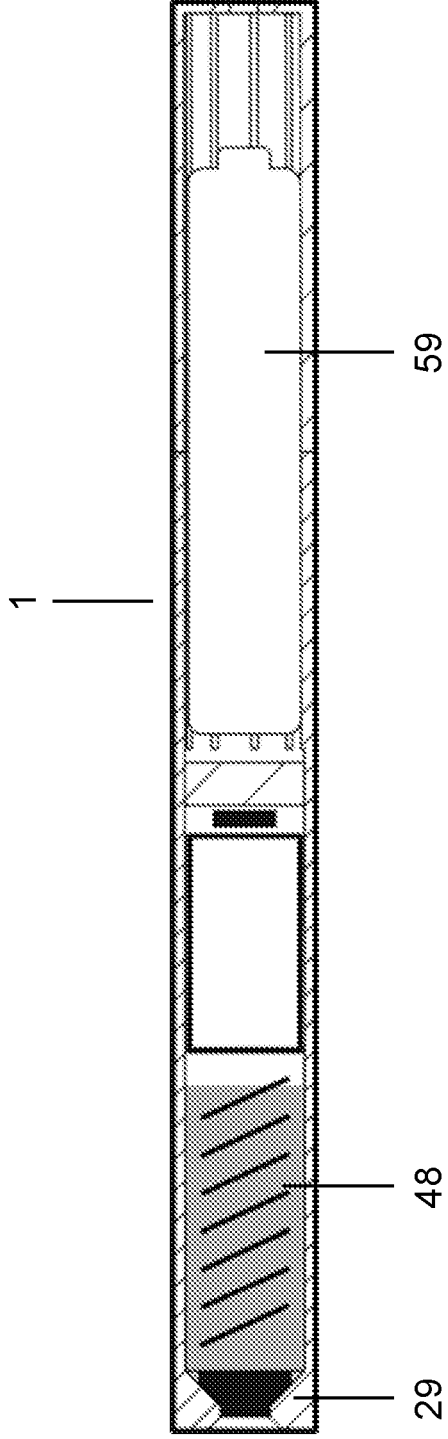


FIGURE 11

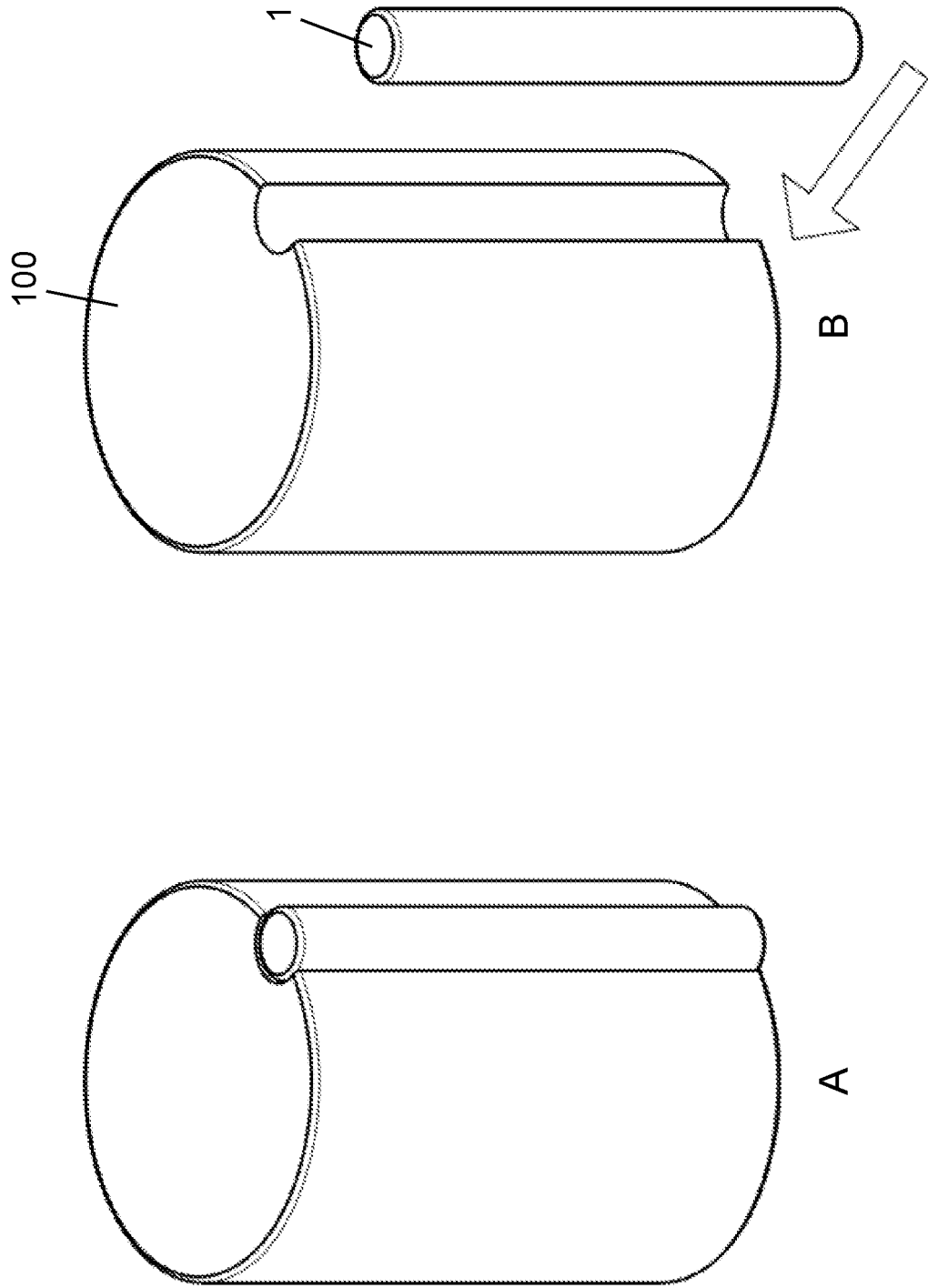


FIGURE 12

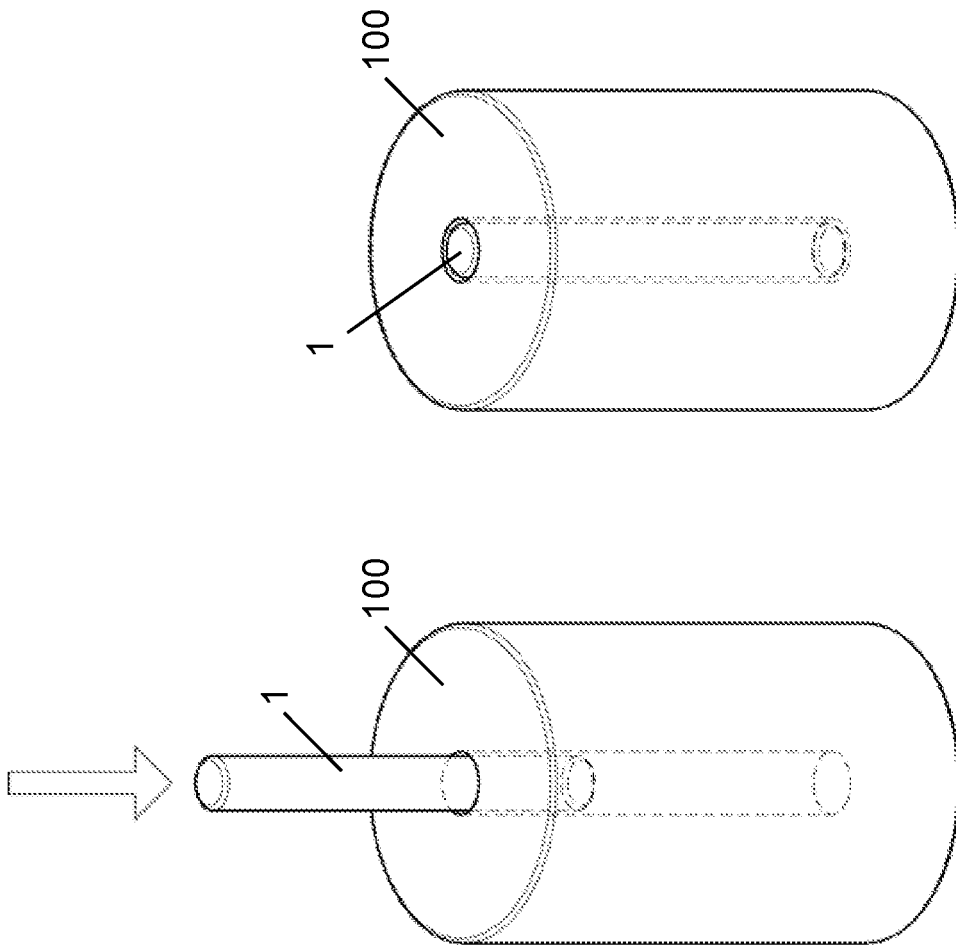


FIGURE 13

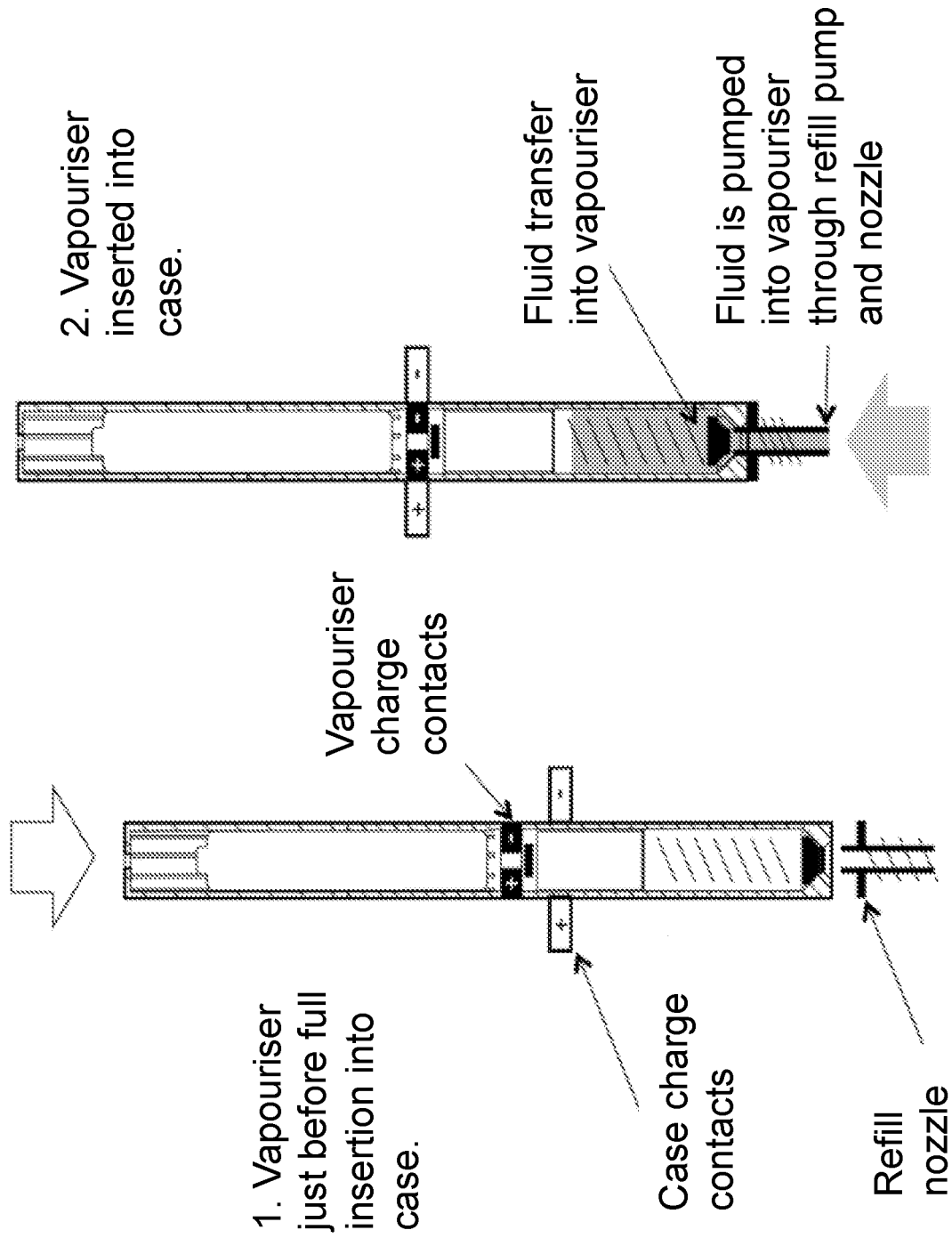


FIGURE 14

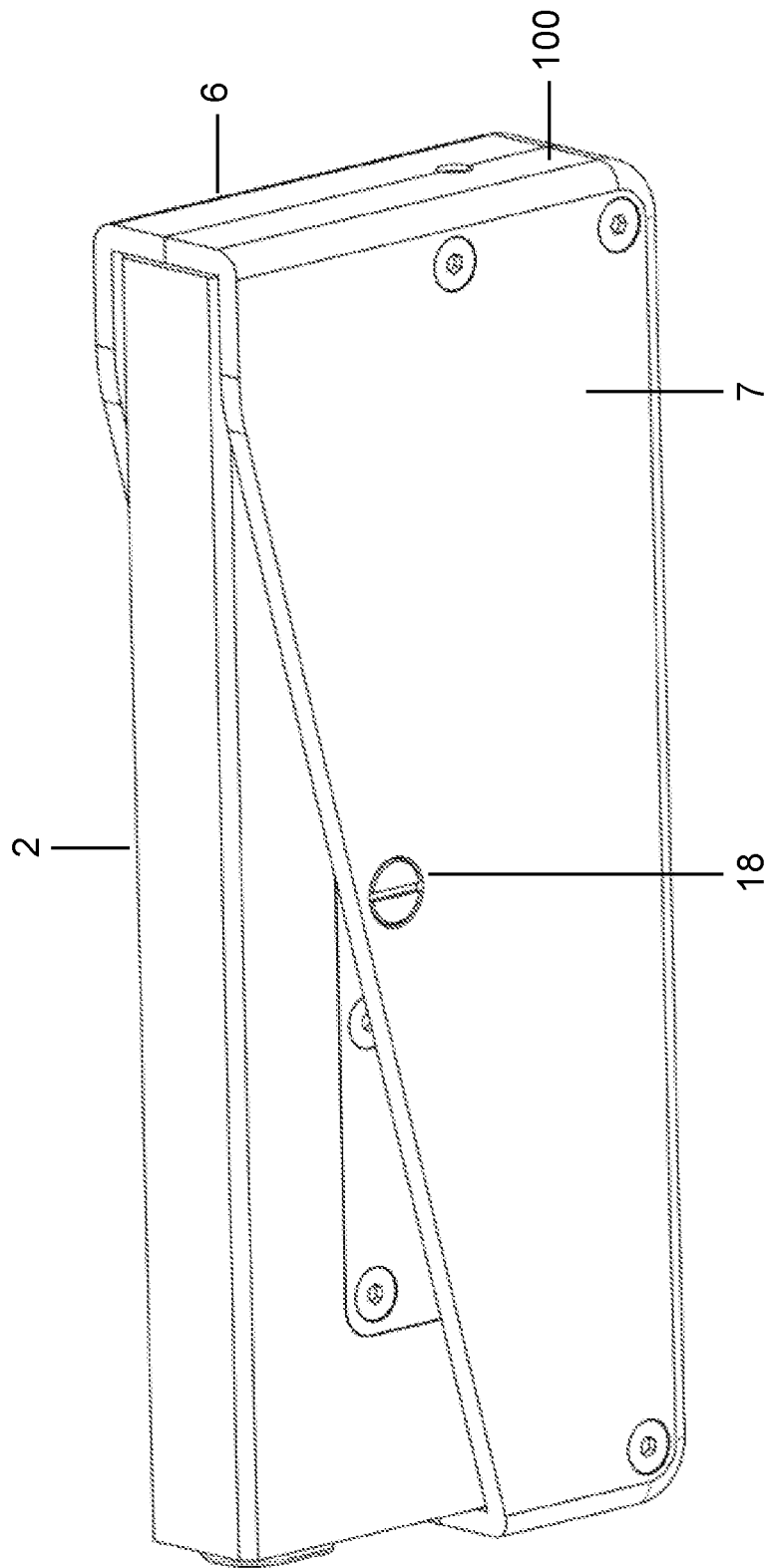


FIGURE 20

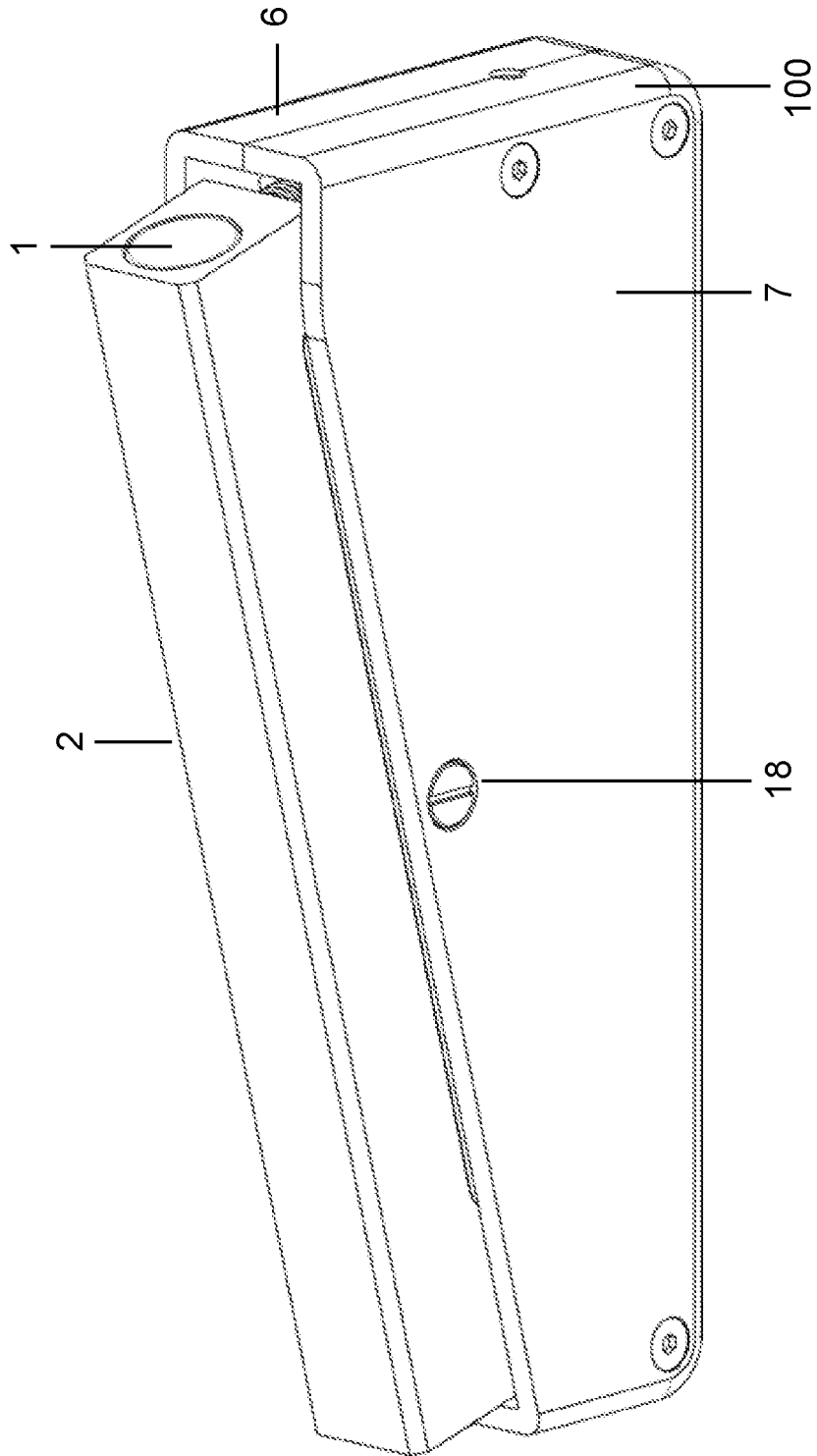


FIGURE 21

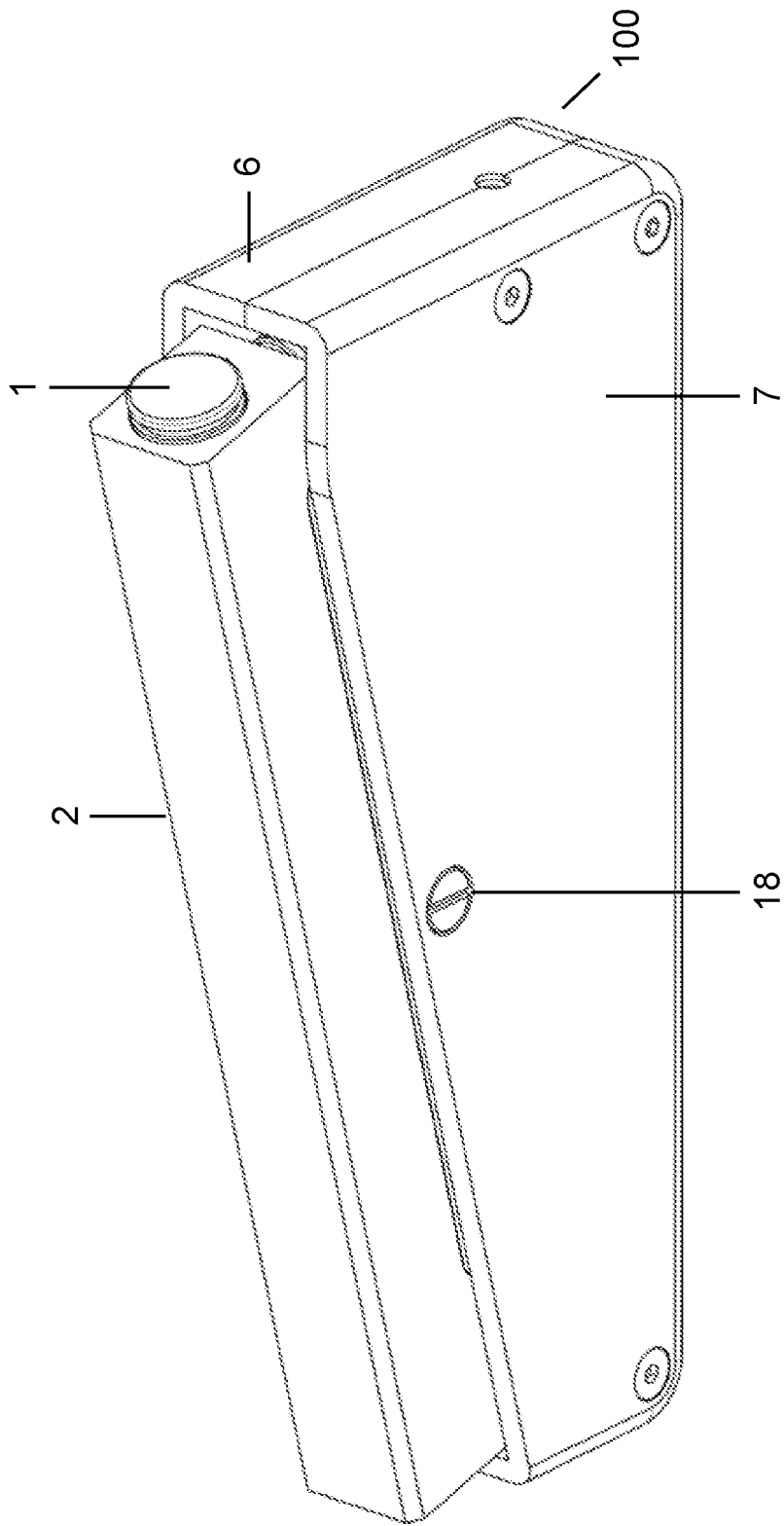


FIGURE 22

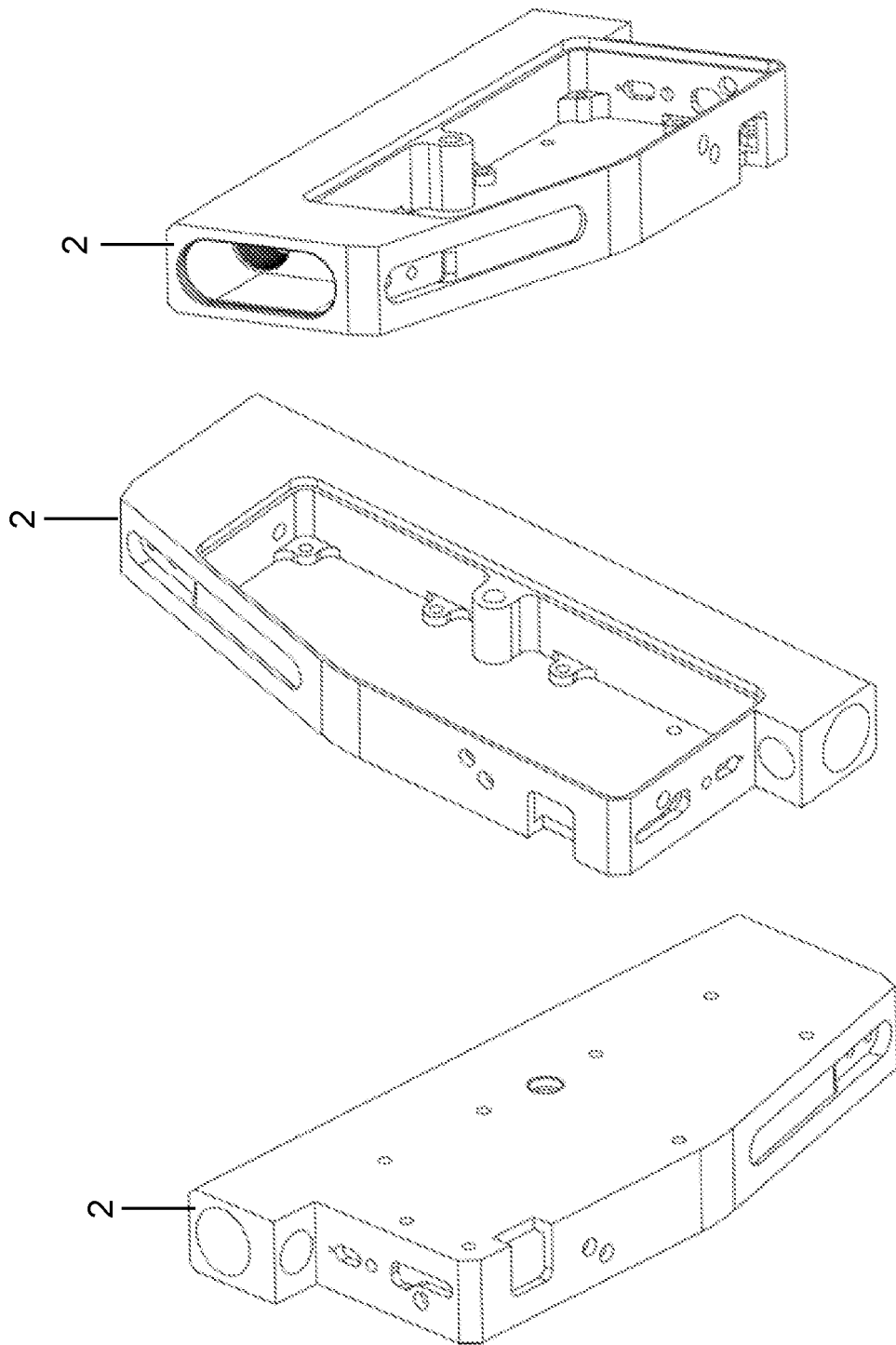


FIGURE 23

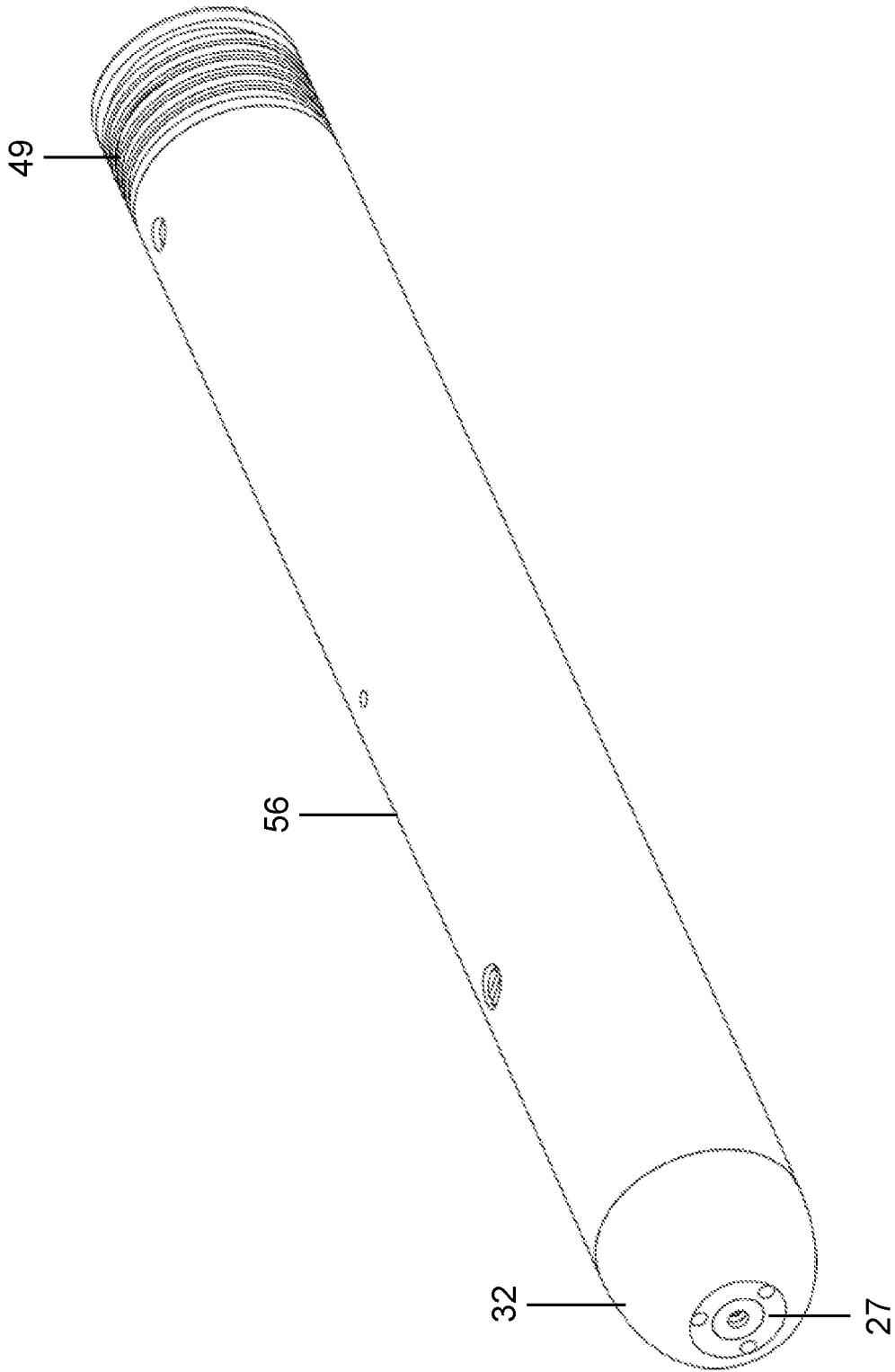


FIGURE 24

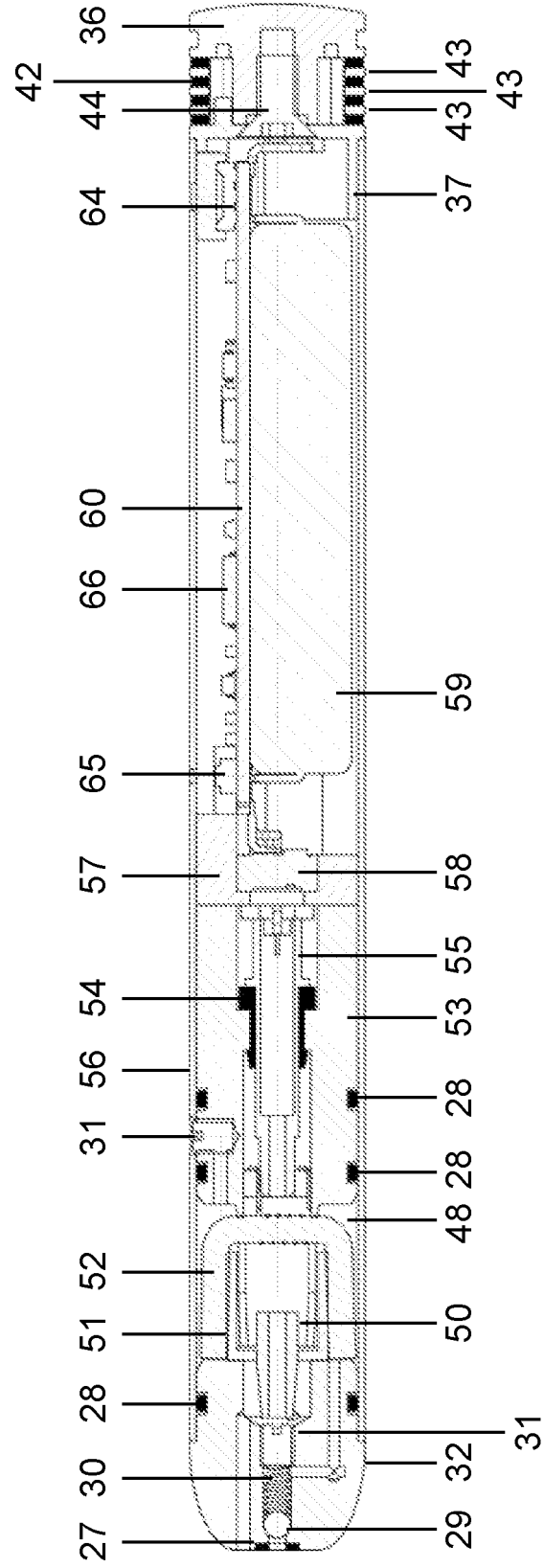


FIGURE 25

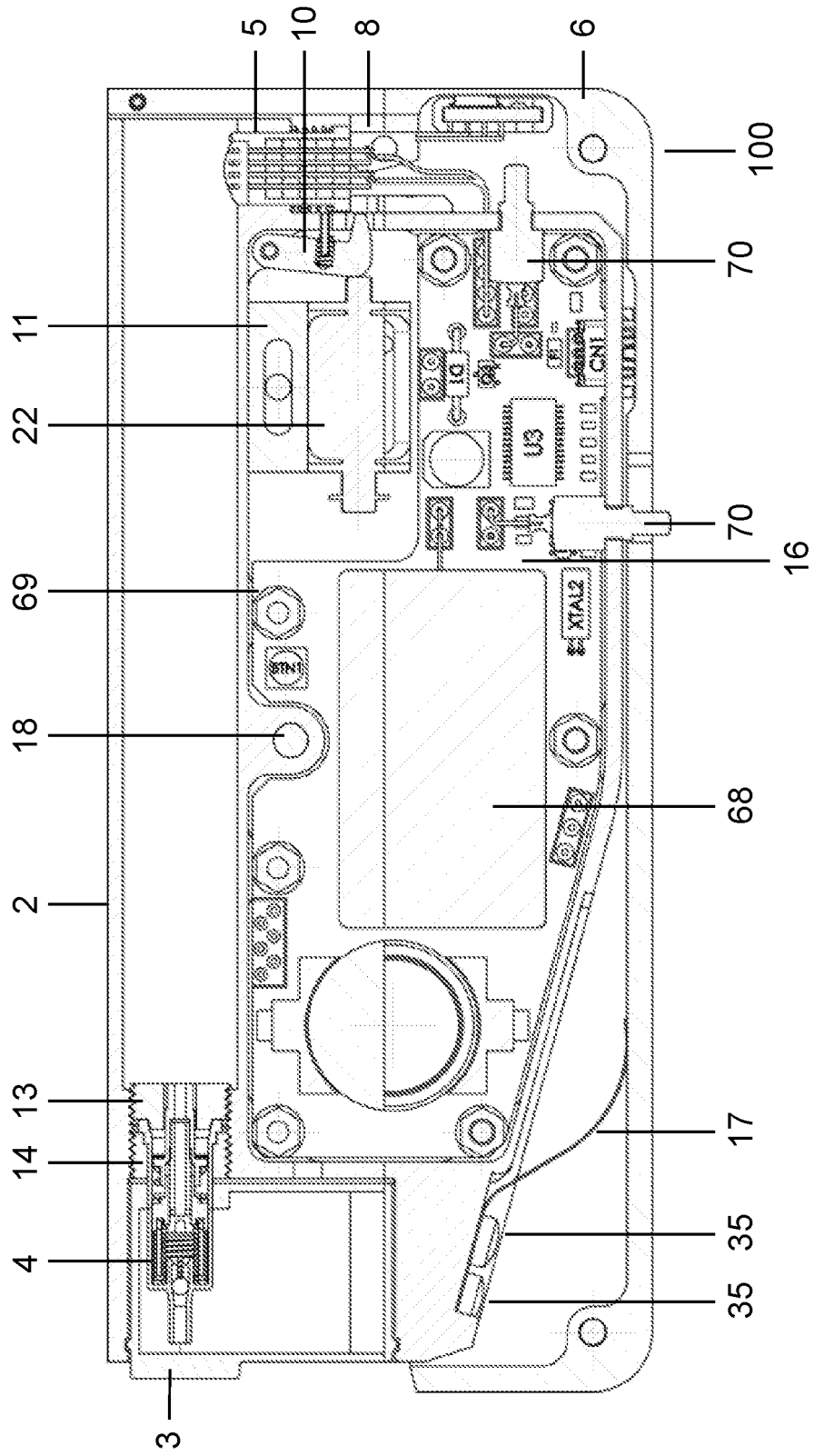


FIGURE 26

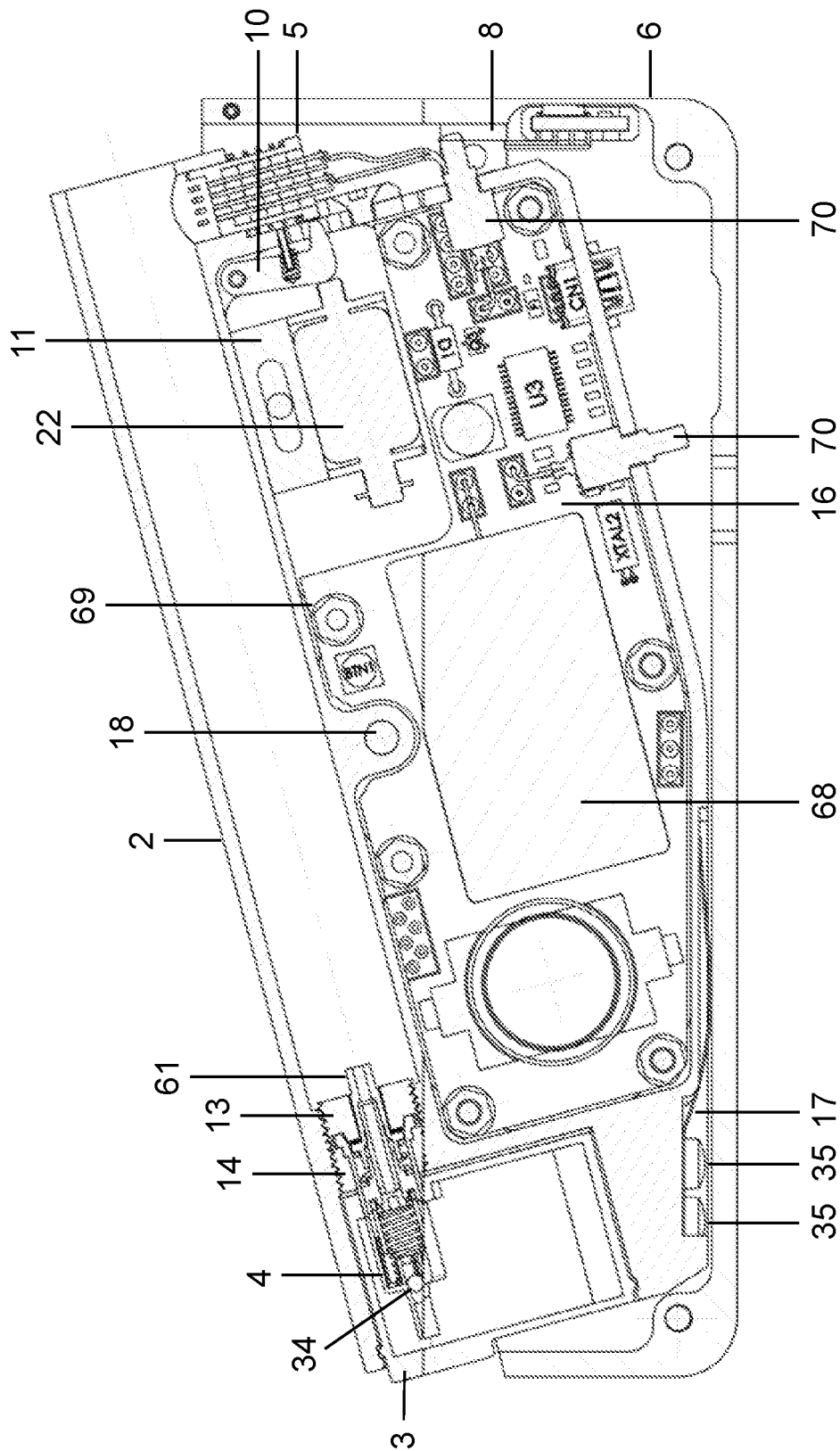


FIGURE 27

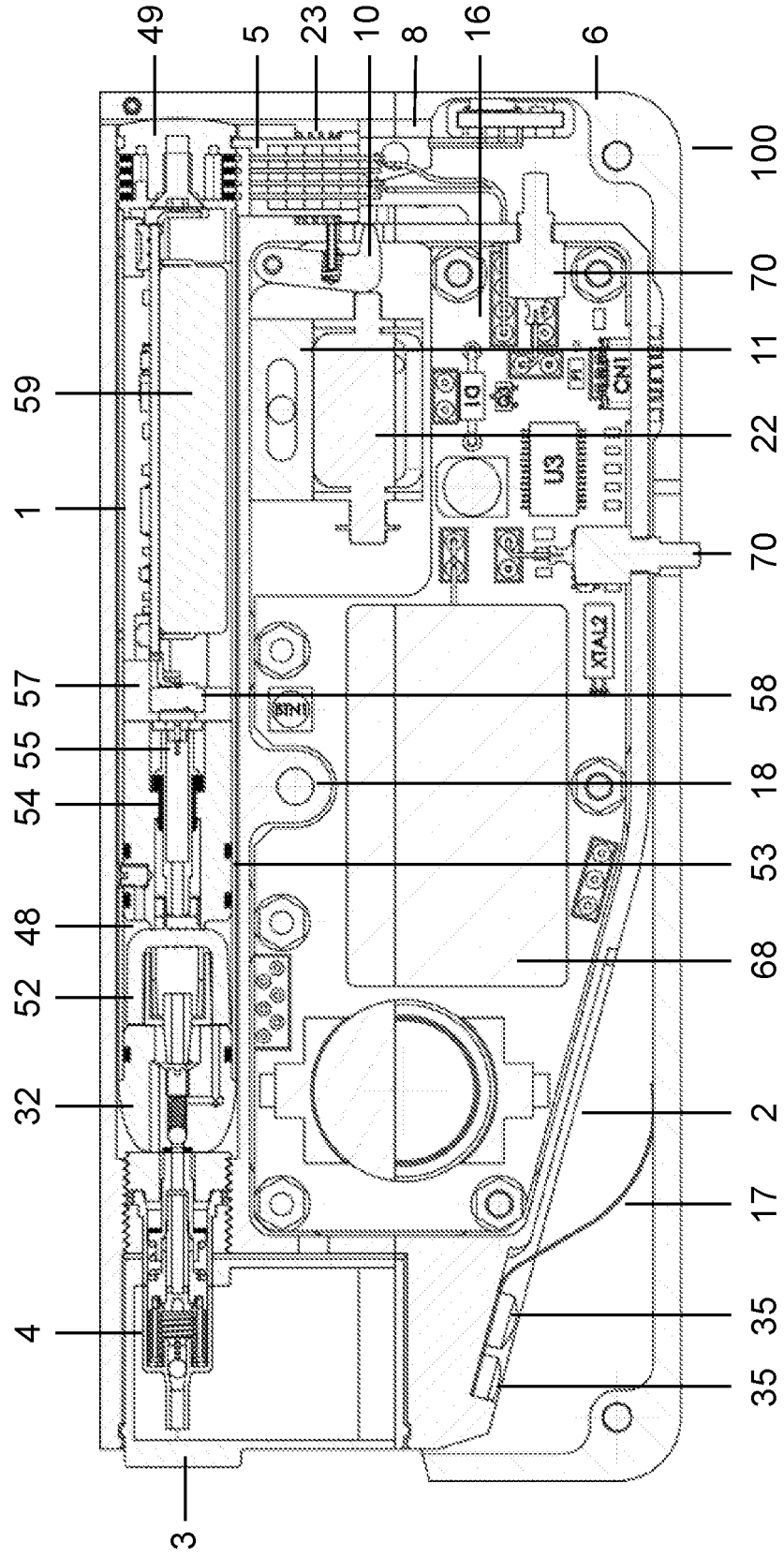


FIGURE 28

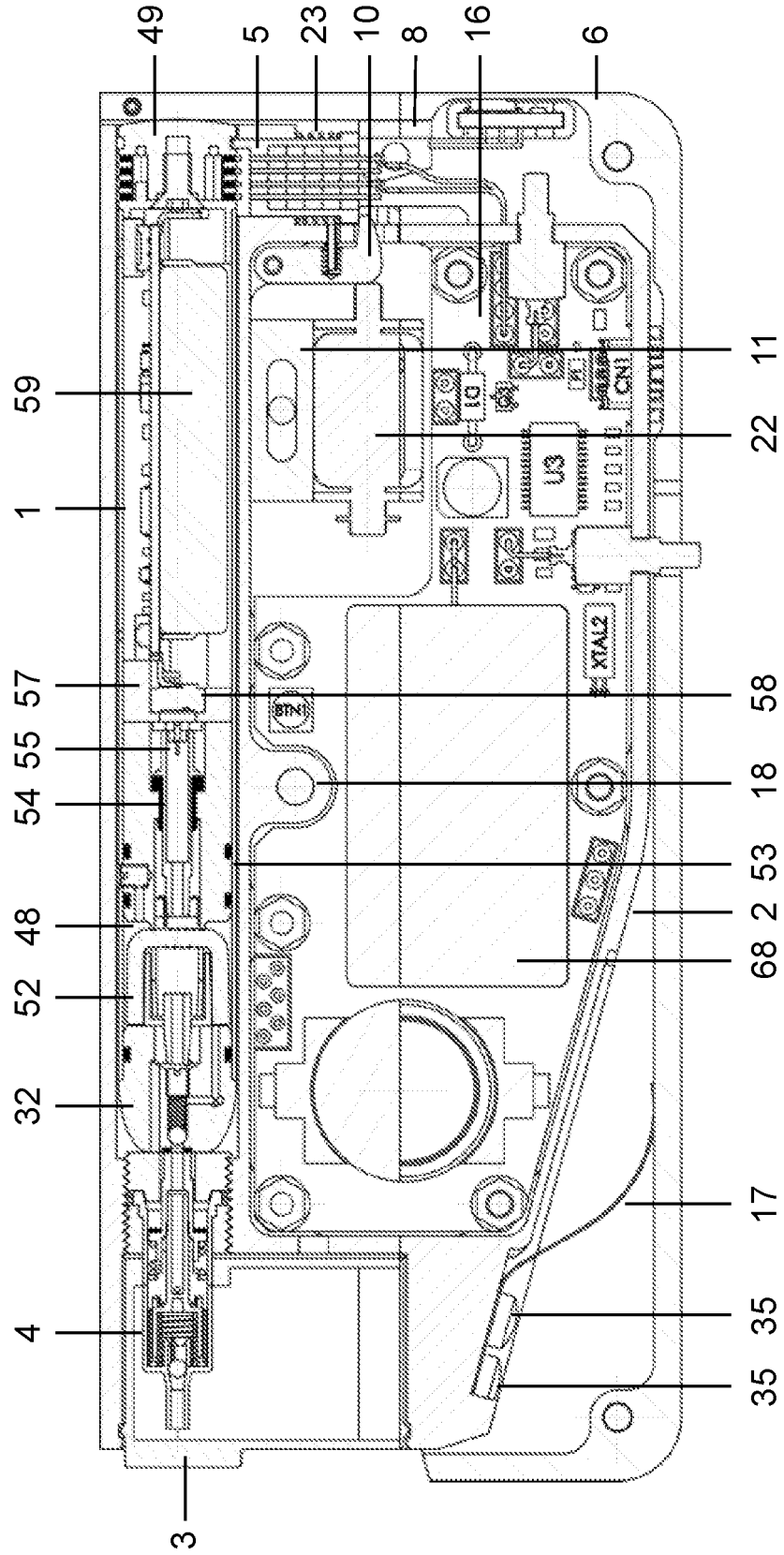


FIGURE 29

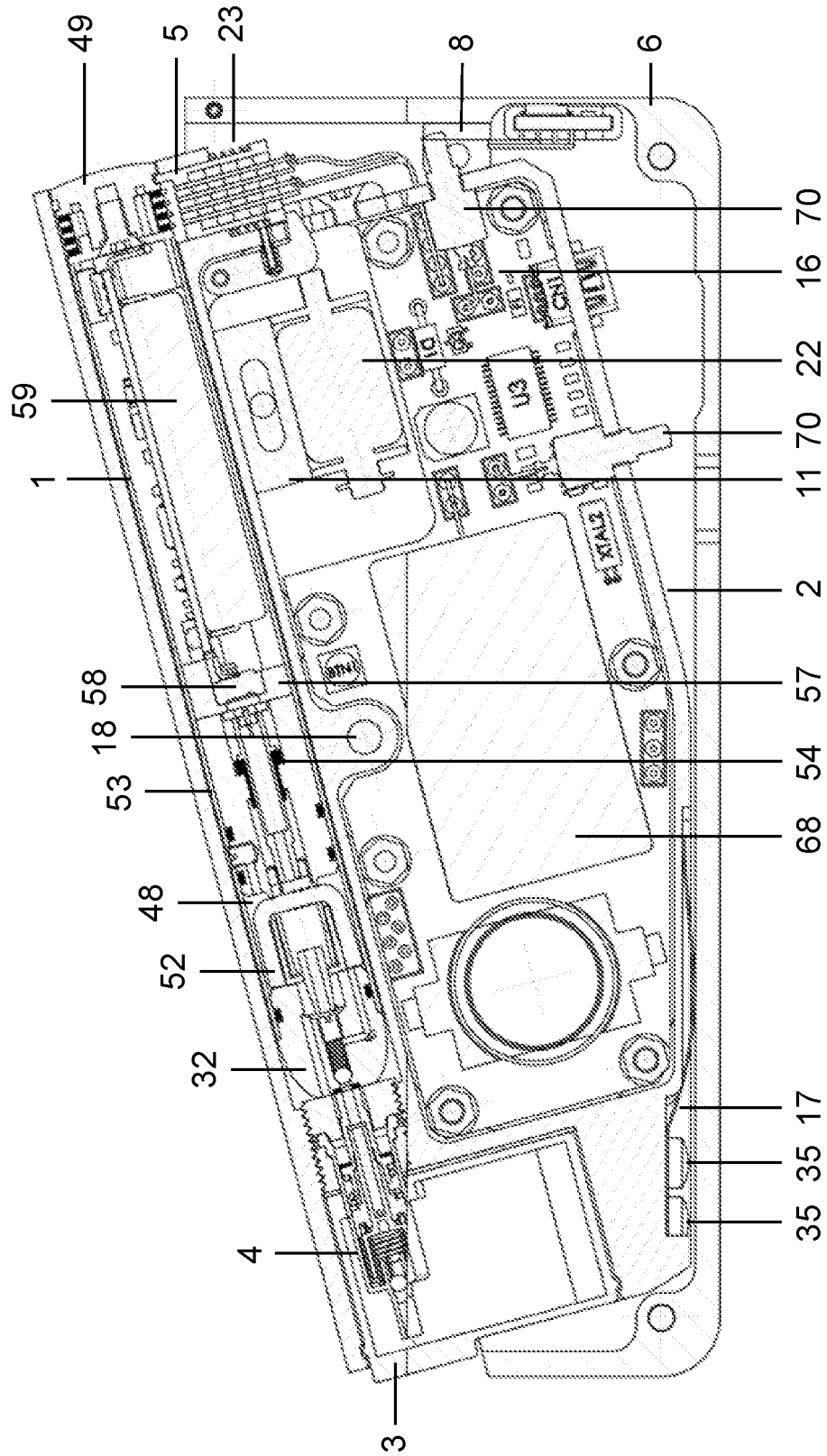


FIGURE 30

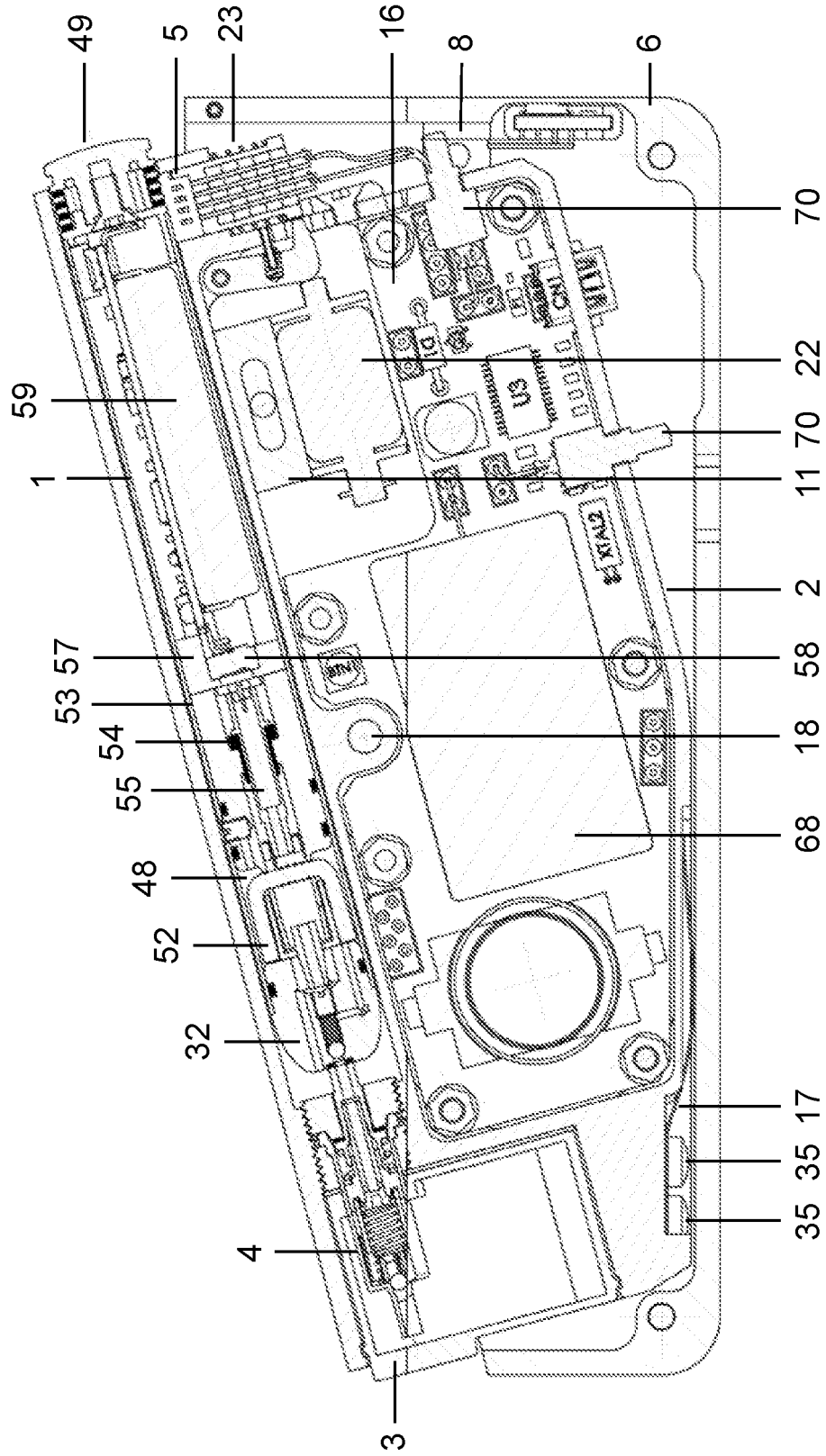


FIGURE 31

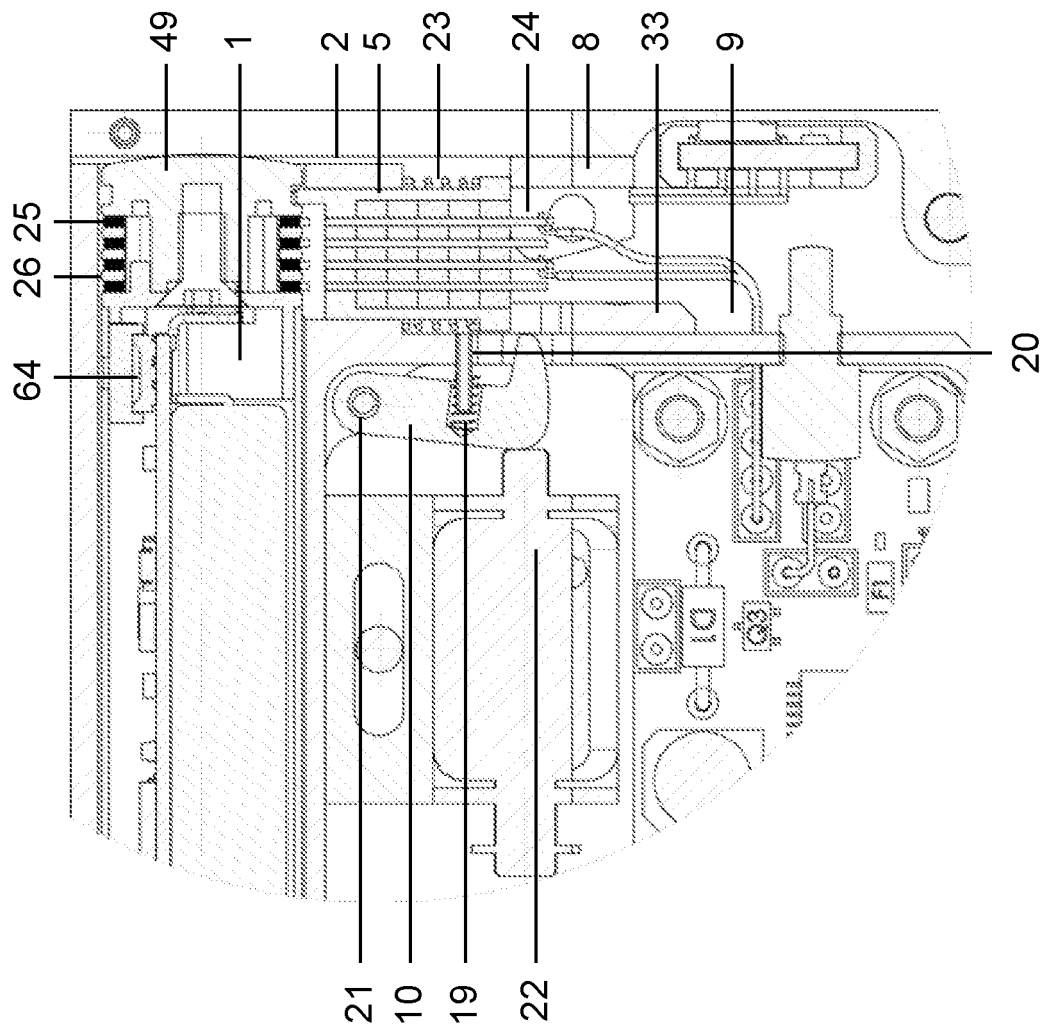


FIGURE 32

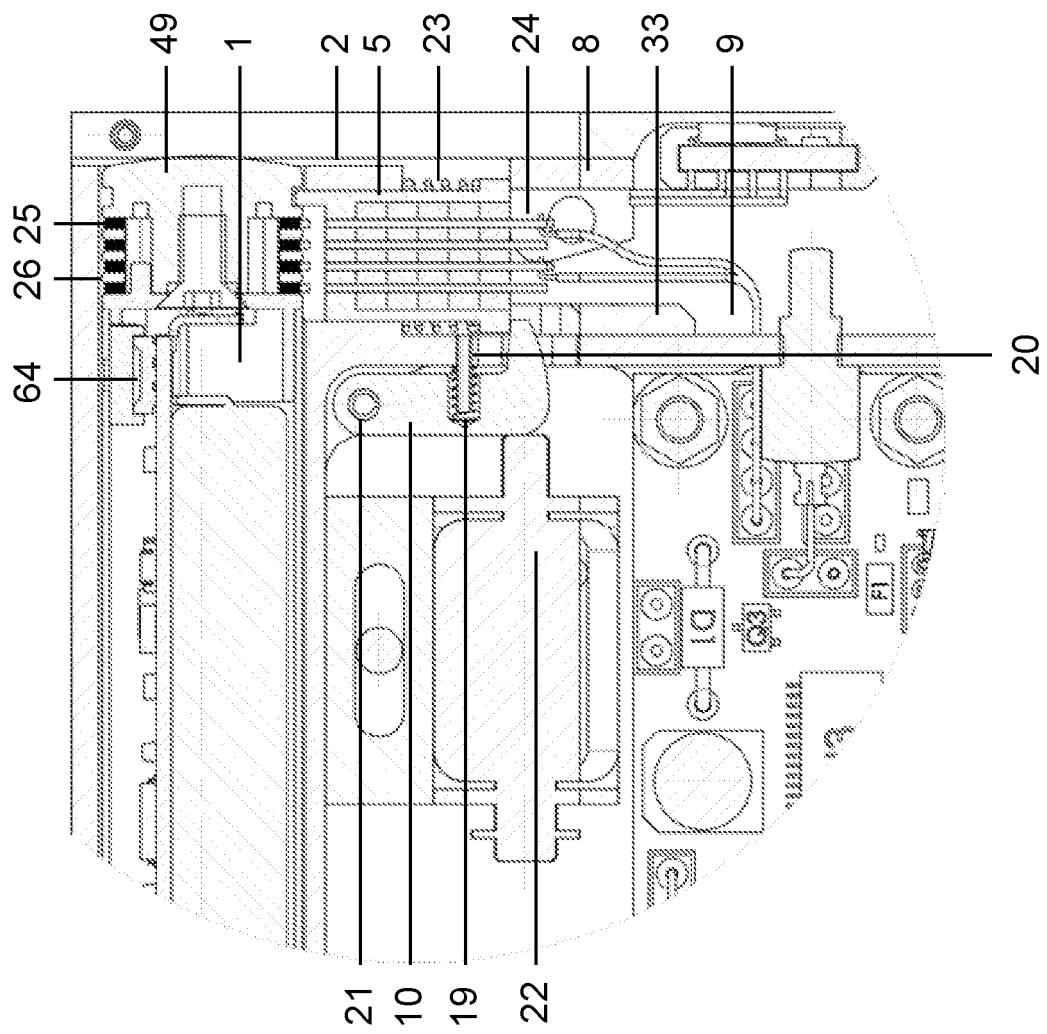


FIGURE 33

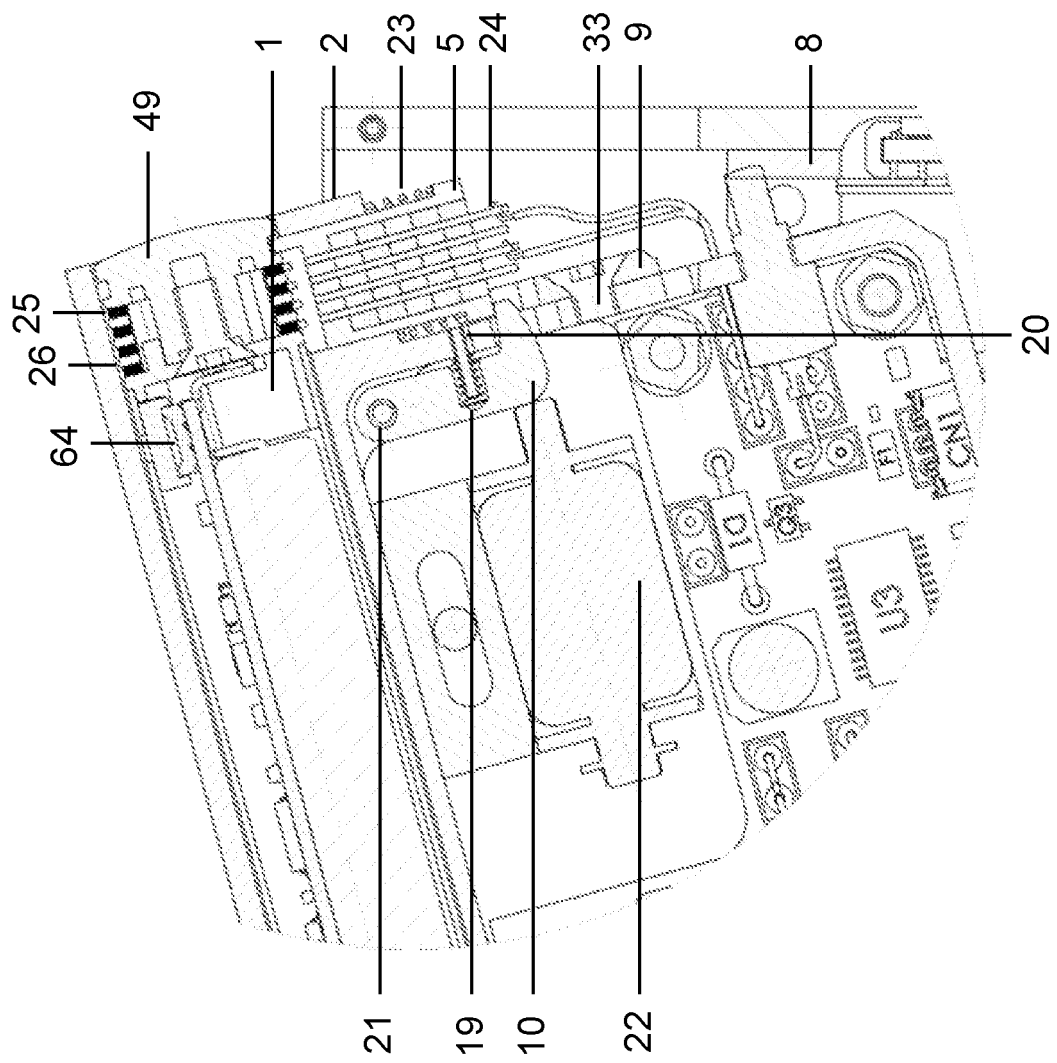


FIGURE 34

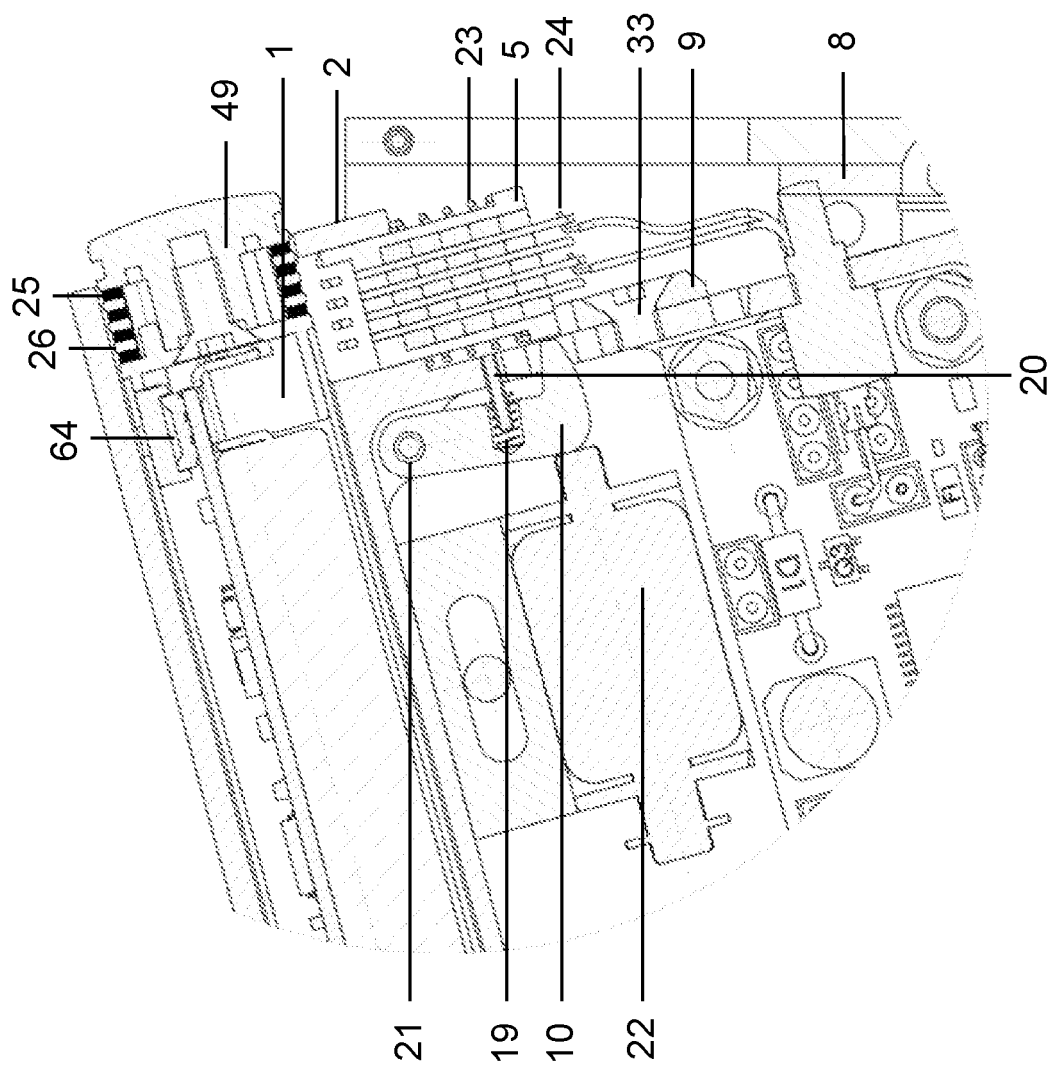


FIGURE 35

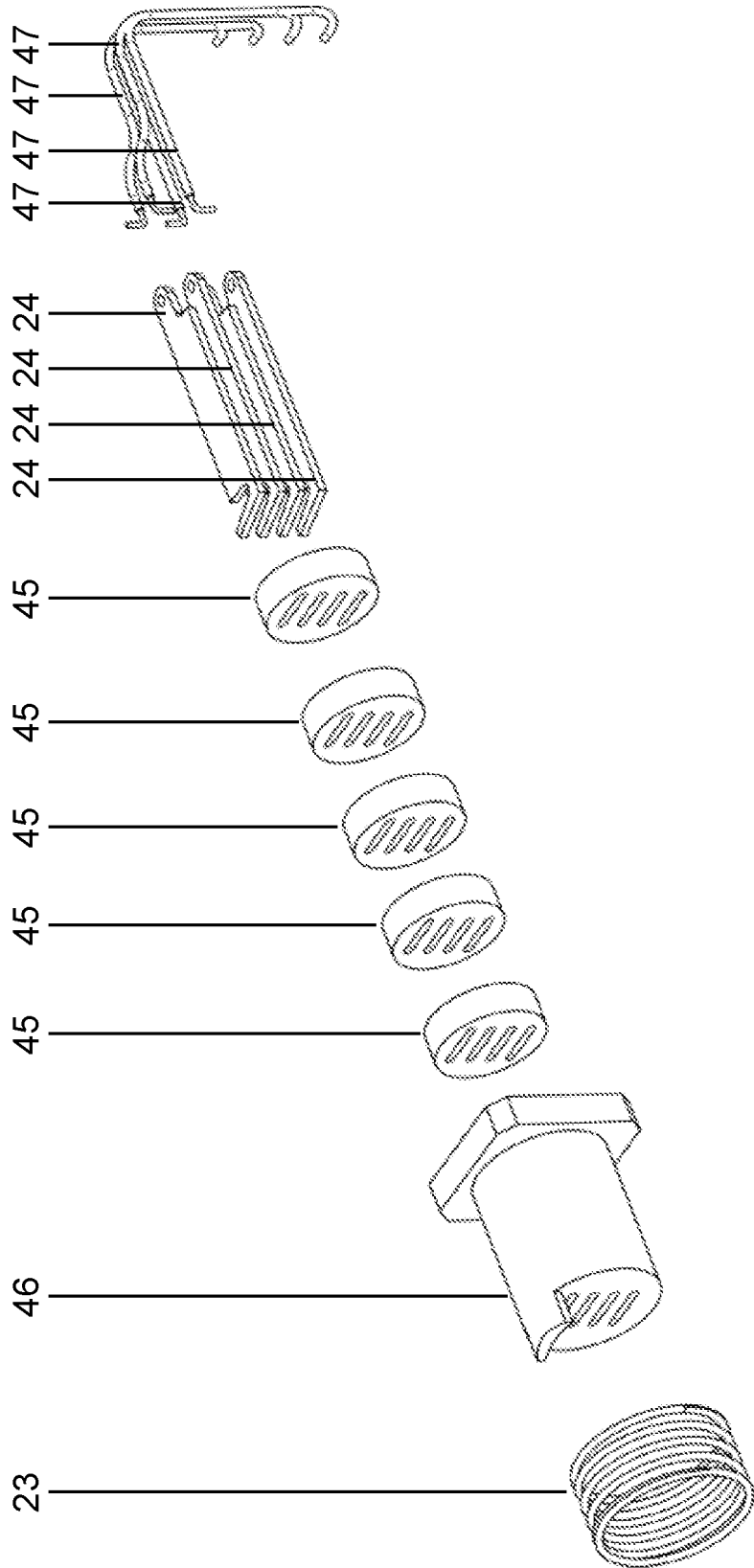


FIGURE 36

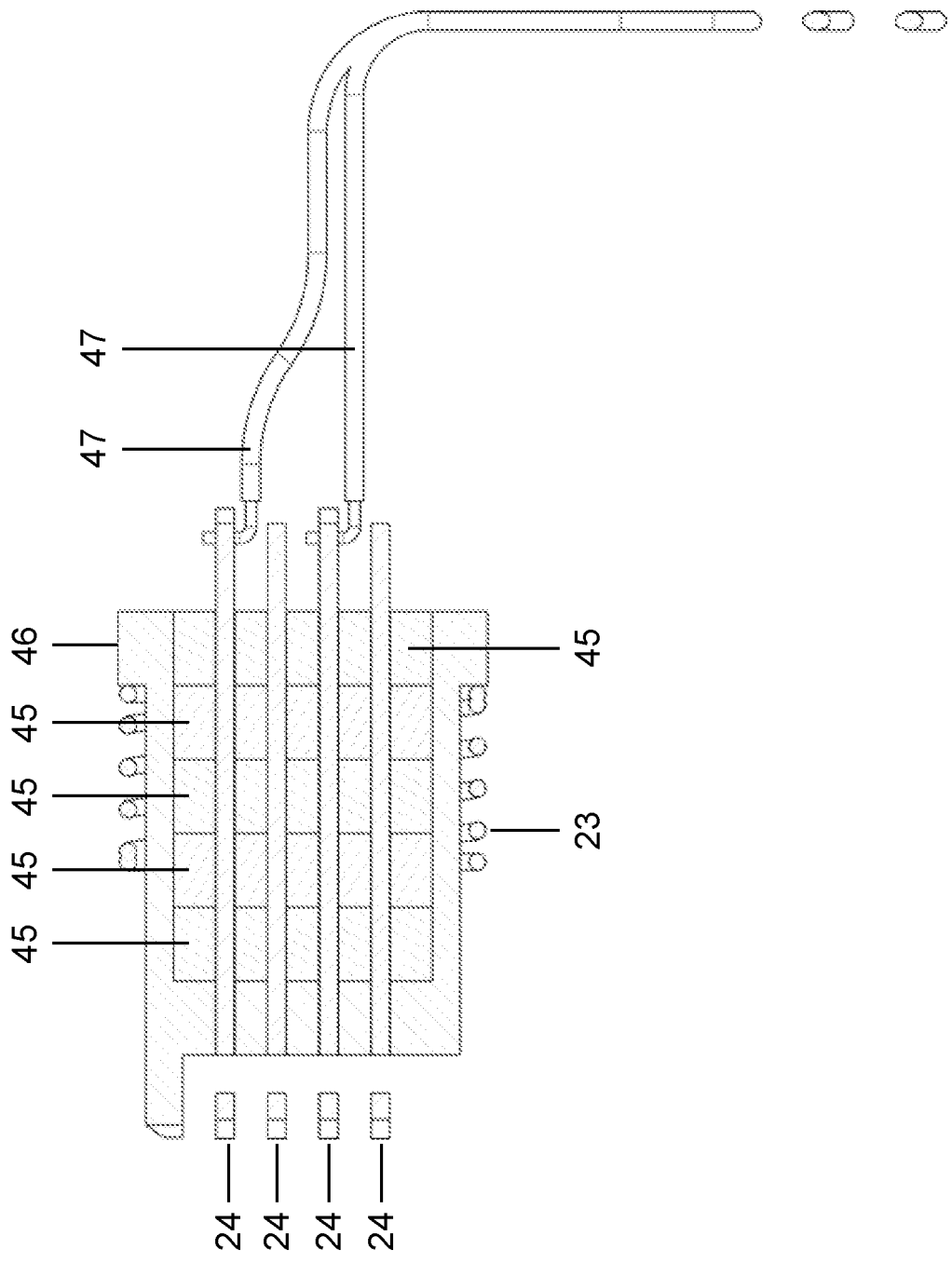


FIGURE 37A

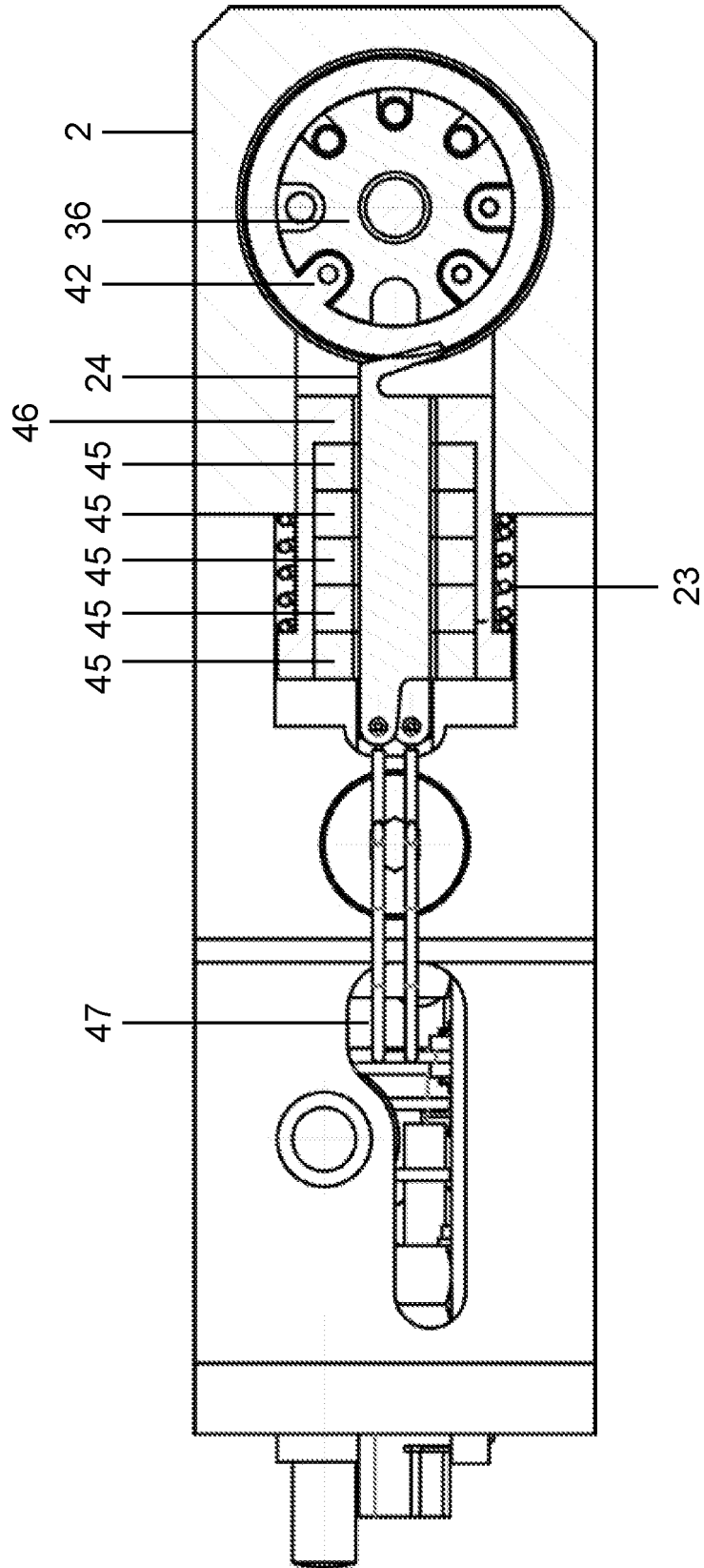


FIGURE 37B

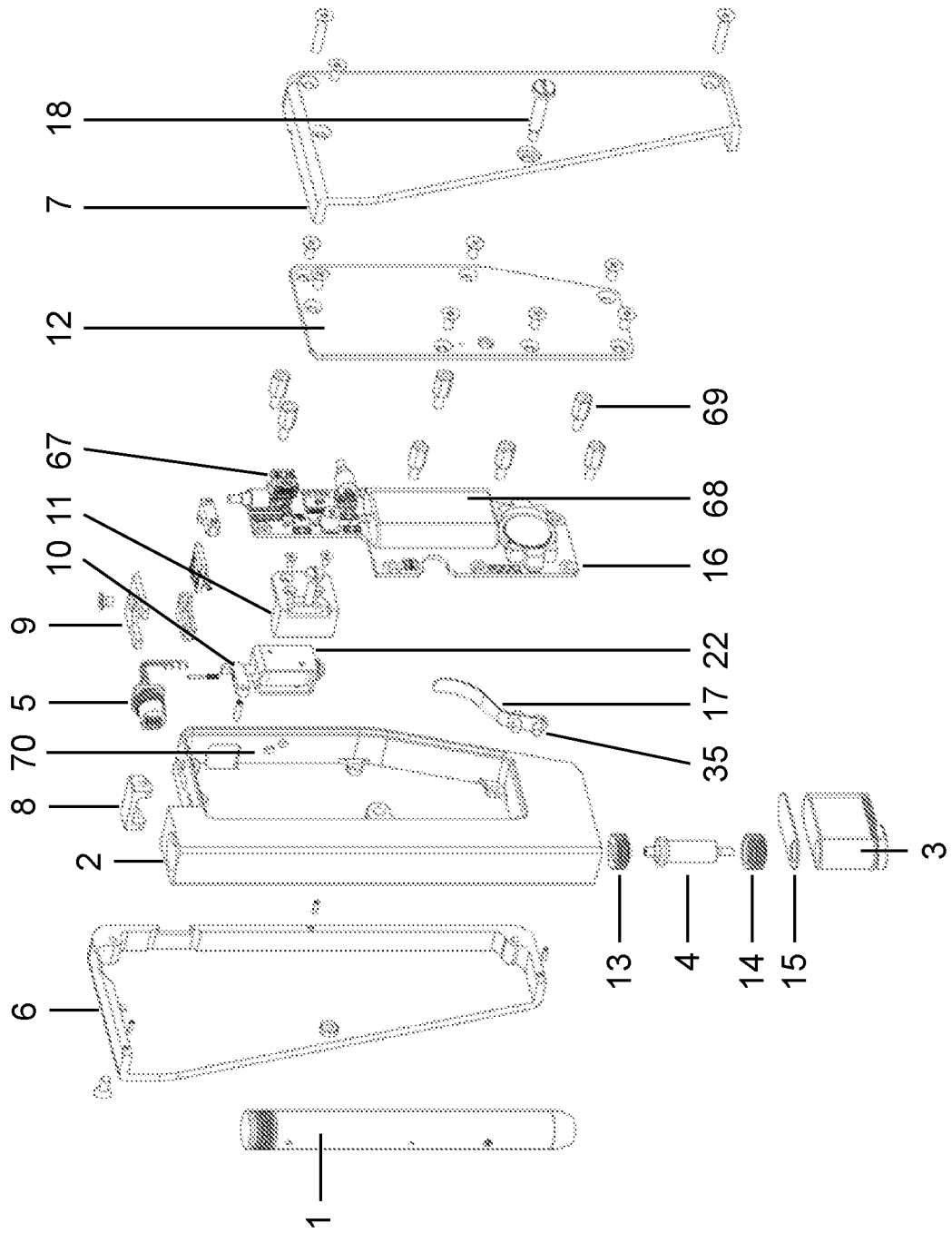


FIGURE 38

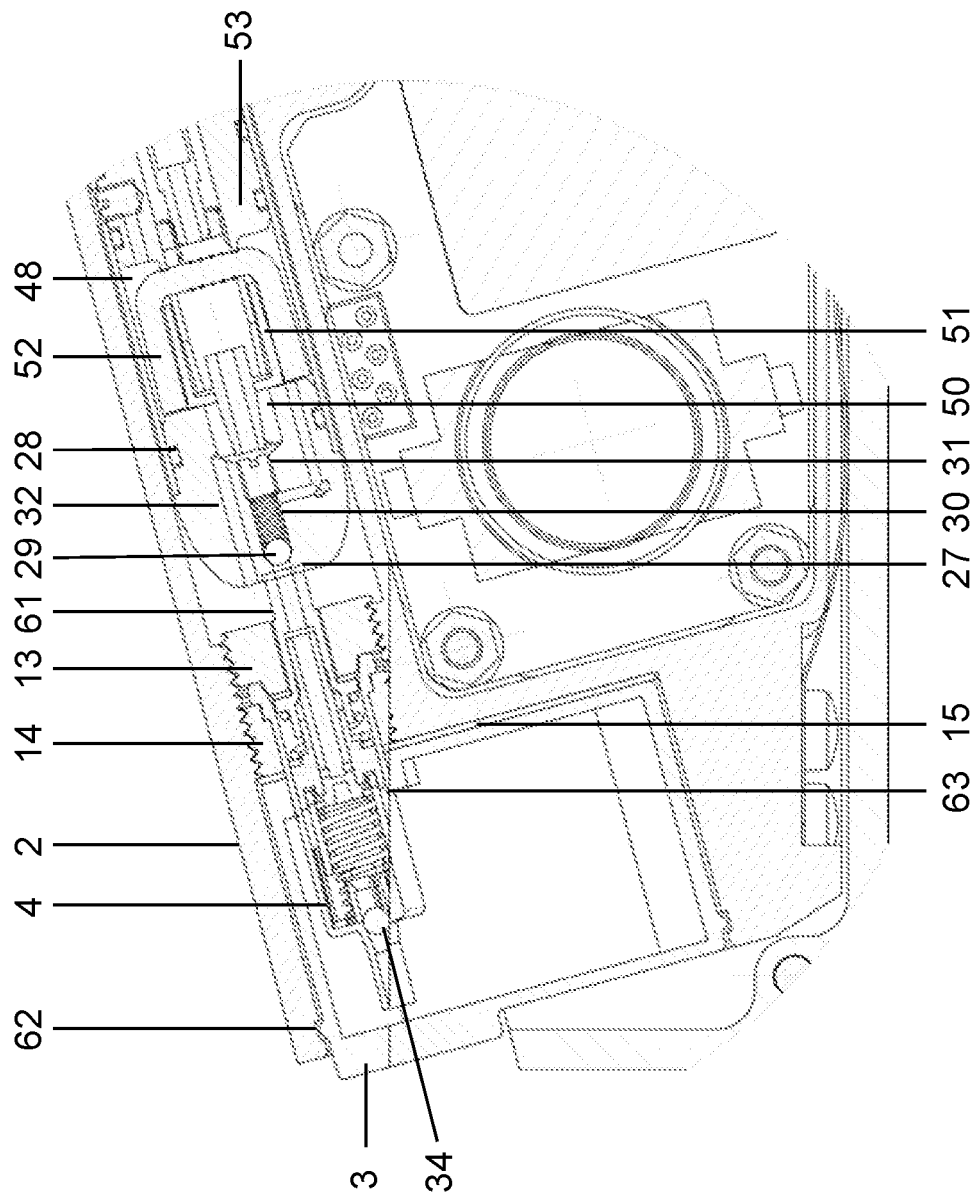


FIGURE 40

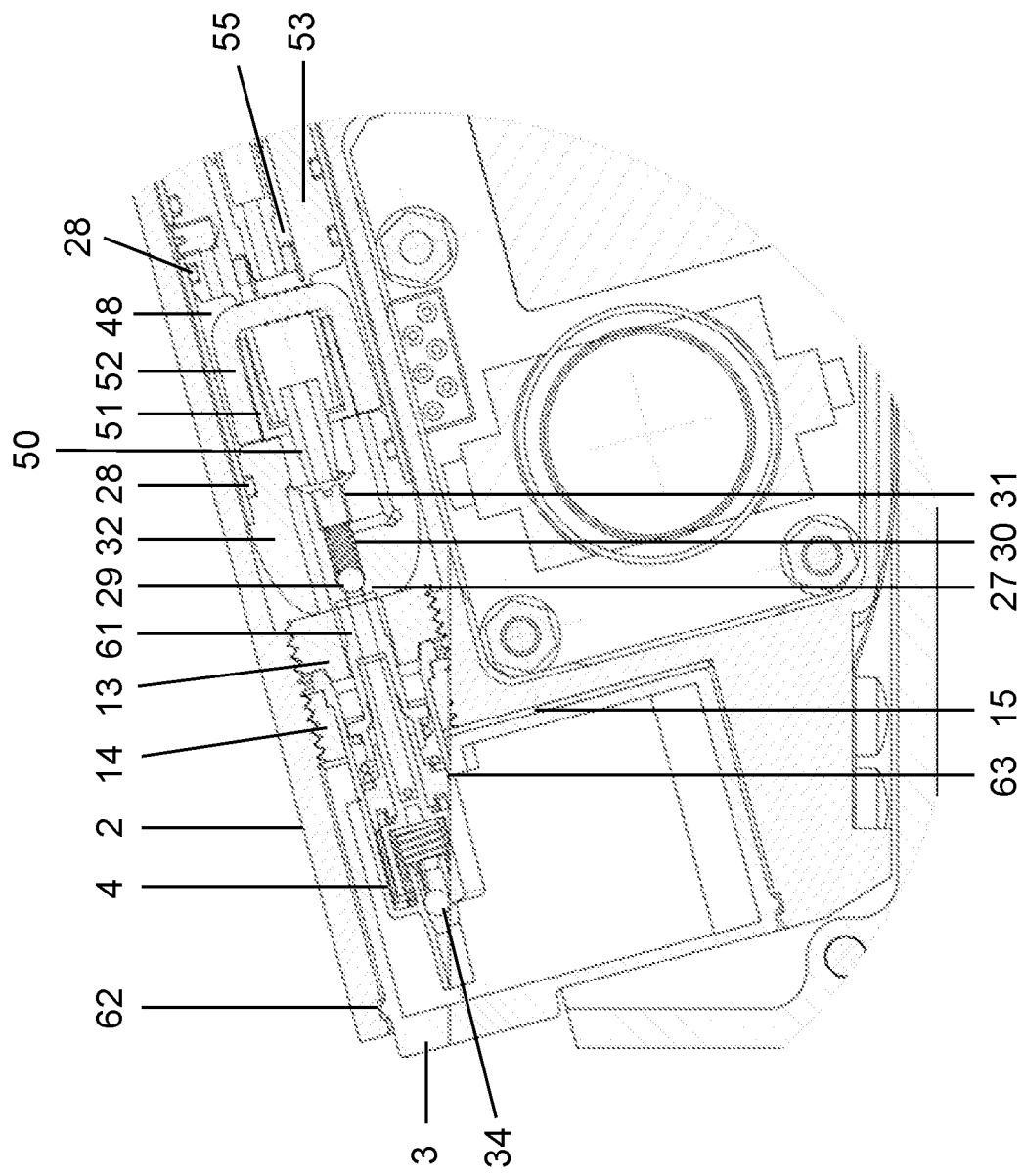


FIGURE 41

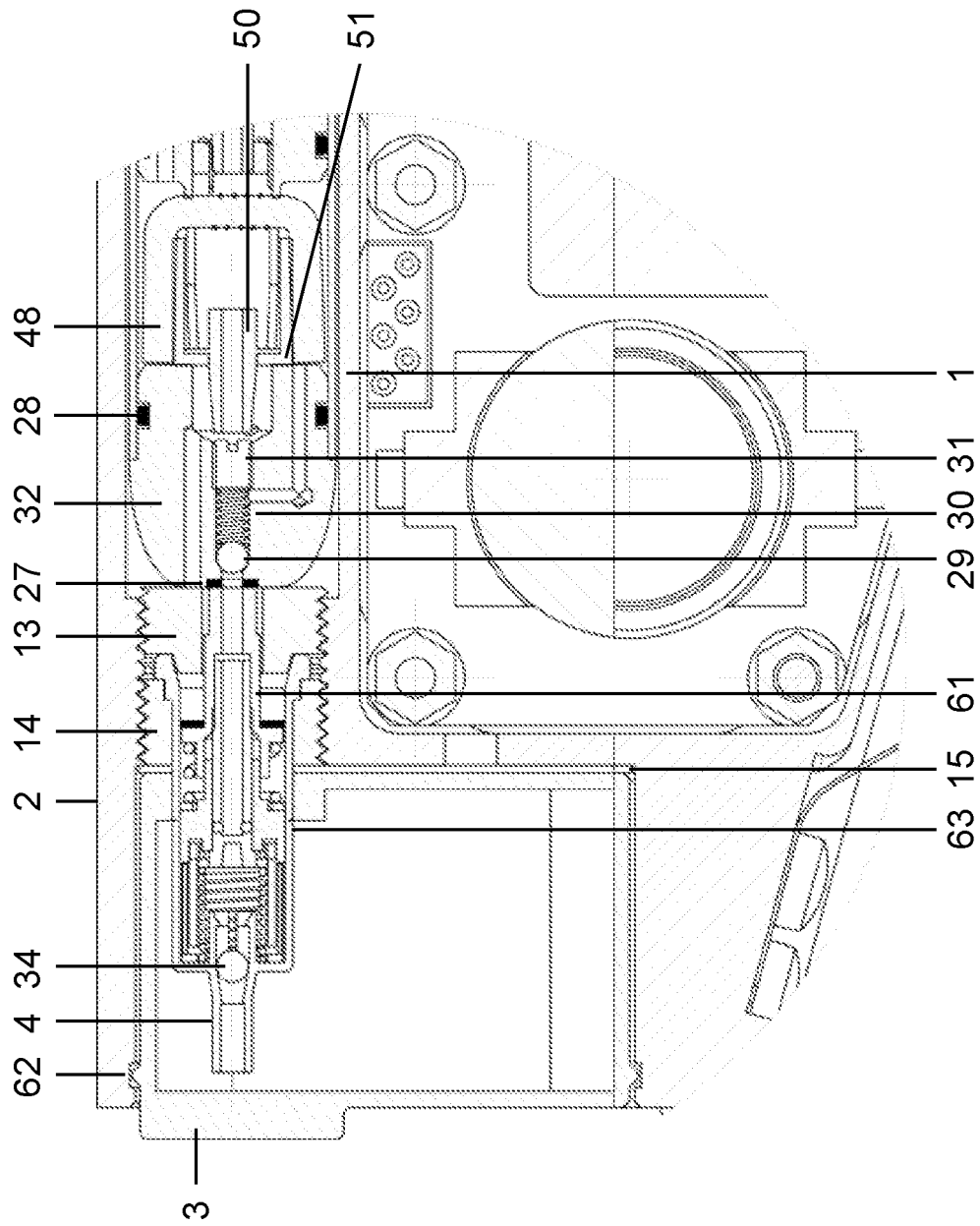


FIGURE 42

PUMP WITH PISTON ASSY IN “START” POSITION FLUID CHAMBER CHARGED

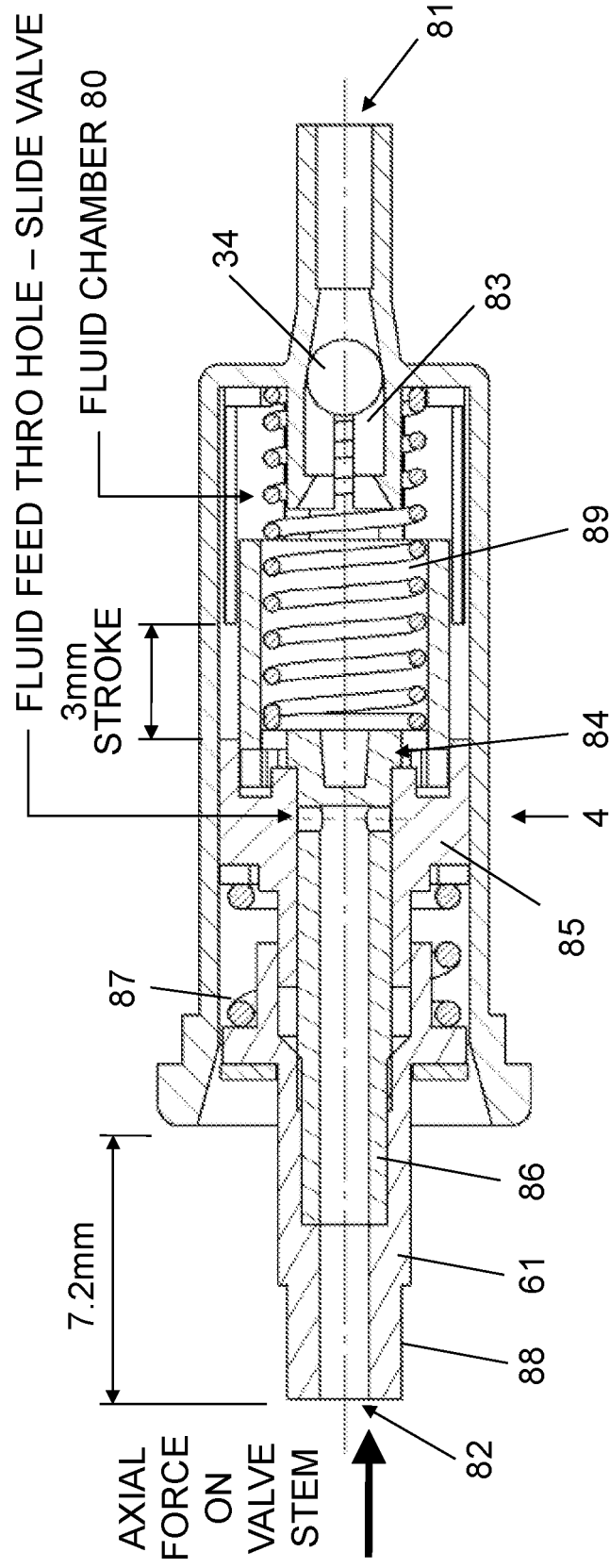


FIGURE 50

PUMP WITH FEED THRO HOLE IN “OPEN” POSITION

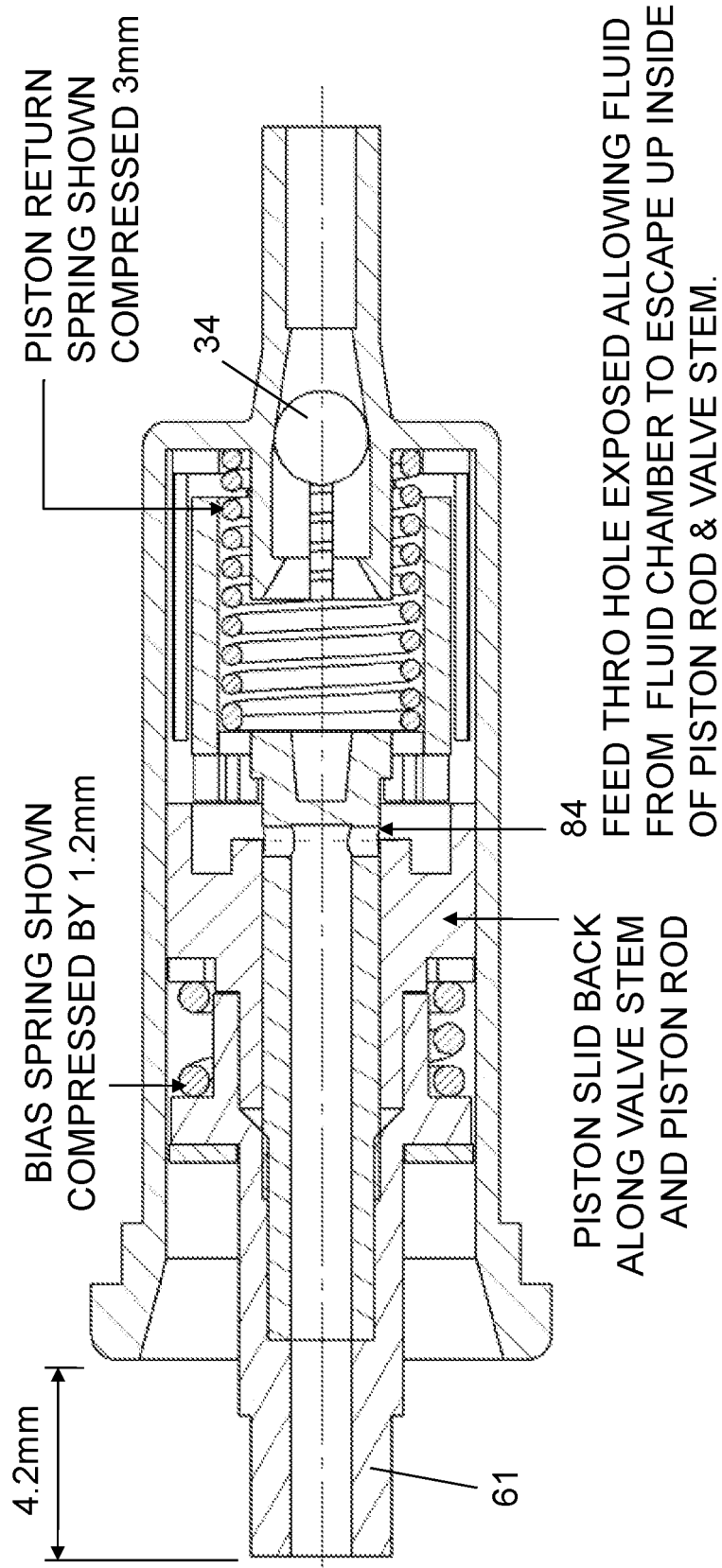
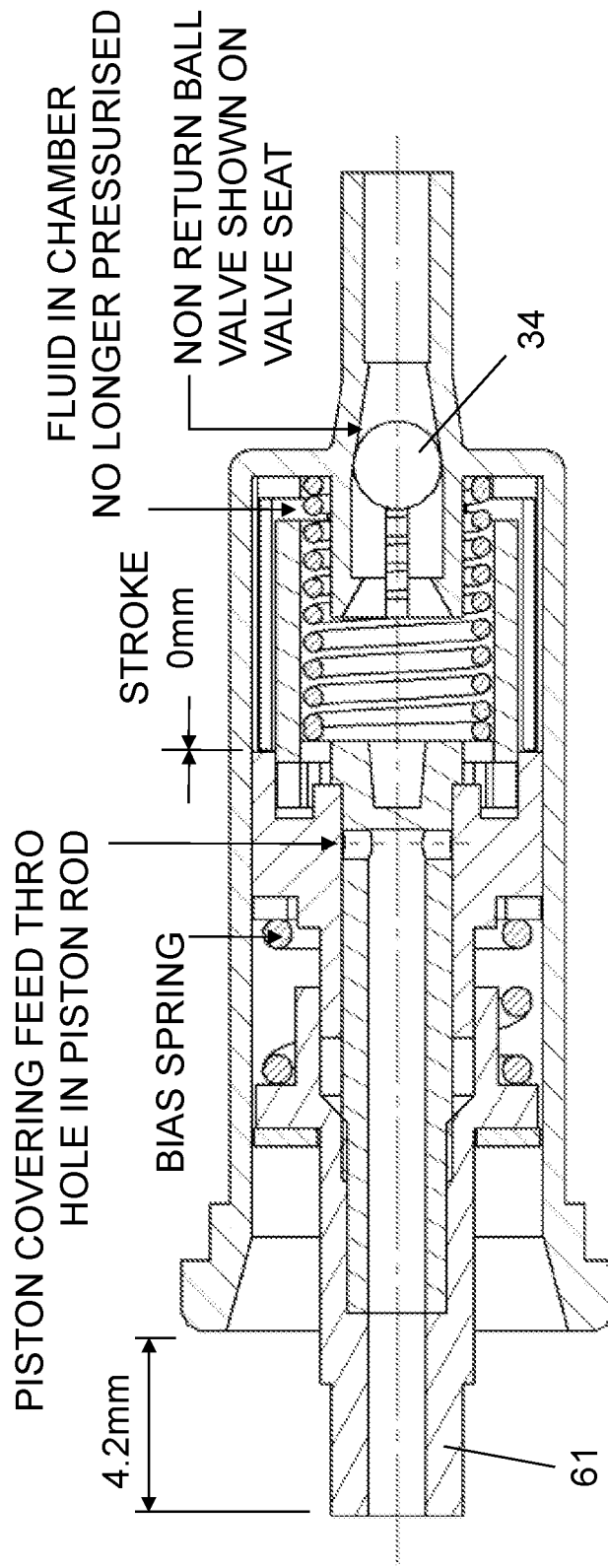


FIGURE 51

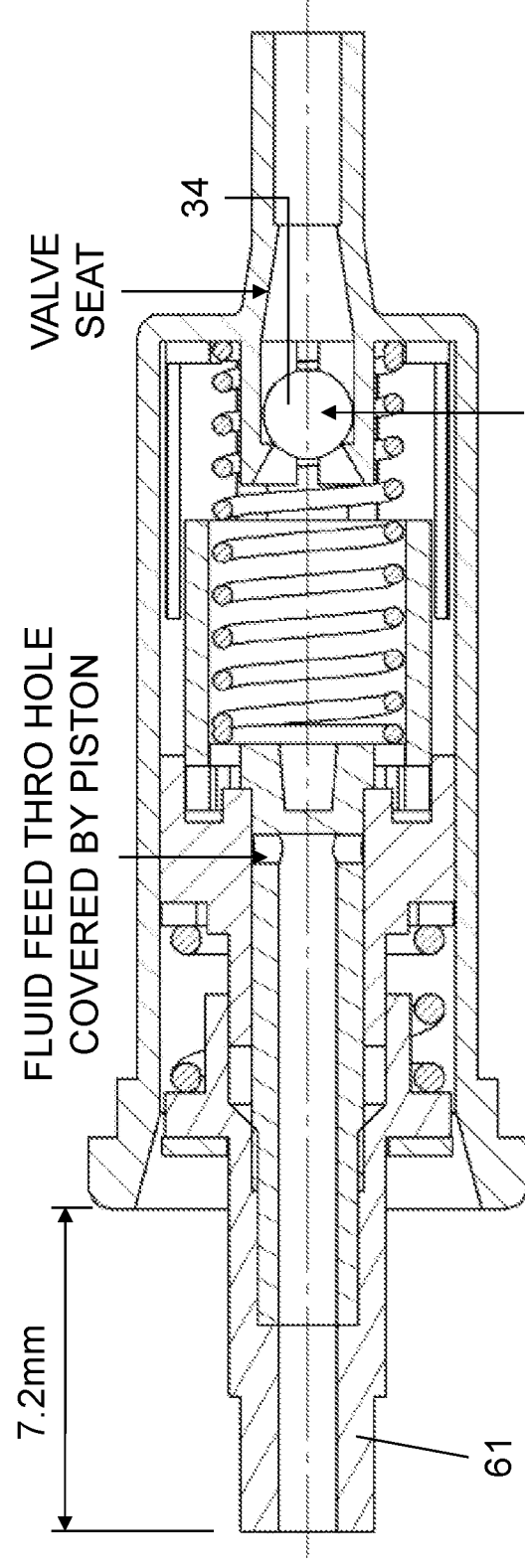
PUMP WITH PISTON ASSY IN “DOWN” POSITION



VIEW SHOWING PUMP WITH PISTON ASSEMBLY AT END OF 3mm STROKE – FLUID IN CHAMBER NO LONGER PRESSURISED, PISTON PUSHED BACK OVER FEED THRO HOLE BY BIAS SPRING.

FIGURE 52

PUMP WITH PISTON ASSY IN “START” POSITION FLUID CHAMBER CHARGING



NON RETURN BALL VALVE SHOWN PULLED OFF IT'S SEAT
BY VACUUM INFREONT OF PISTON HEAD MOVING BACK.
FLUID FROM RESERVOIR FILLS CHARGING CHAMBER.

FIGURE 53

INTEGRATED PUMP / RESERVOIR / OVERFLOW VALVE IN "START" POSITION

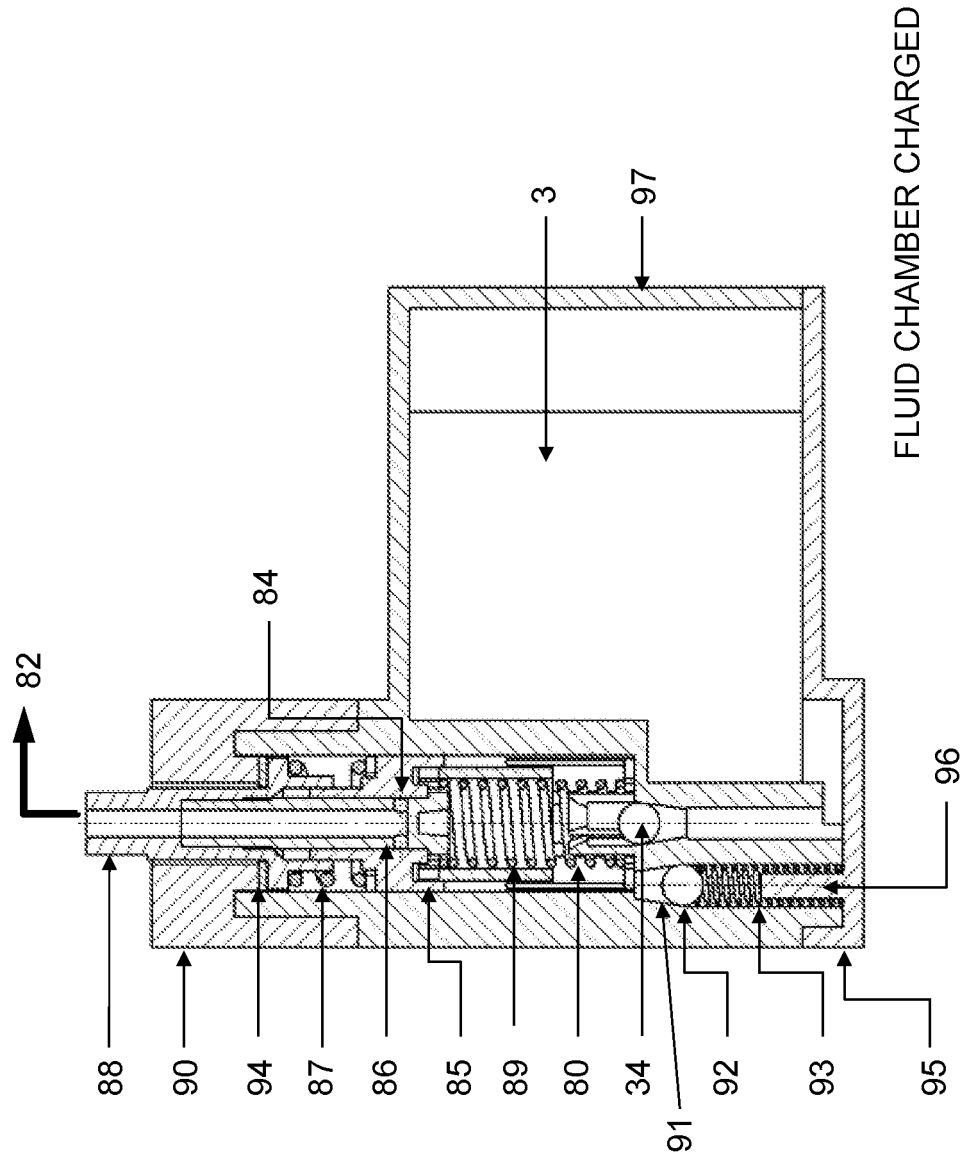


FIGURE 55

INTEGRATED PUMP / RESERVOIR / OVERFLOW VALVE IN “OPEN” POSITION

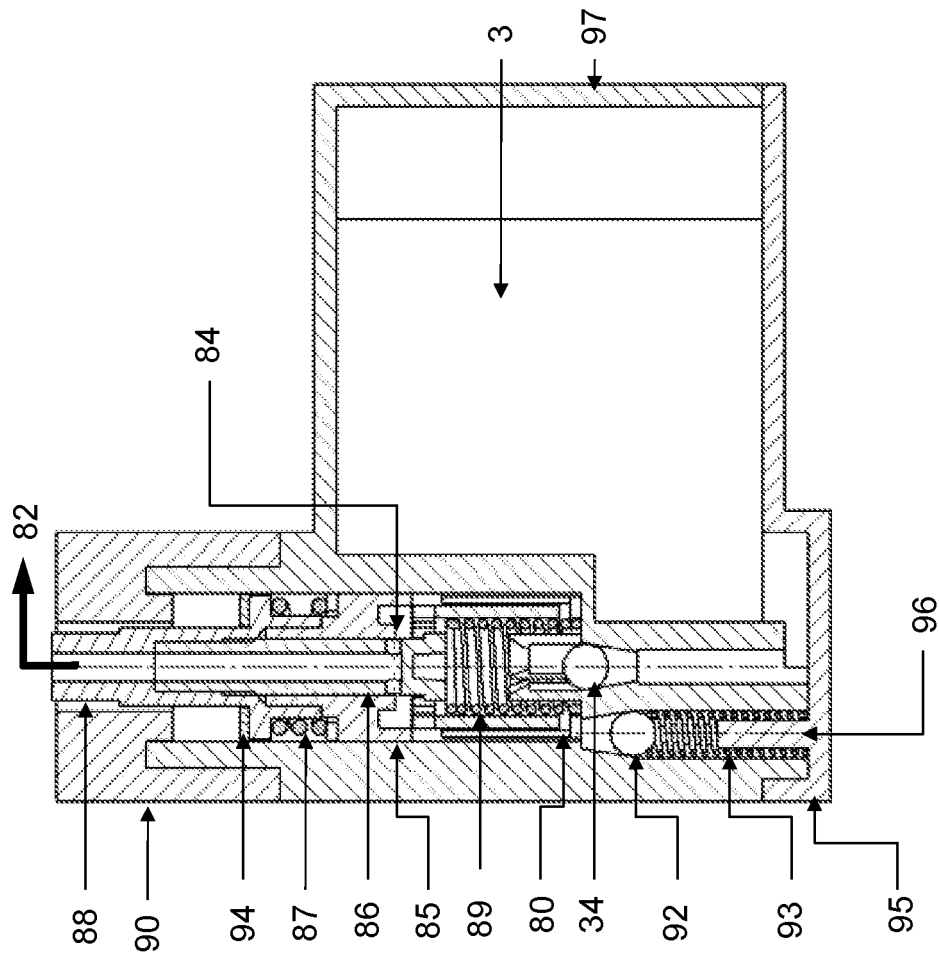


FIGURE 56

INTEGRATED PUMP / RESERVOIR / OVERFLOW VALVE IN "DOWN" POSITION

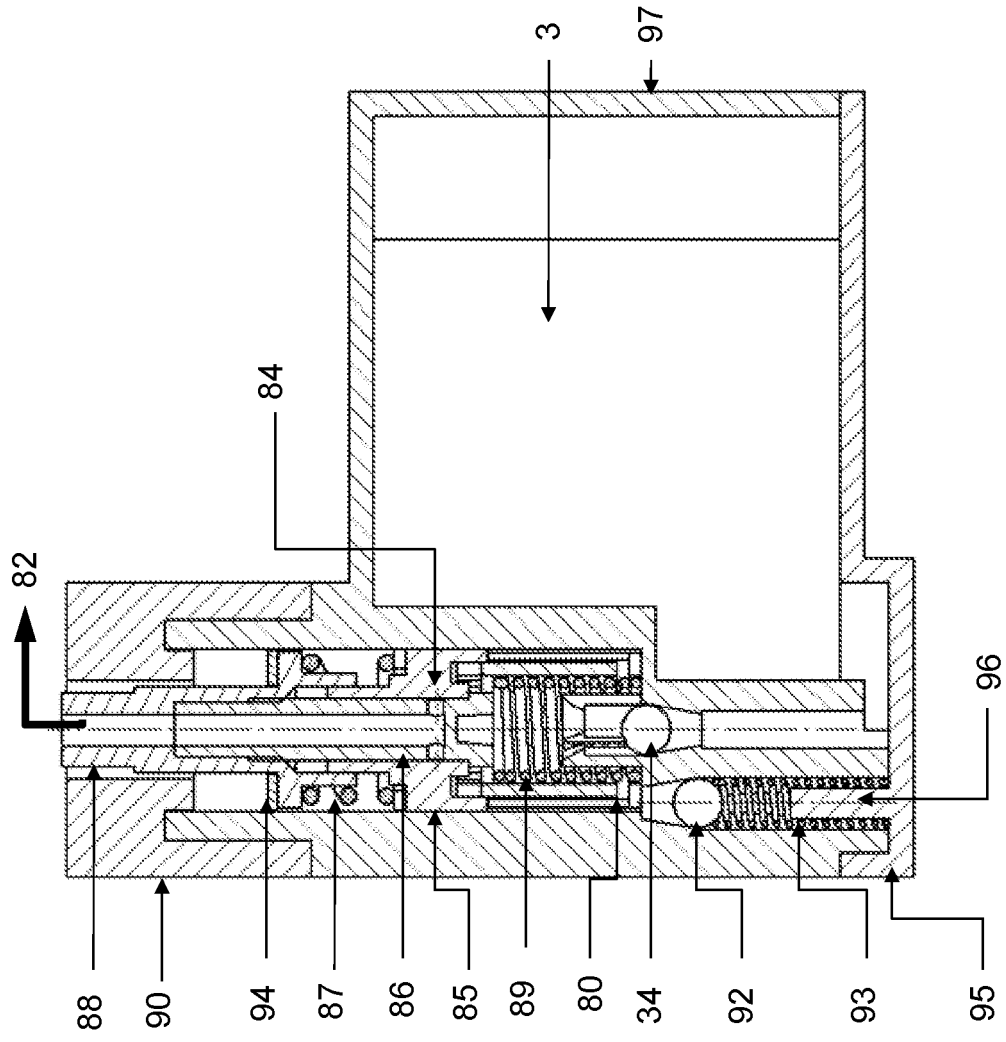


FIGURE 57

INTEGRATED PUMP / RESERVOIR / OVERFLOW VALVE IN “BYPASS” CONDITION
 THIS POSITION IS CONDITIONAL ON HYDRAULIC DESIGN LIMIT BEING EXCEEDED

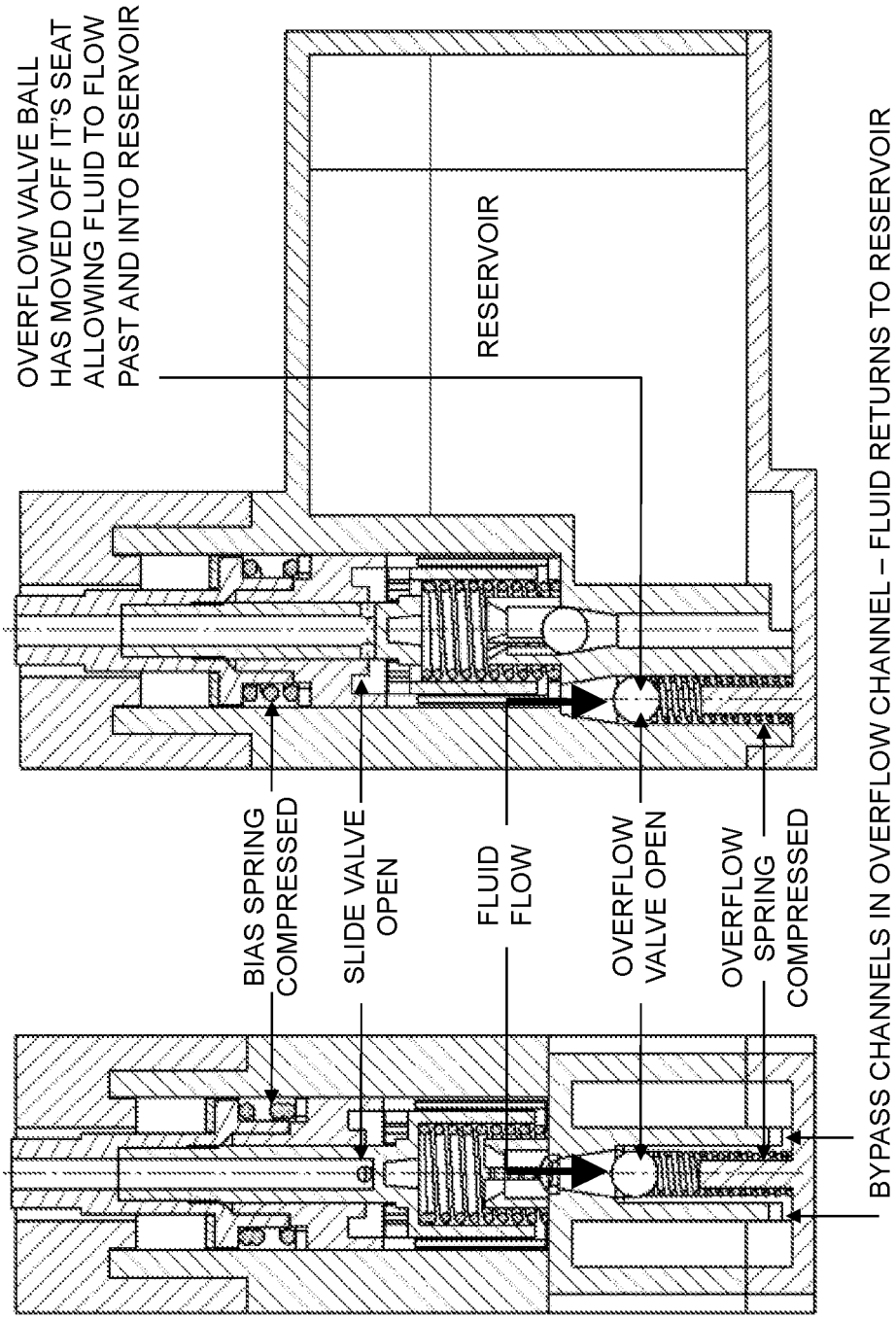


FIGURE 58

INTEGRATED PUMP / RESERVOIR / OVERFLOW VALVE IN "RETURN" POSITION

AXIAL FORCE REMOVED FROM VALVE STEM
PUMP PISTON ASSEMBLY RETURNS TO START
POSITION PUSHED BY RETURN SPRING.

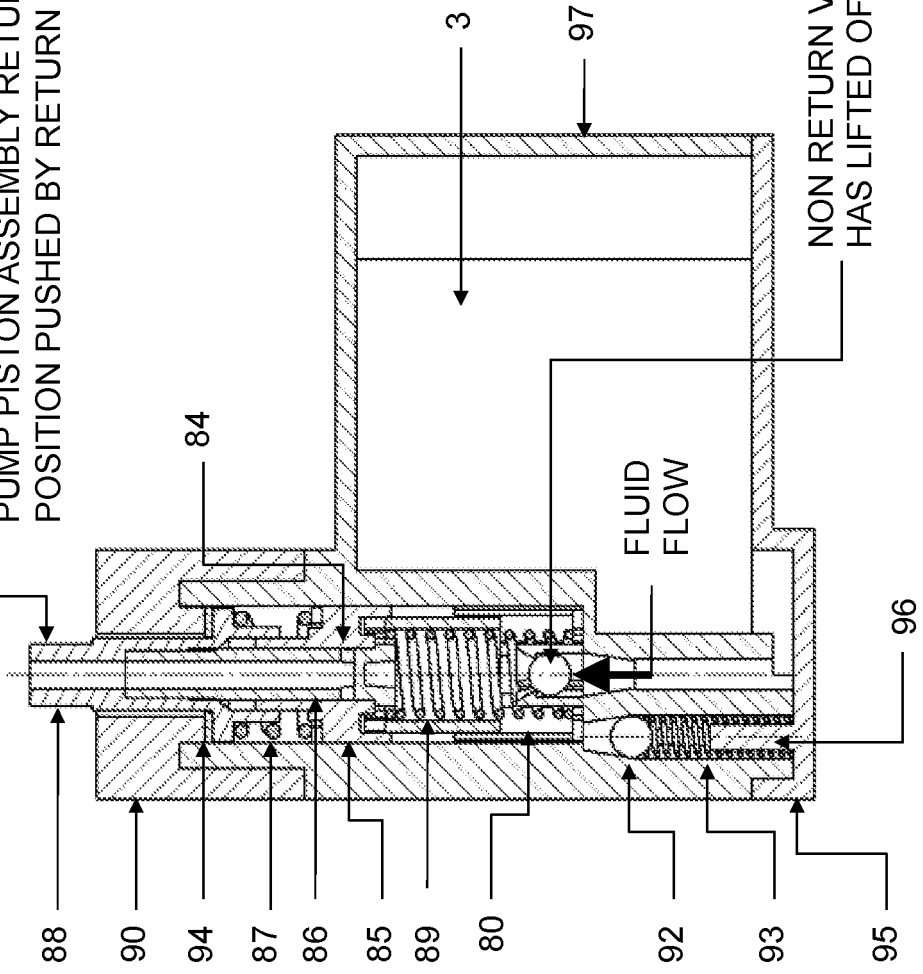


FIGURE 59

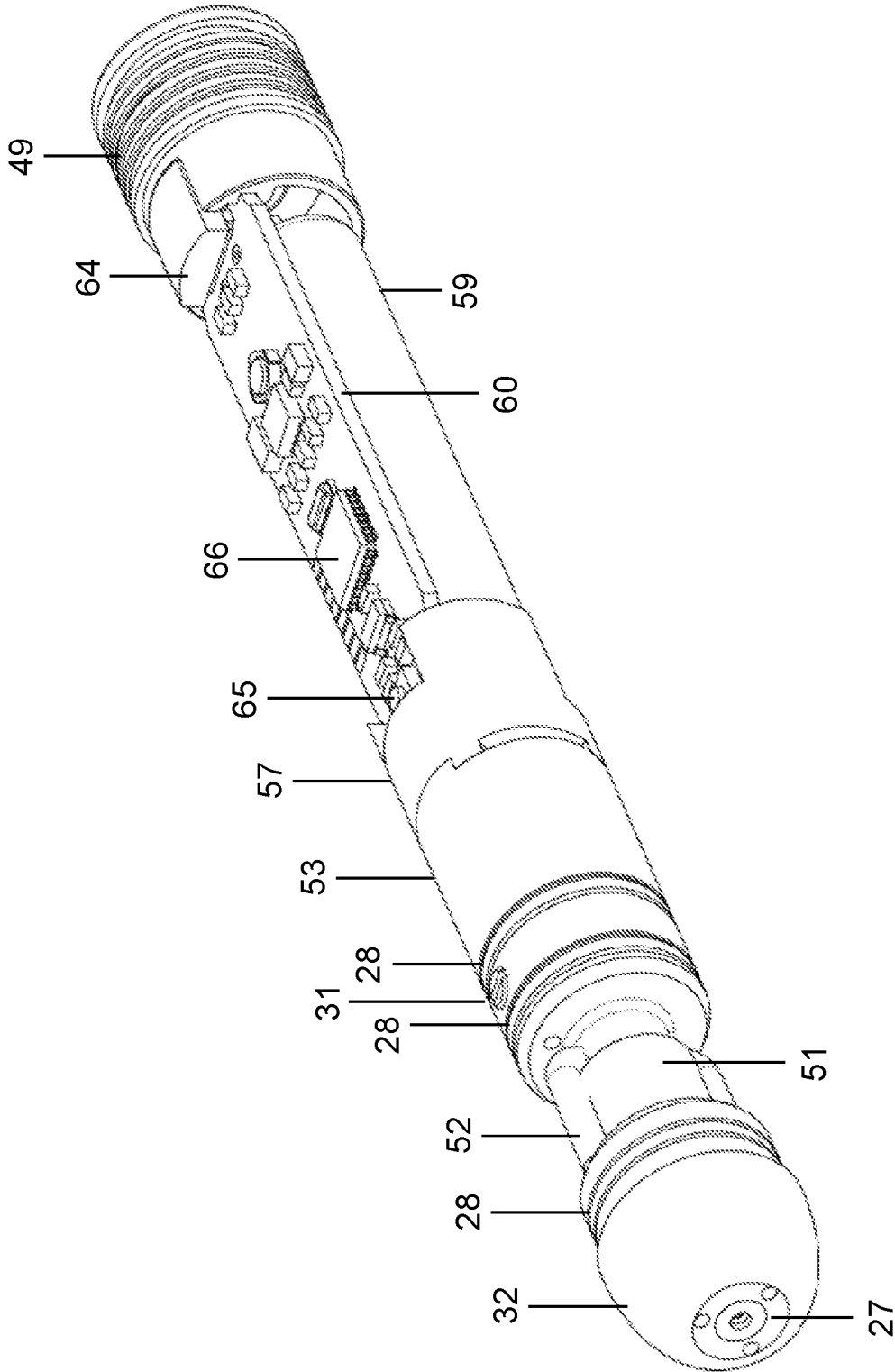


FIGURE 61

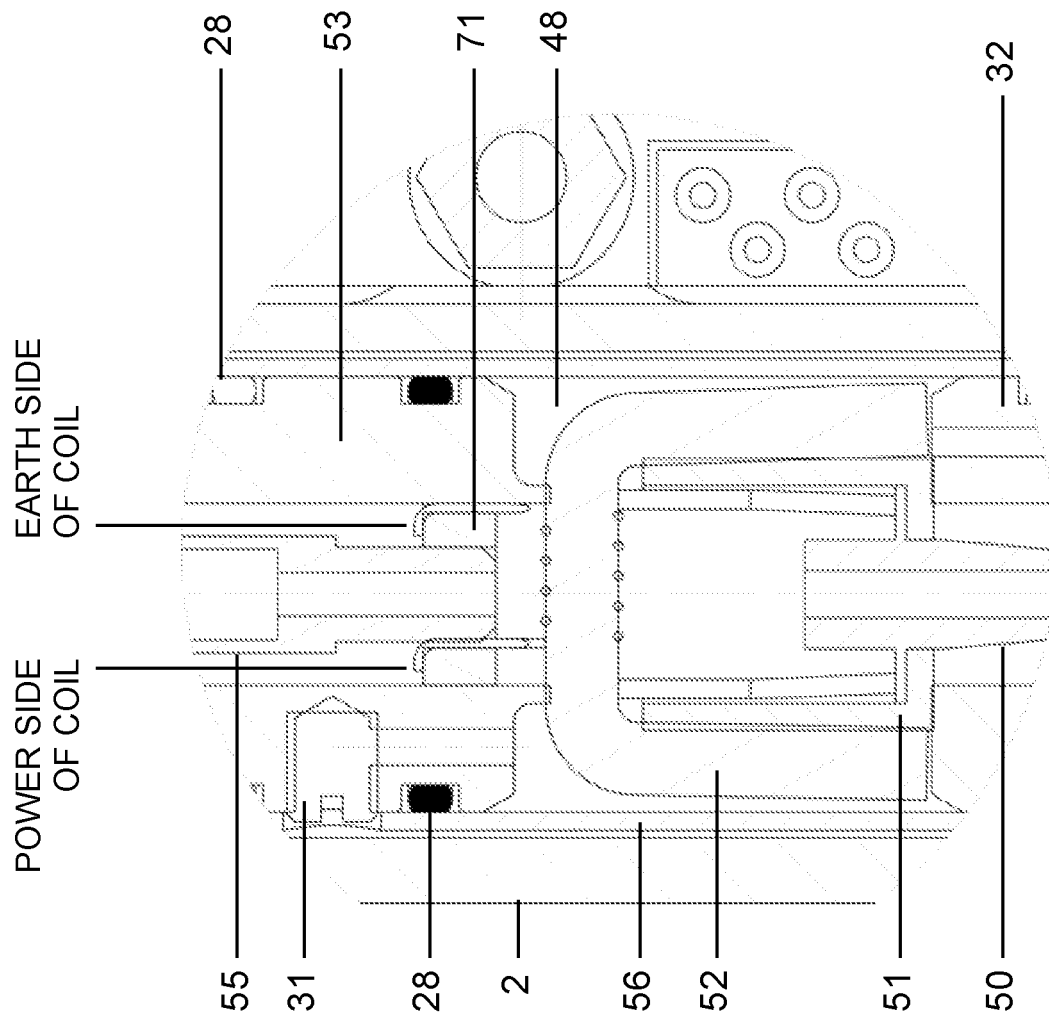


FIGURE 62

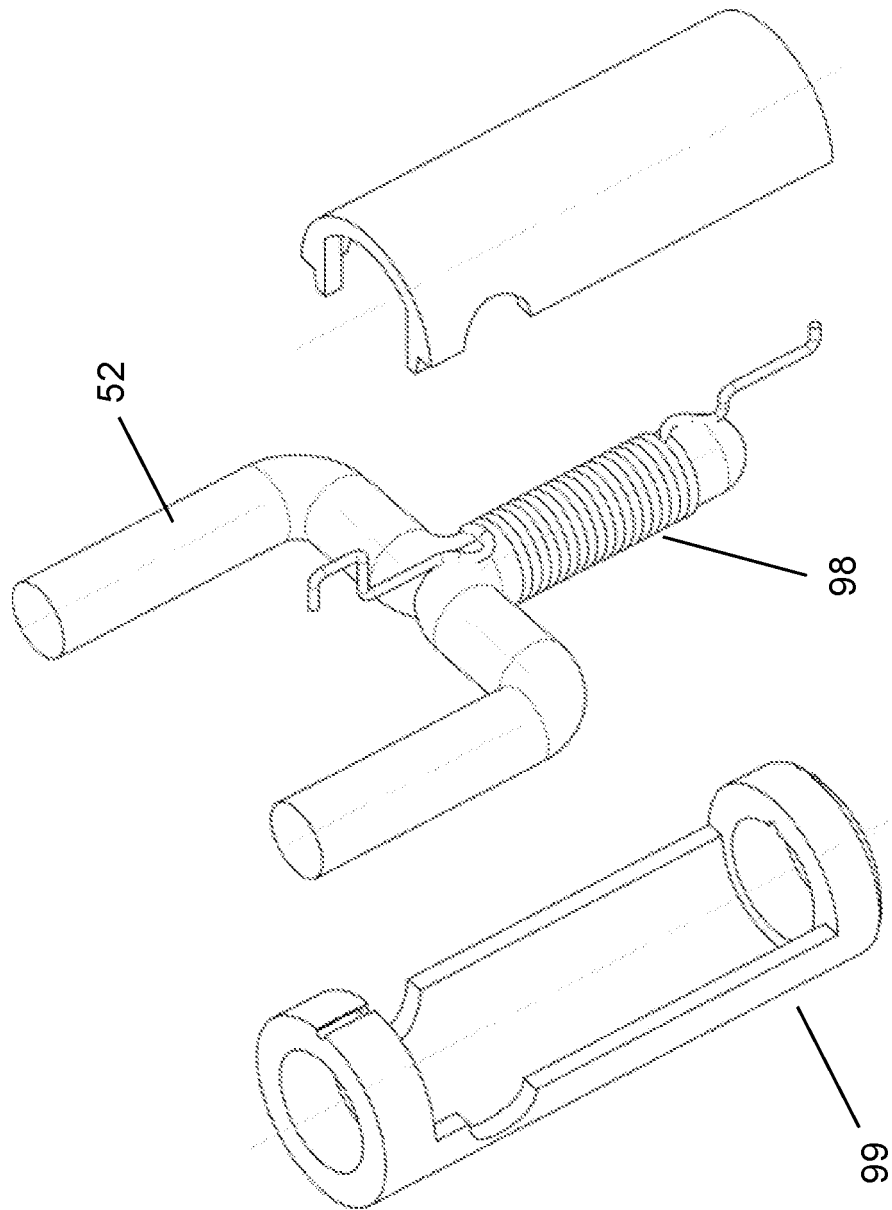


FIGURE 63

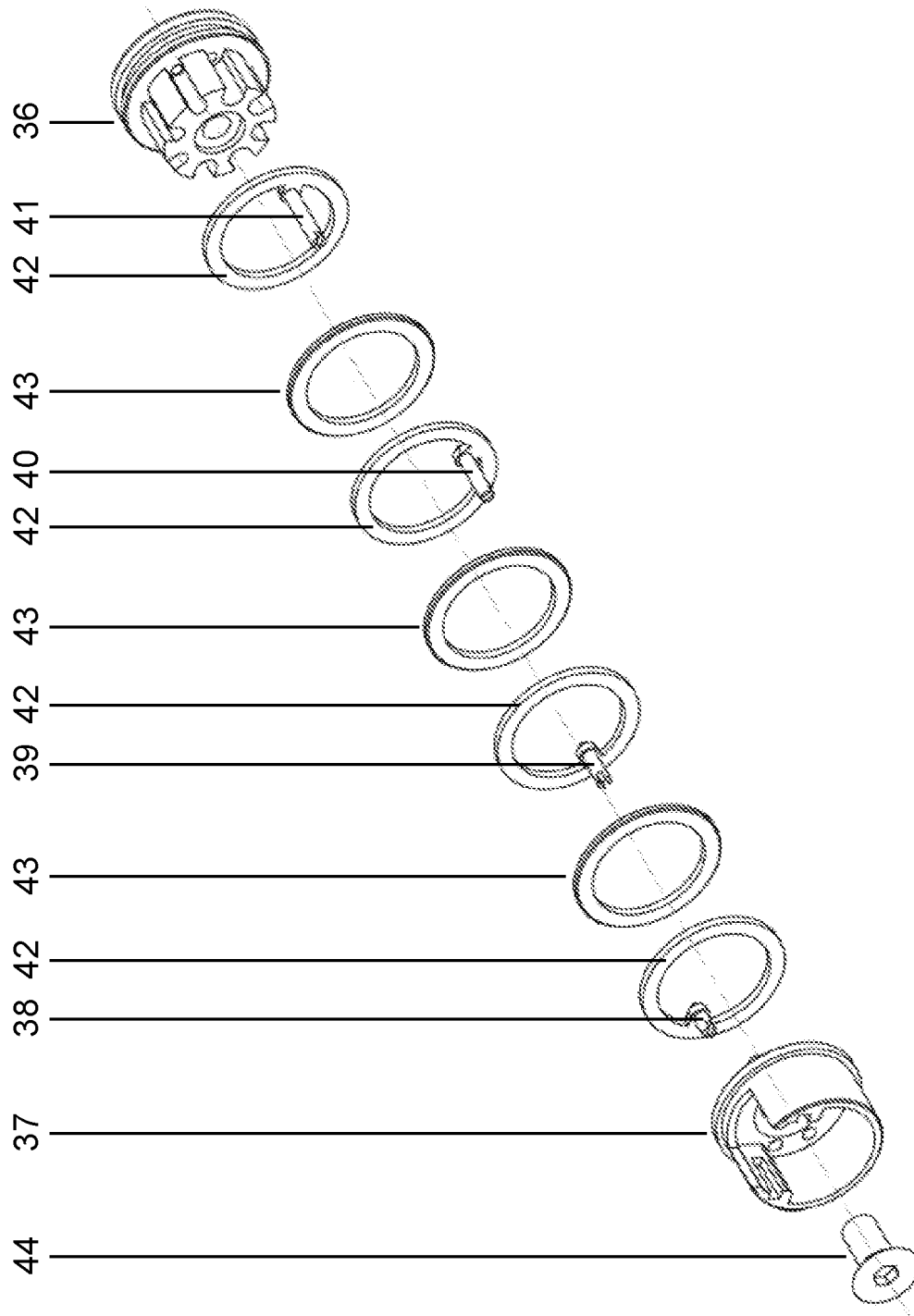


FIGURE 65

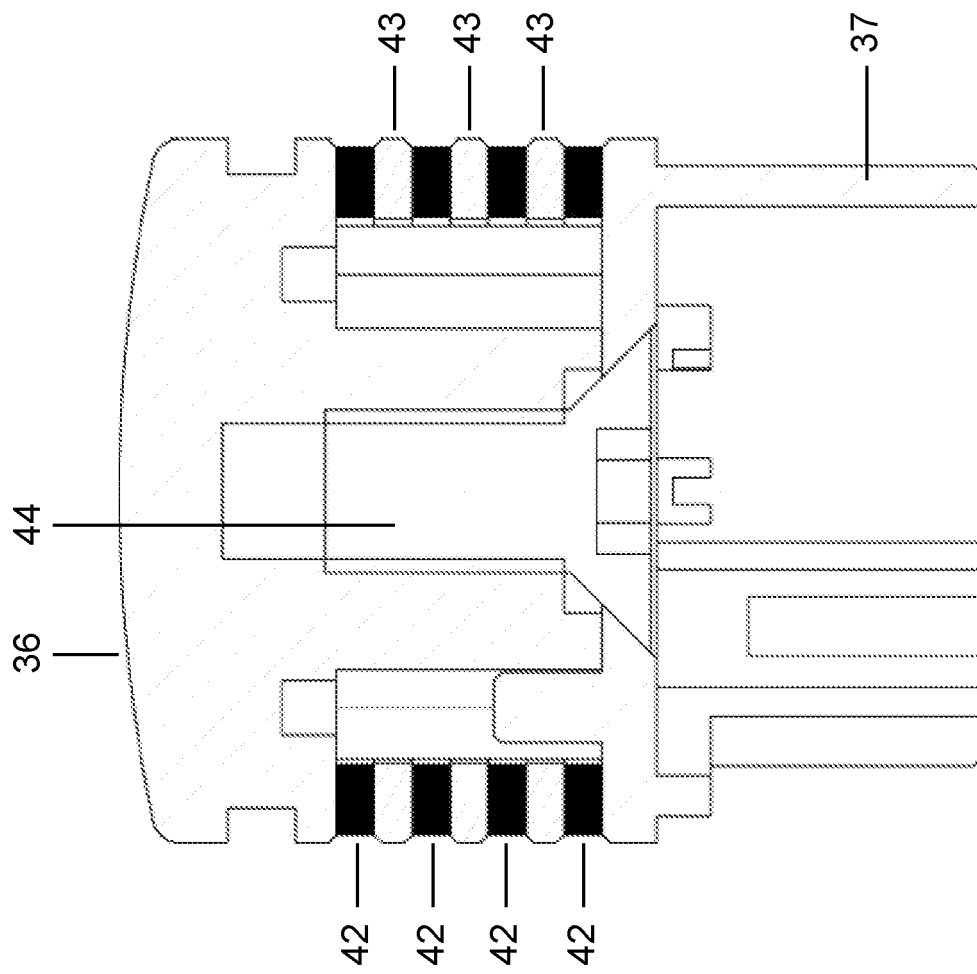


FIGURE 66

VAPING VARIABLE AIR INTAKE
SQUARE INNER & OUTER MATRIX
AIR PATH WITH 2 ROWS OF HOLES LINED UP

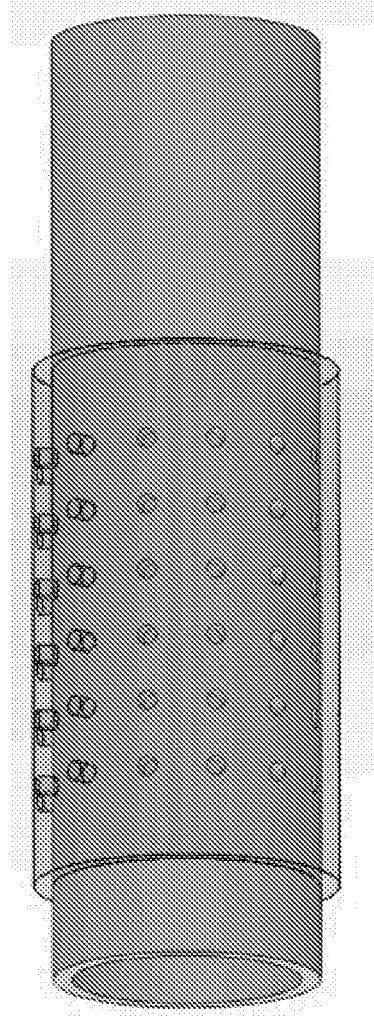
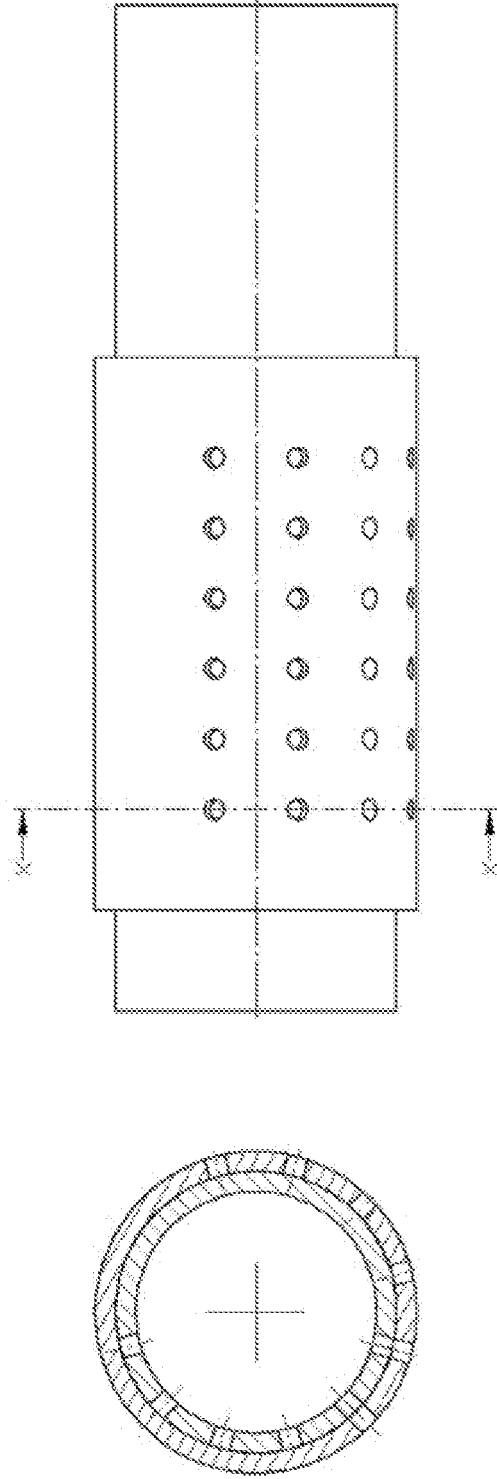


FIGURE 67

VAPING VARIABLE AIR INTAKE
SQUARE INNER & OUTER MATRIX
AIR PATH WITH 5 ROWS OF HOLES LINED UP

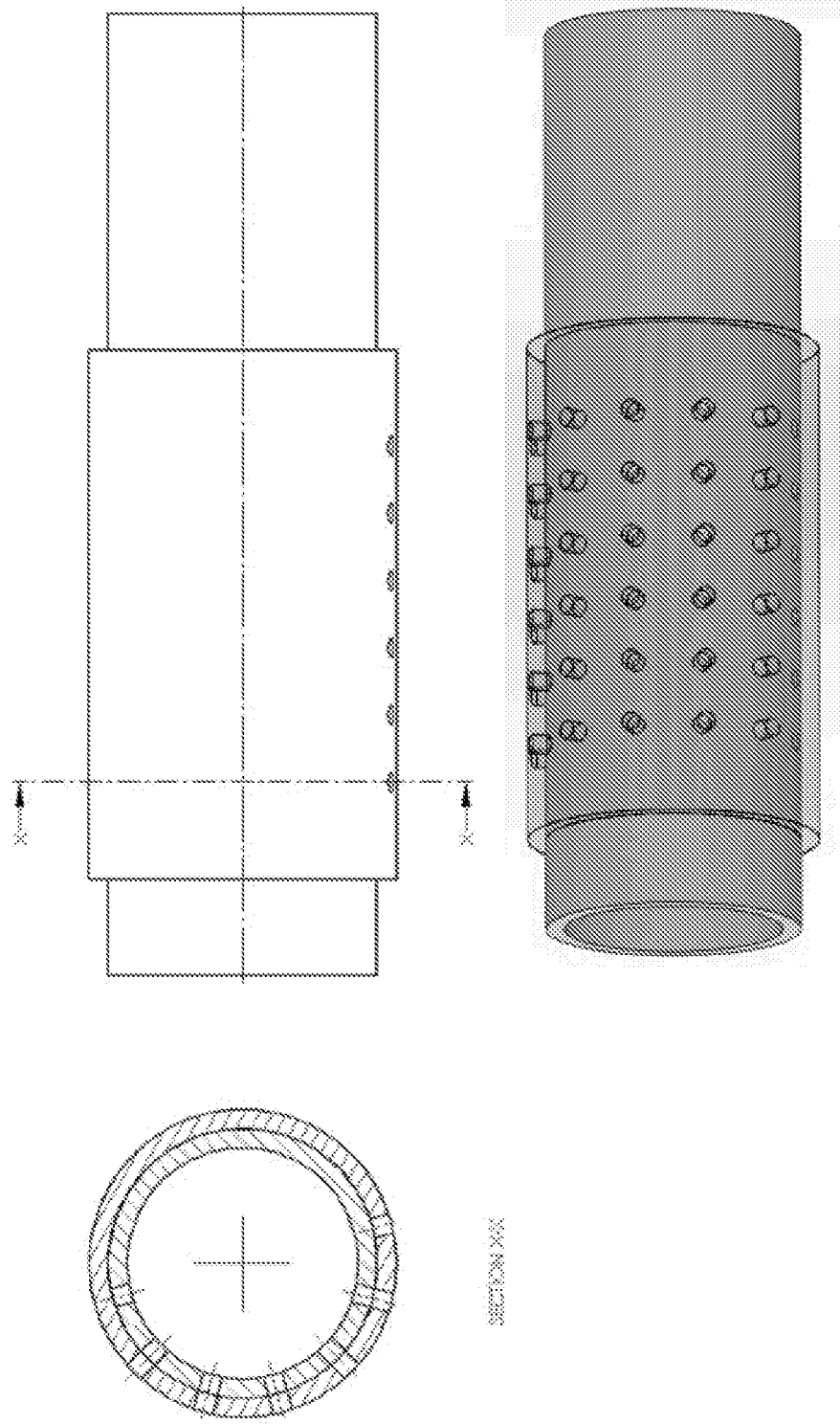


FIGURE 68

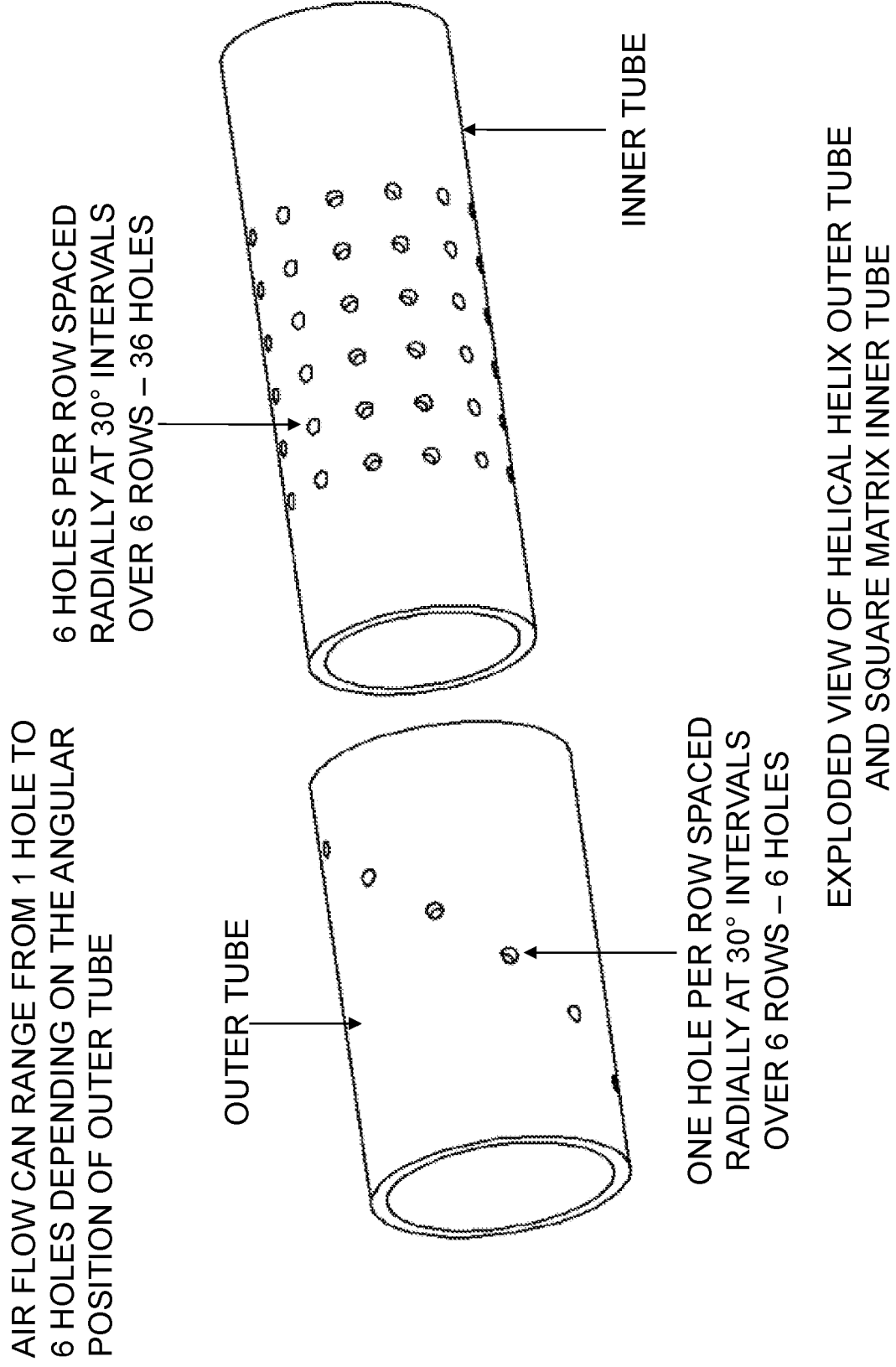


FIGURE 69

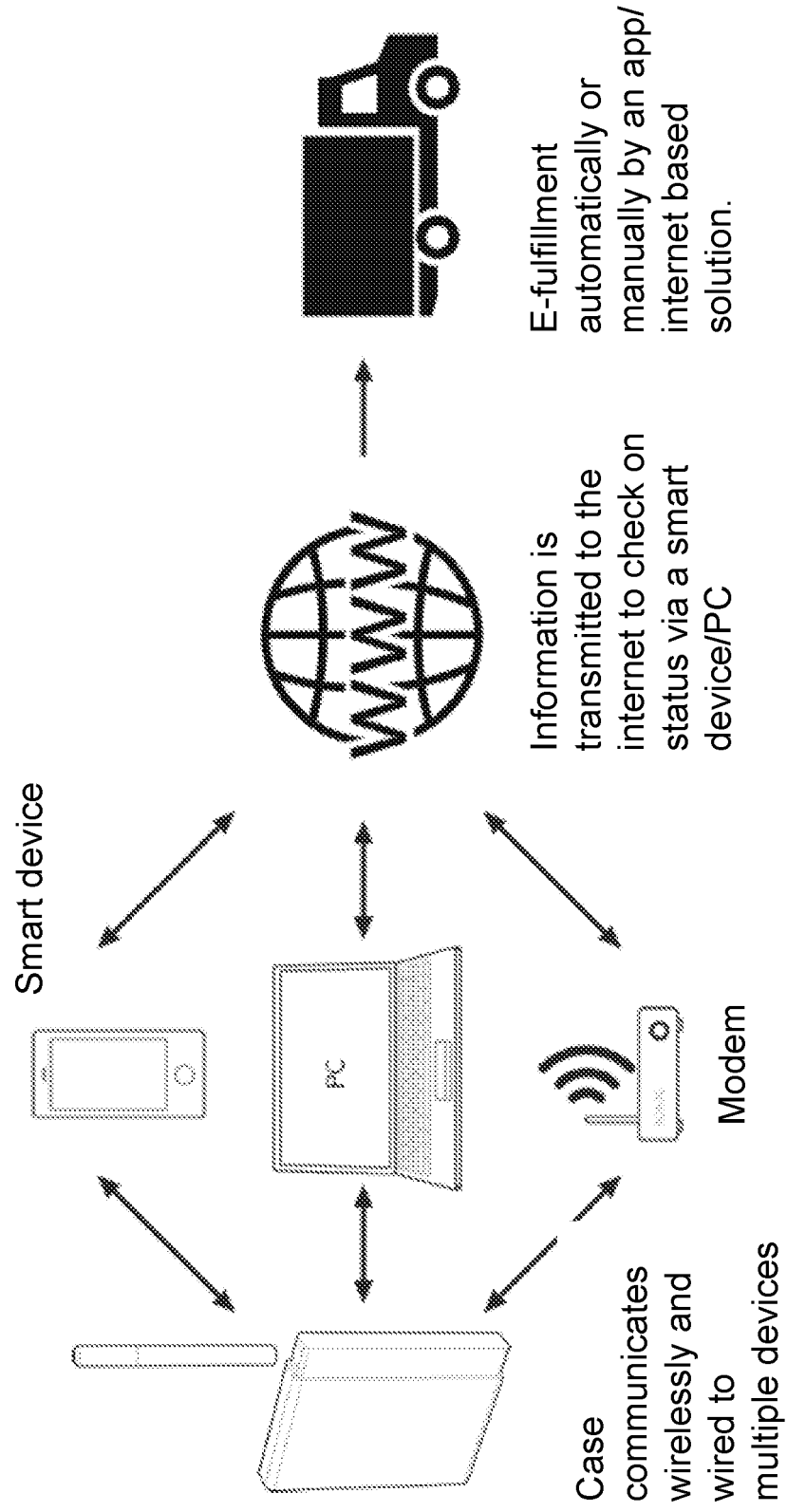
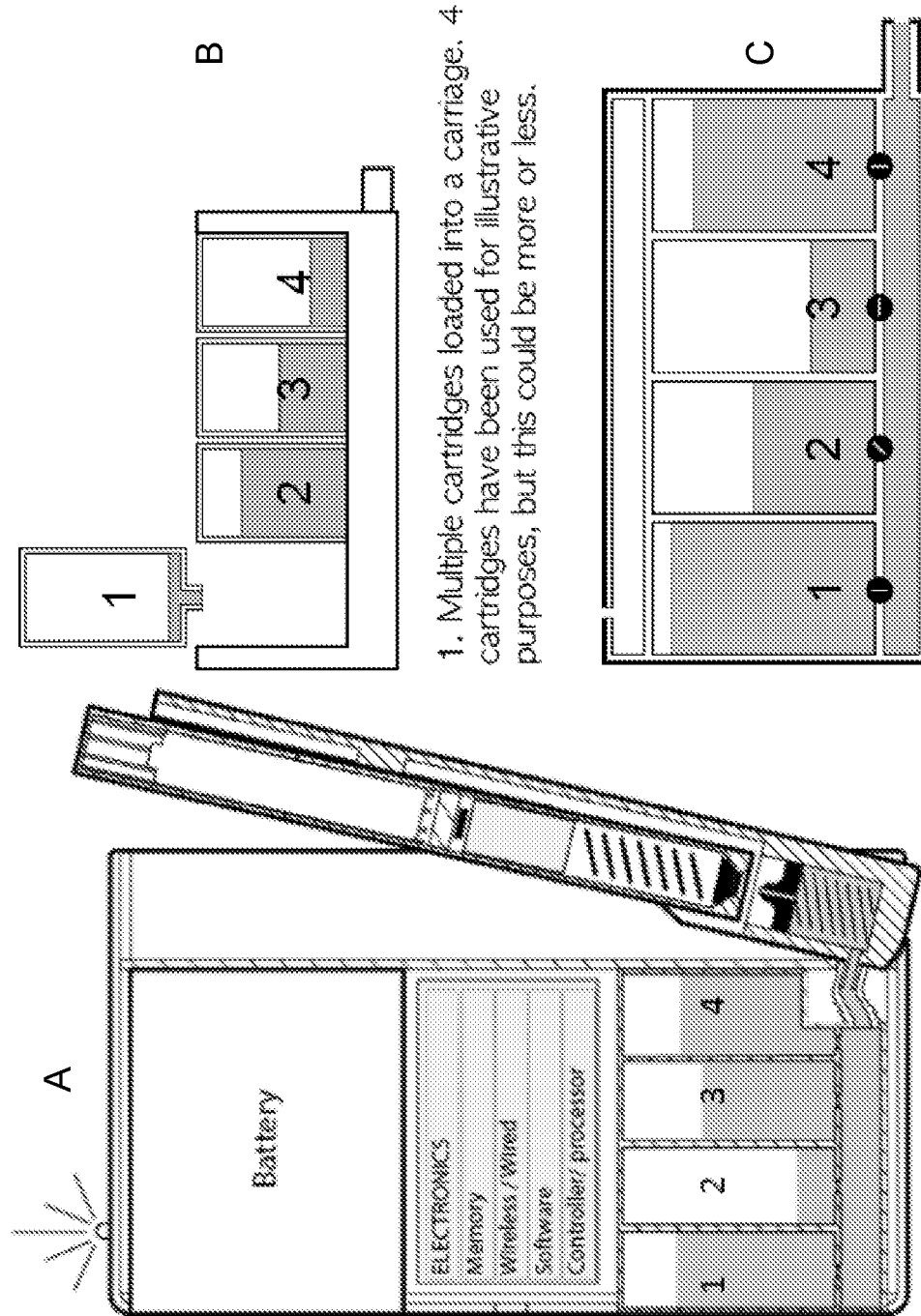


FIGURE 70



1. Multiple cartridges loaded into a carriage. 4 cartridges have been used for illustrative purposes, but this could be more or less.

FIGURE 71

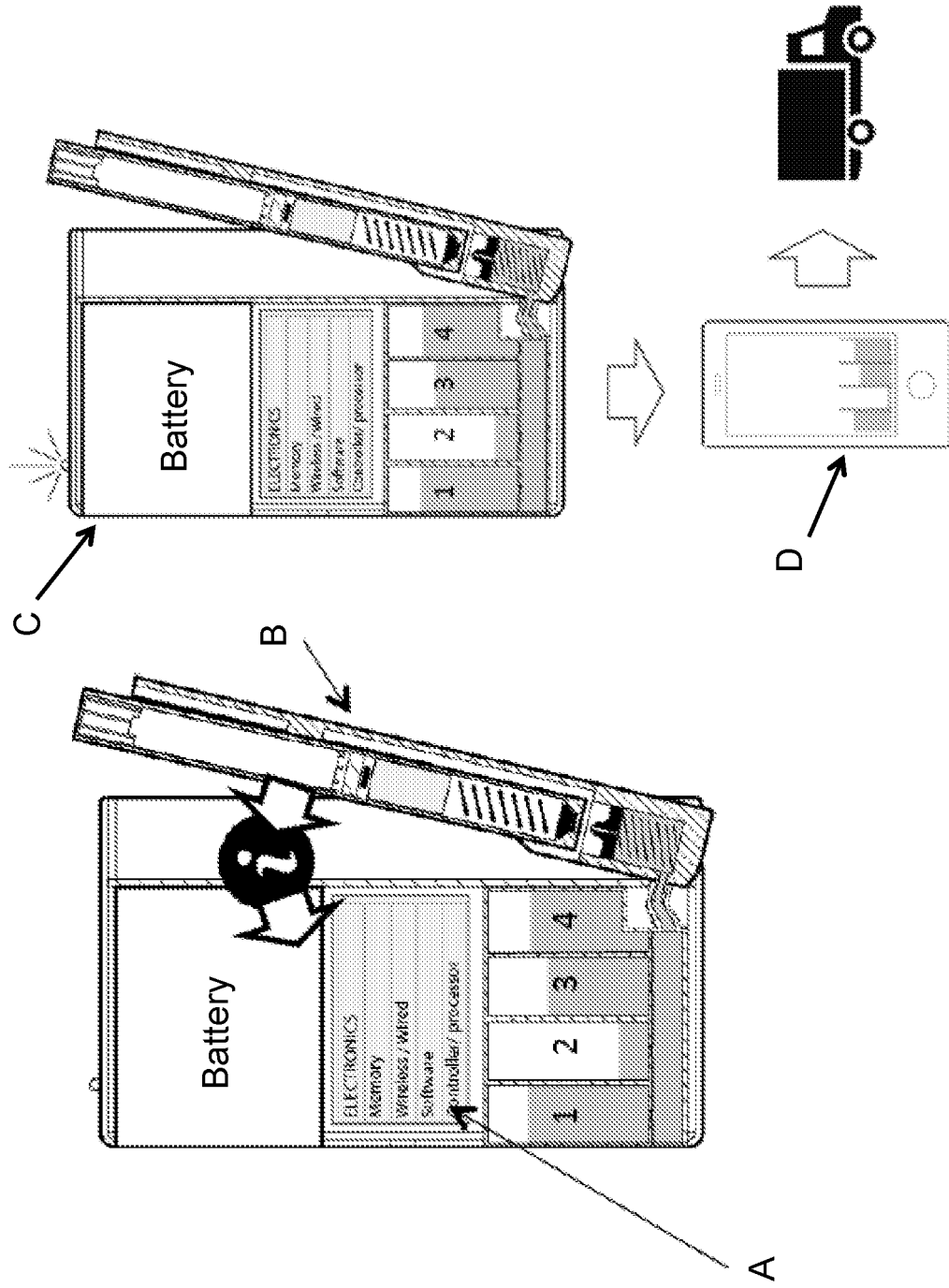


FIGURE 72

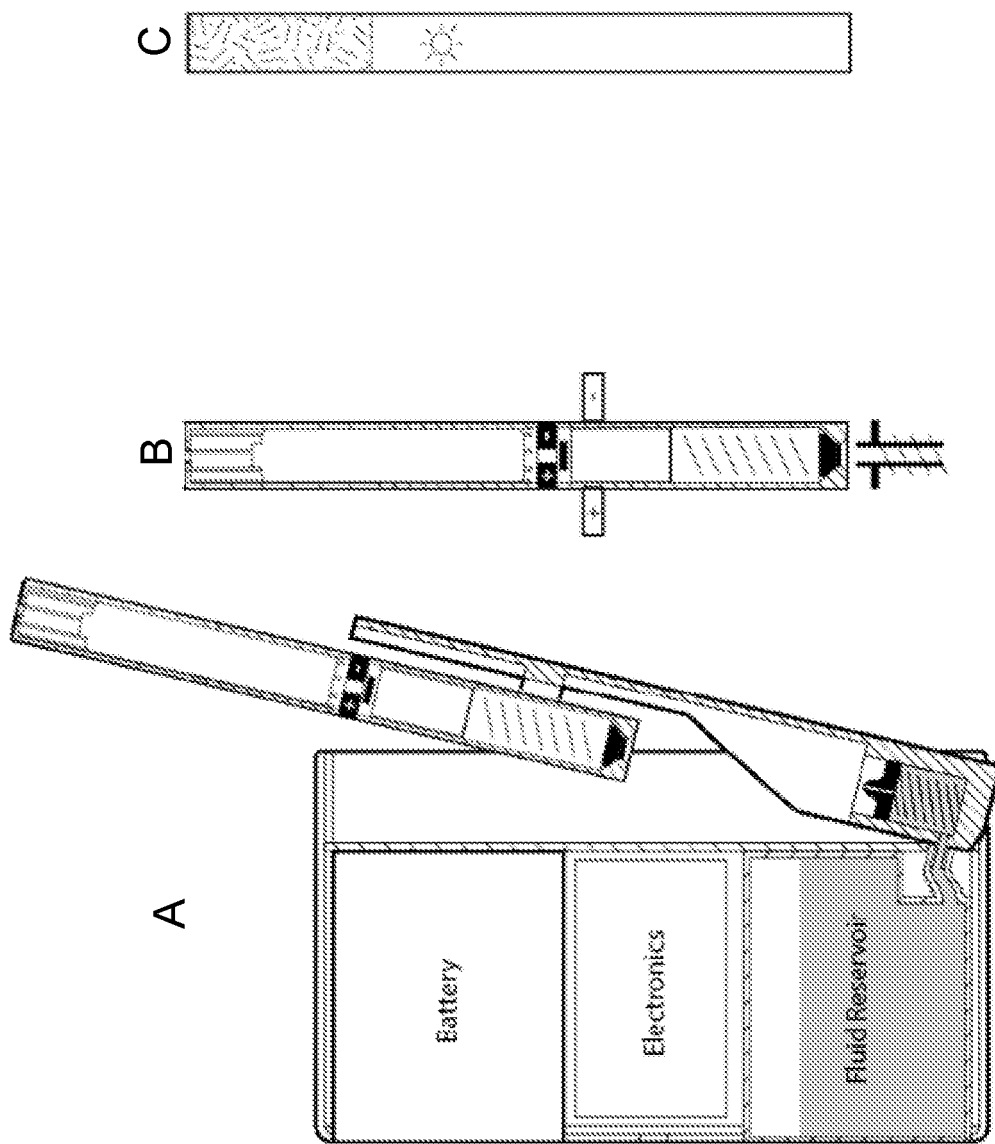


FIGURE 73

Pressure sensor + Time used = Quantity inhaled

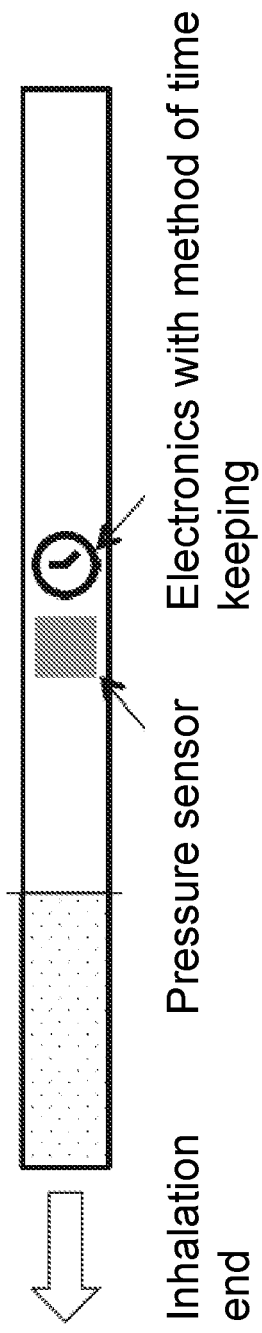


FIGURE 74

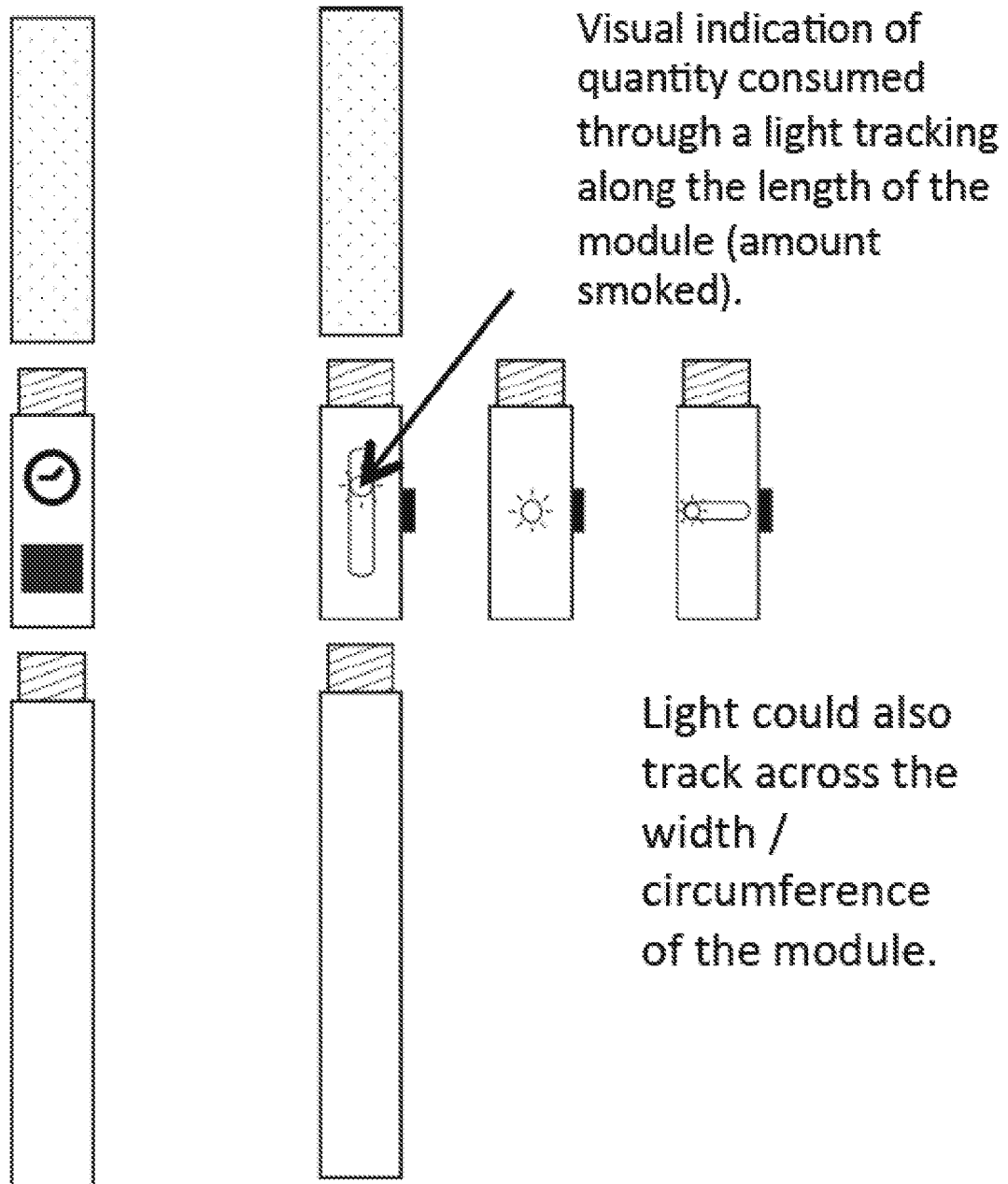


FIGURE 75

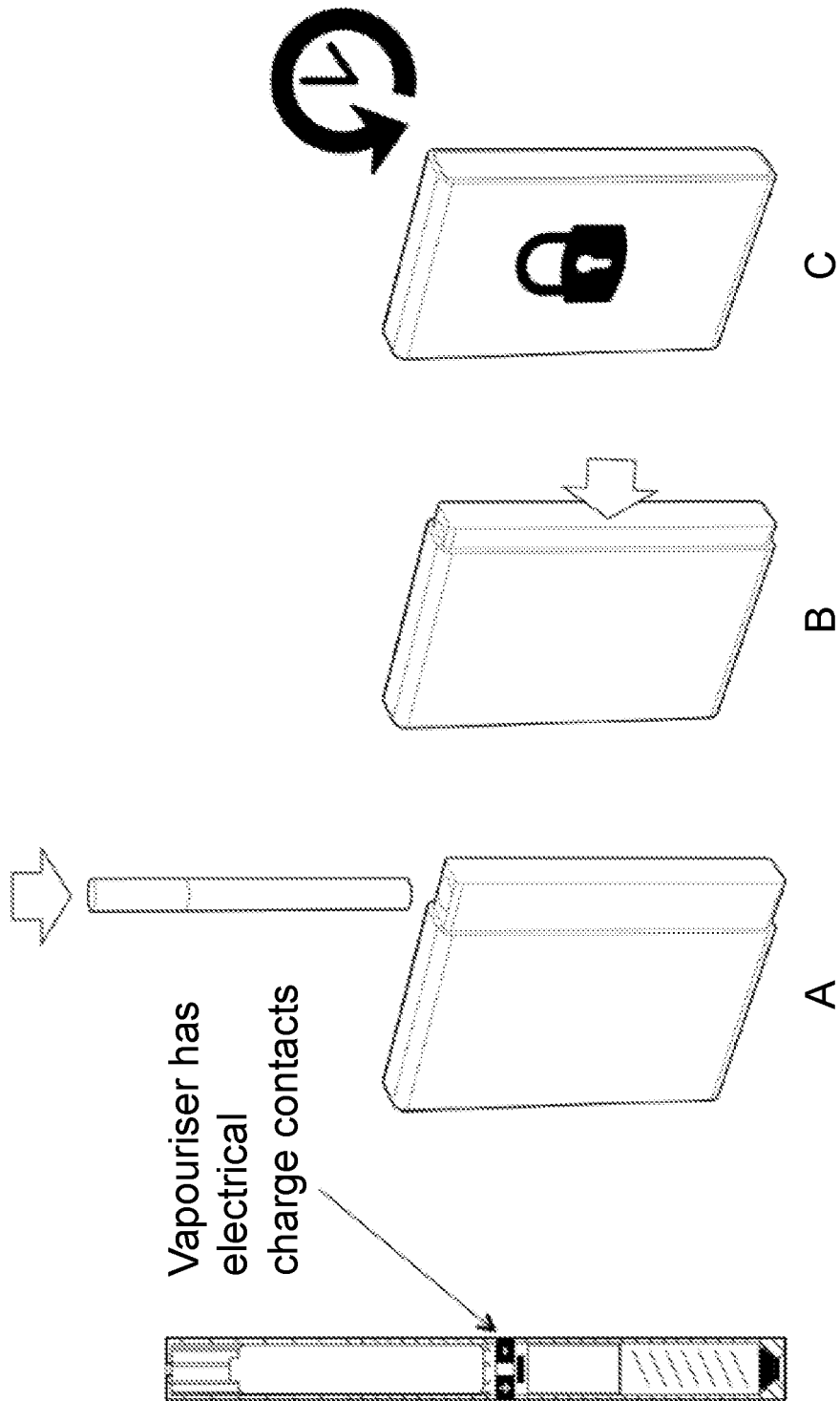


FIGURE 76

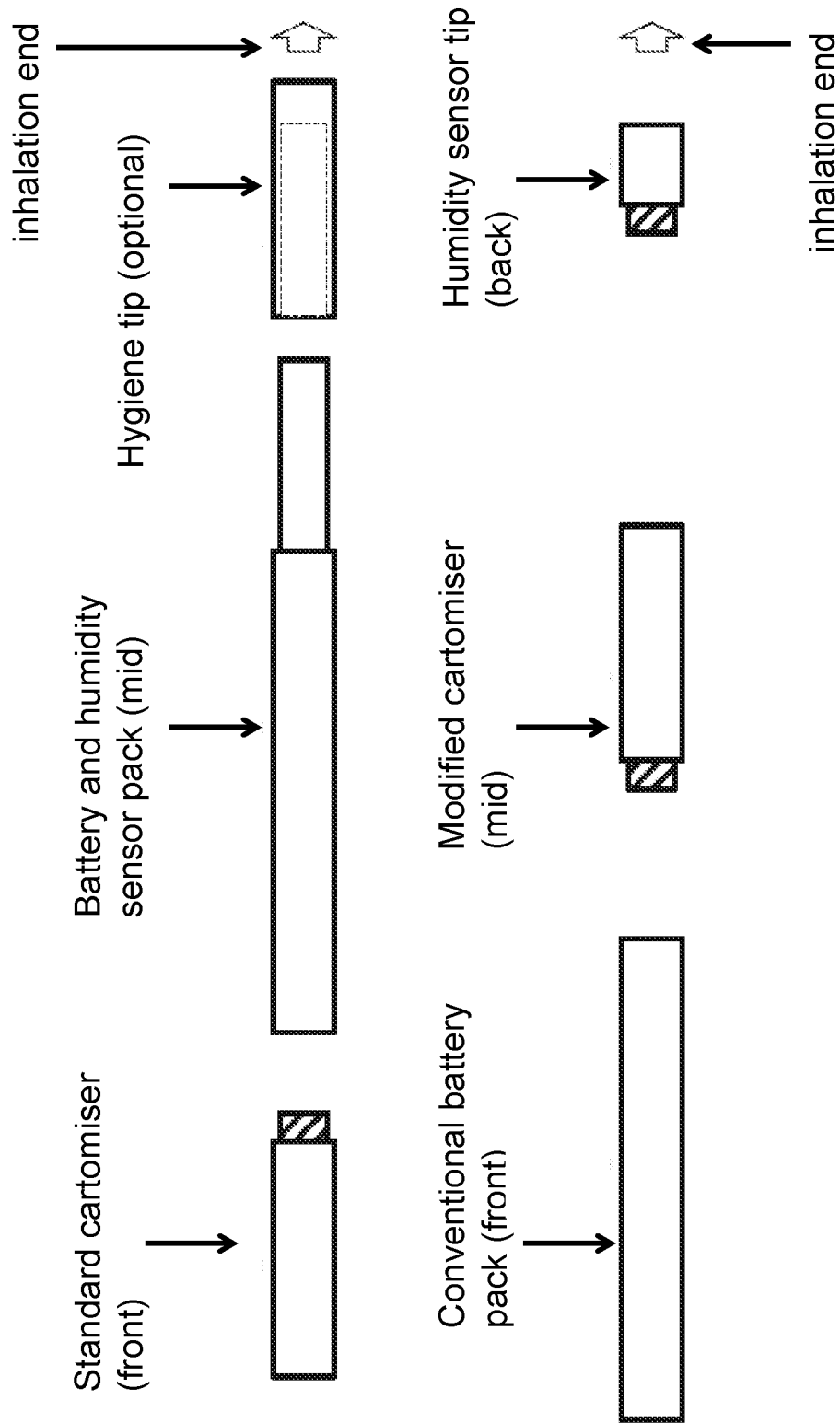


FIGURE 77

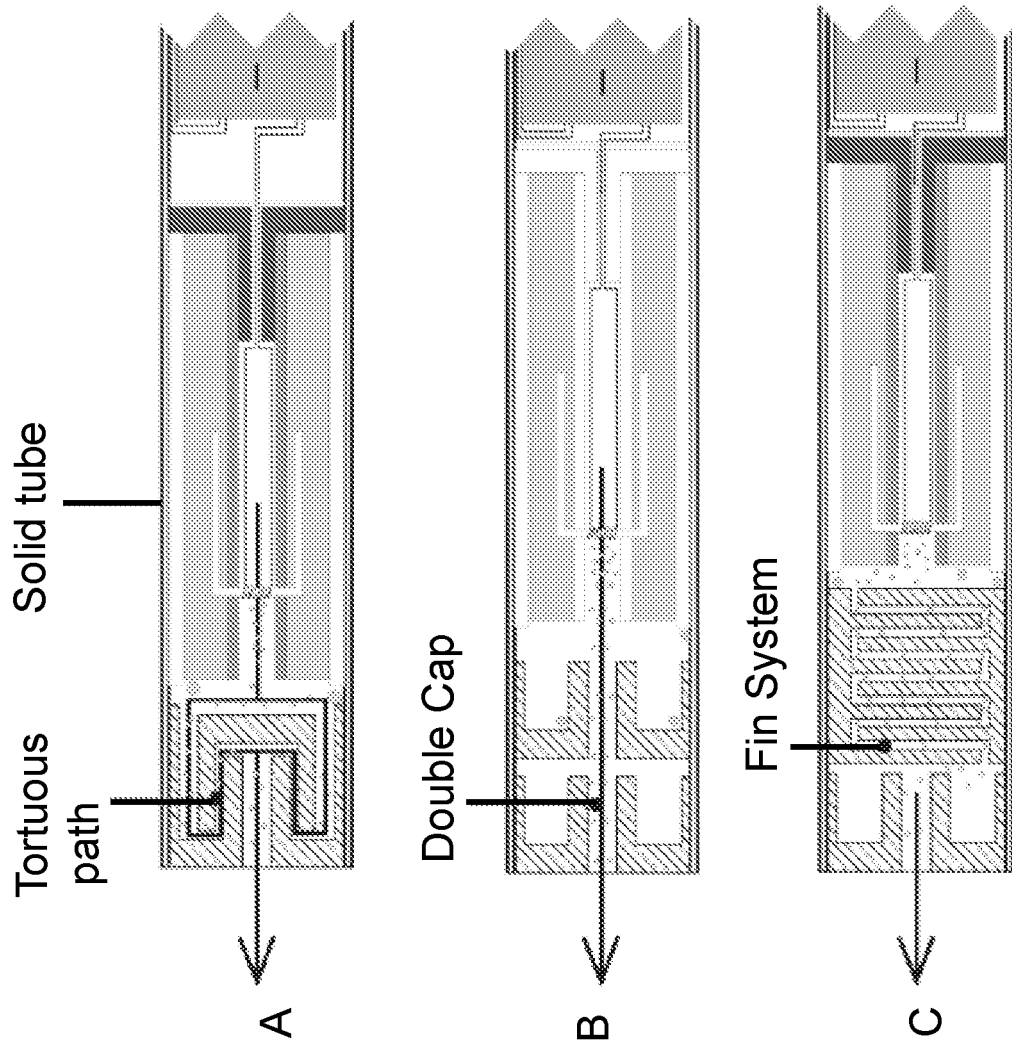


FIGURE 80

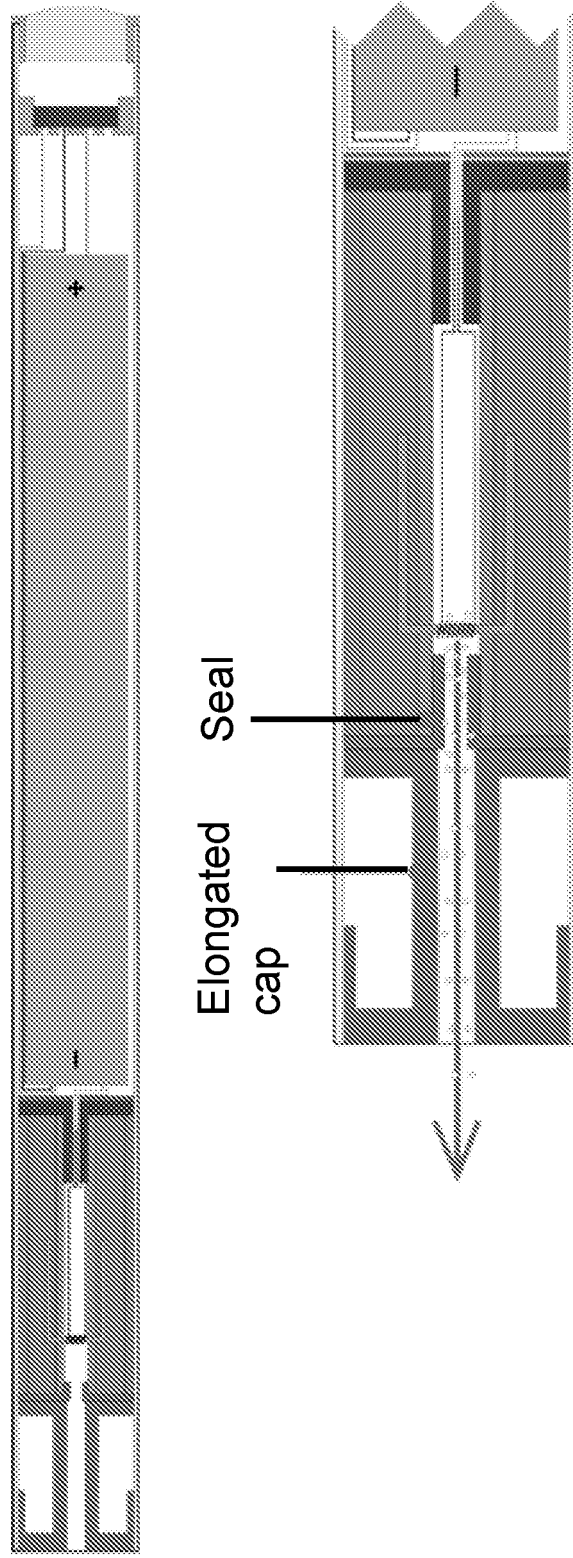


FIGURE 81

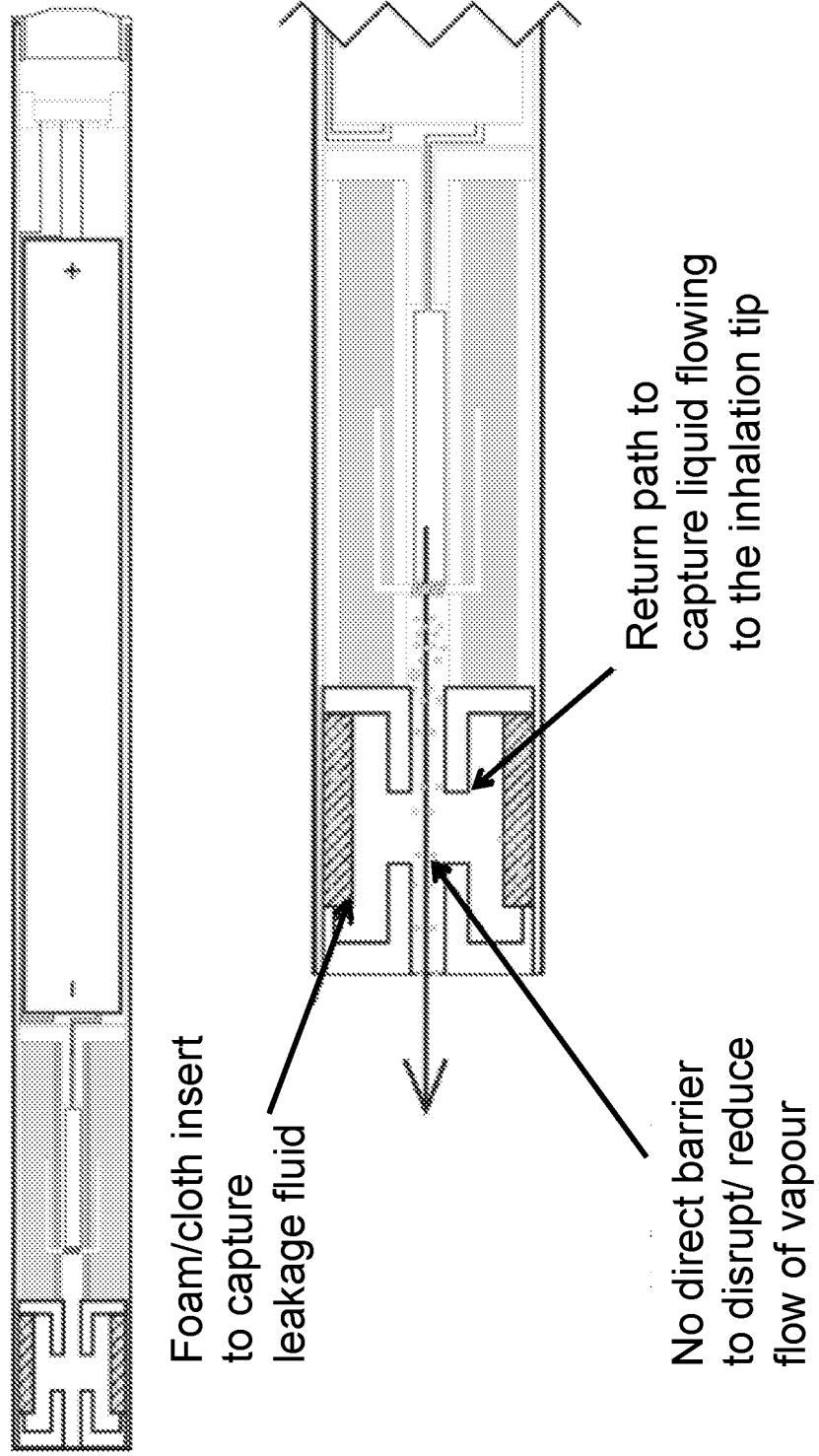


FIGURE 82

Proposed new configuration

Moved liquid chamber and heating

Tortuous path for vapour and liquid

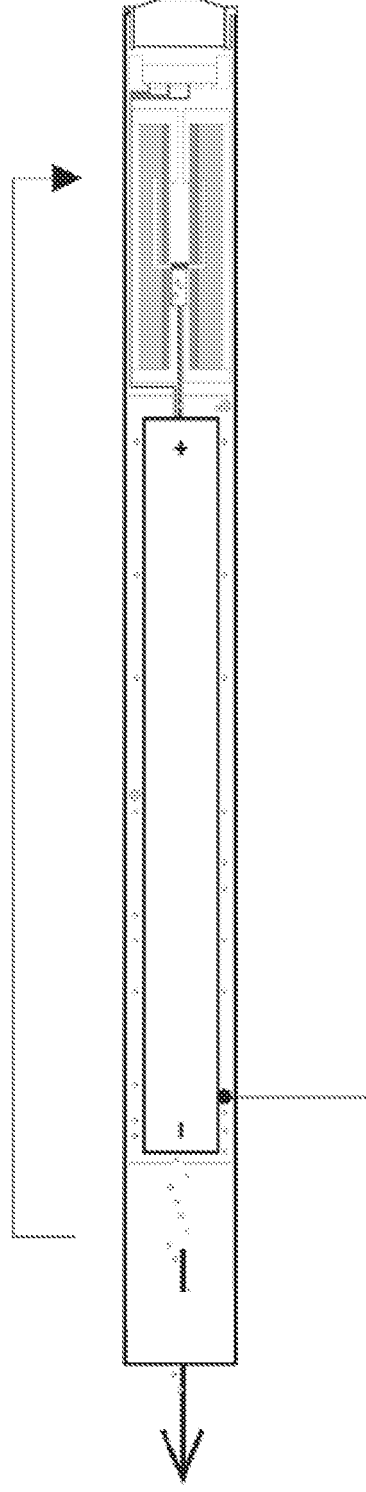


FIGURE 83

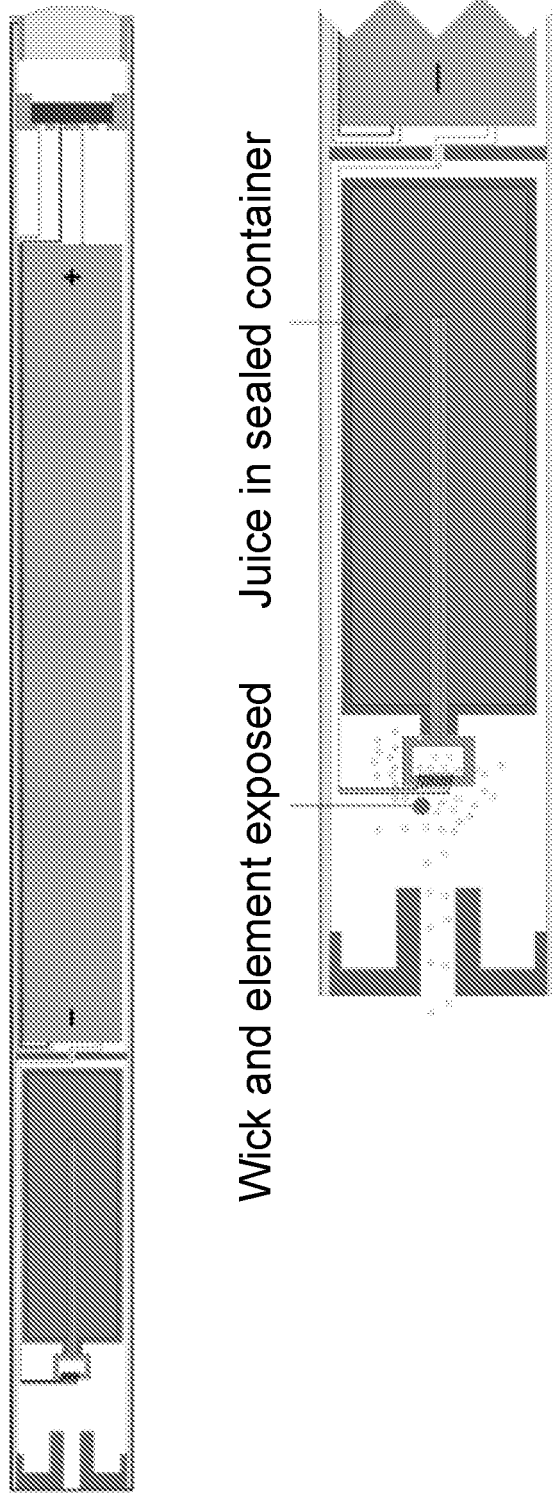


FIGURE 84

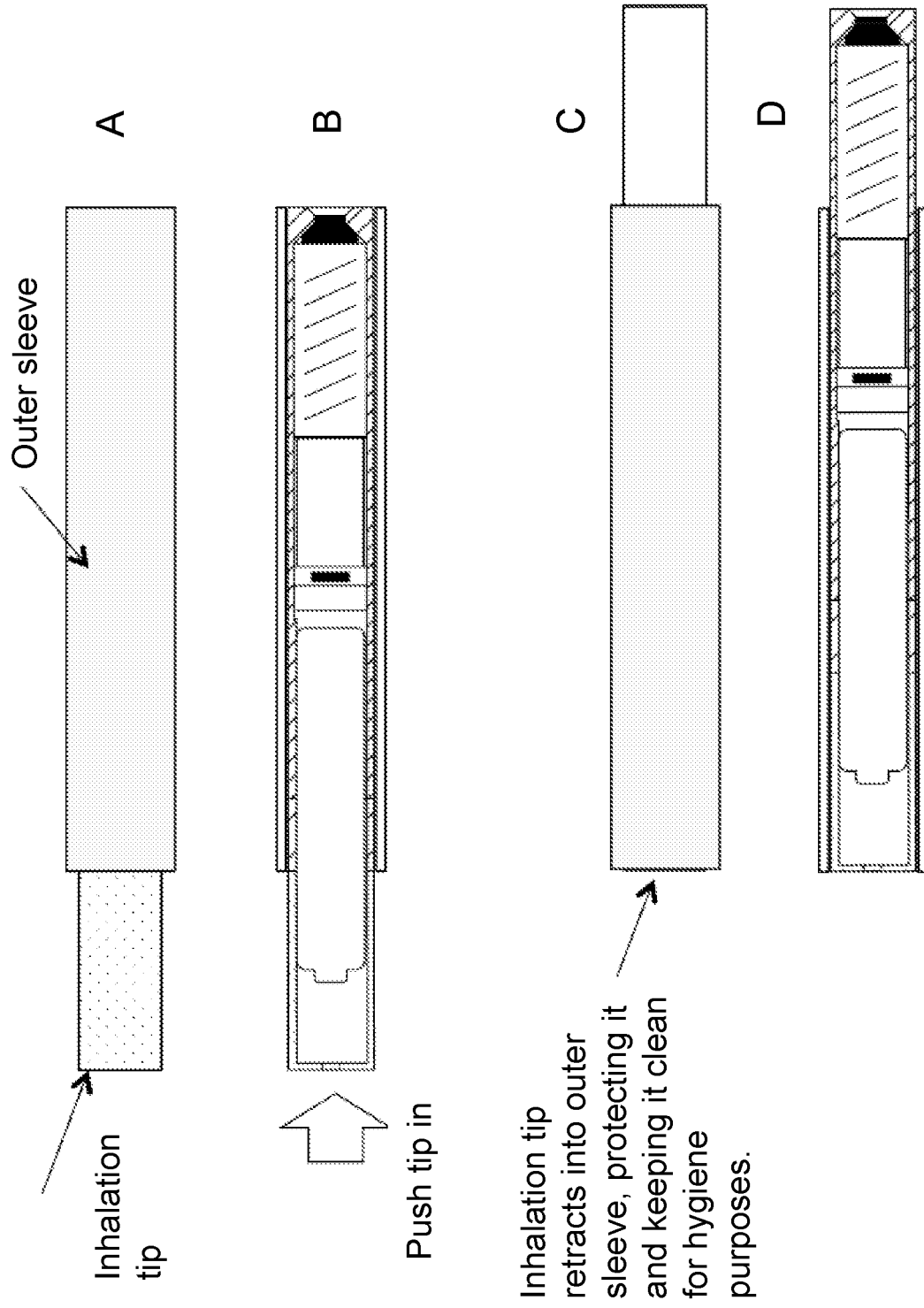


FIGURE 85

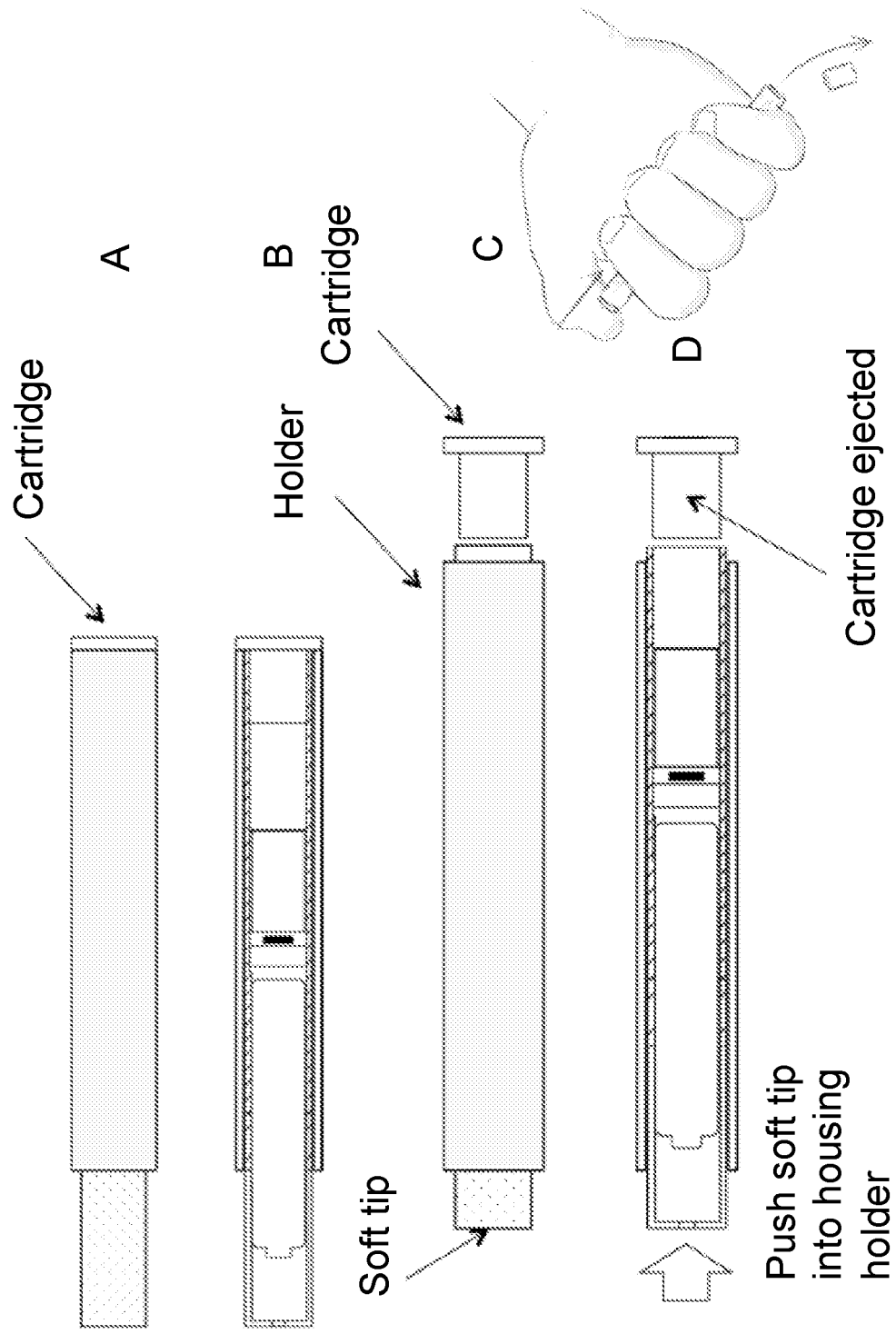


FIGURE 86

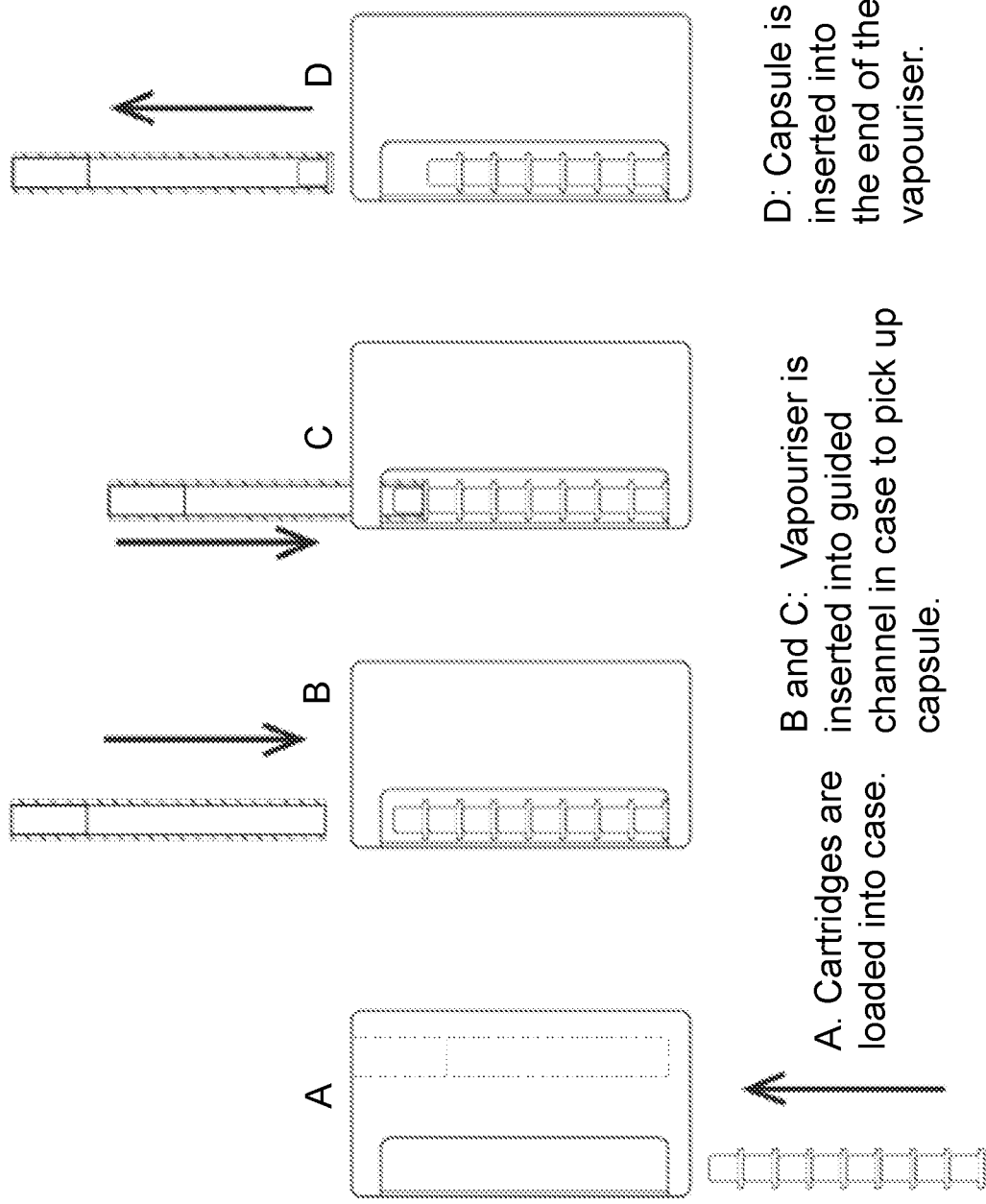


FIGURE 87

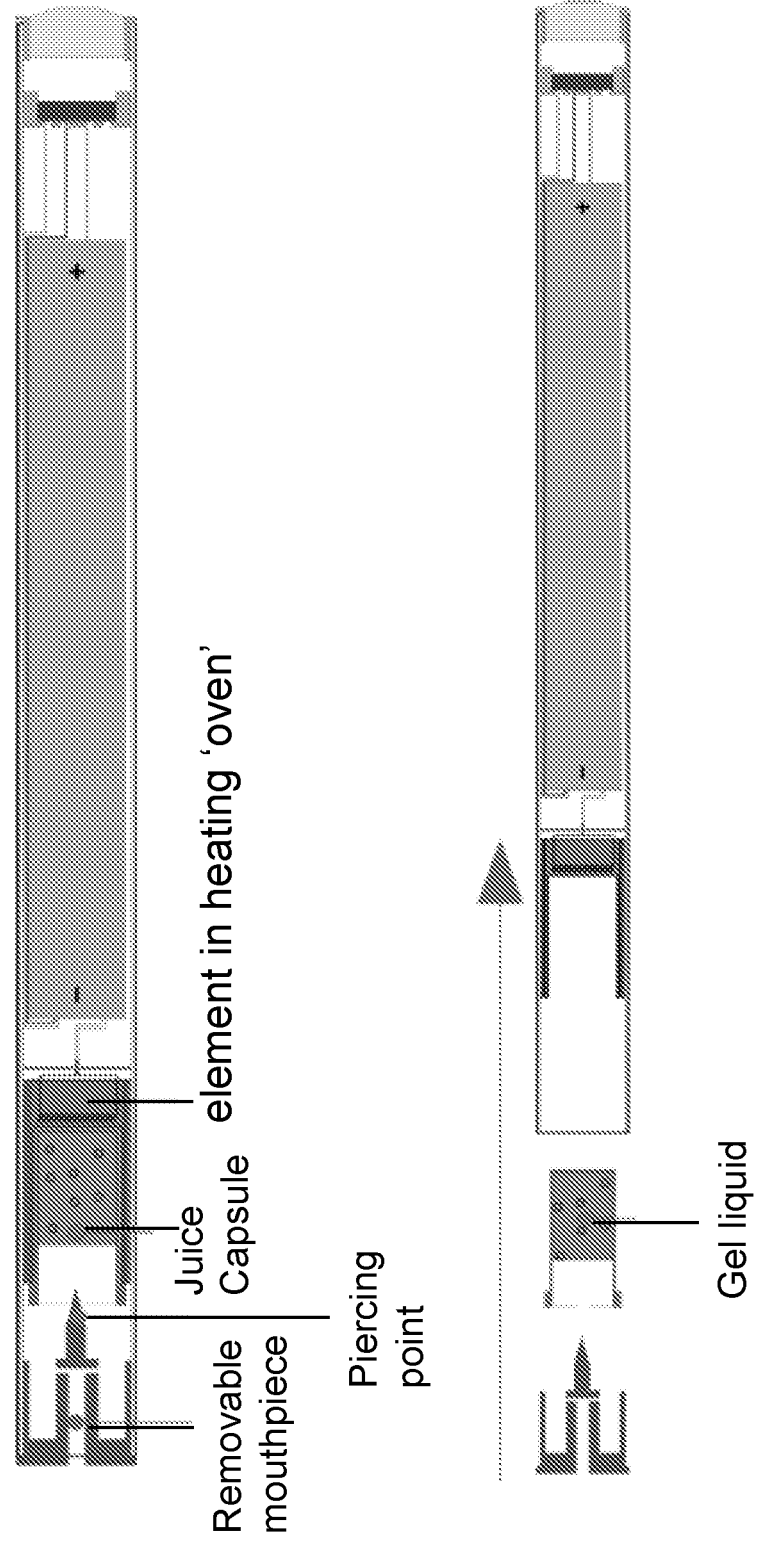


FIGURE 89

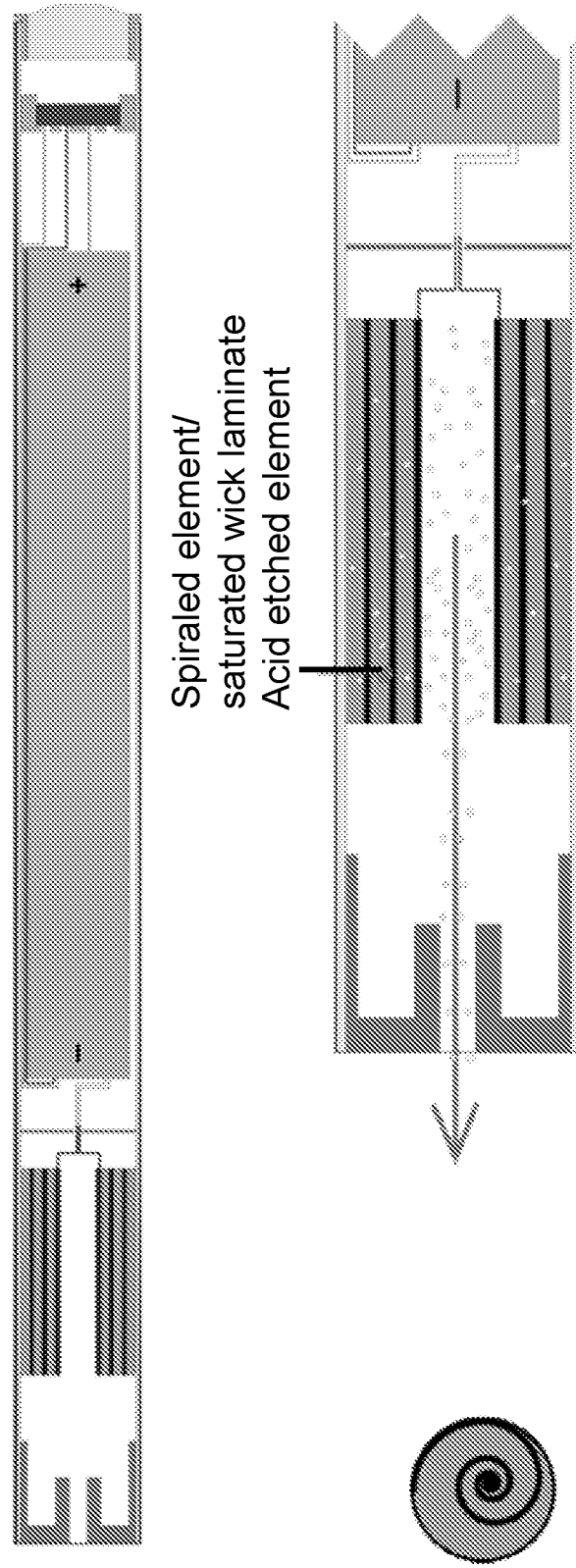


FIGURE 90

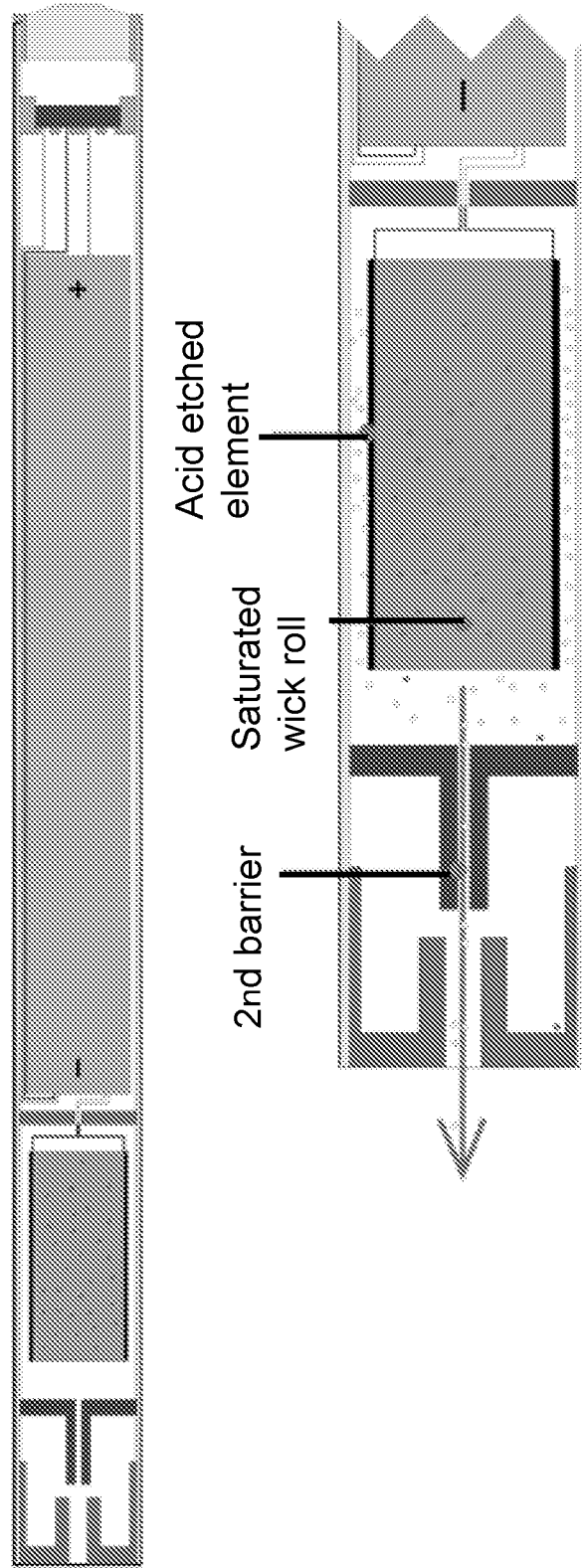


FIGURE 91

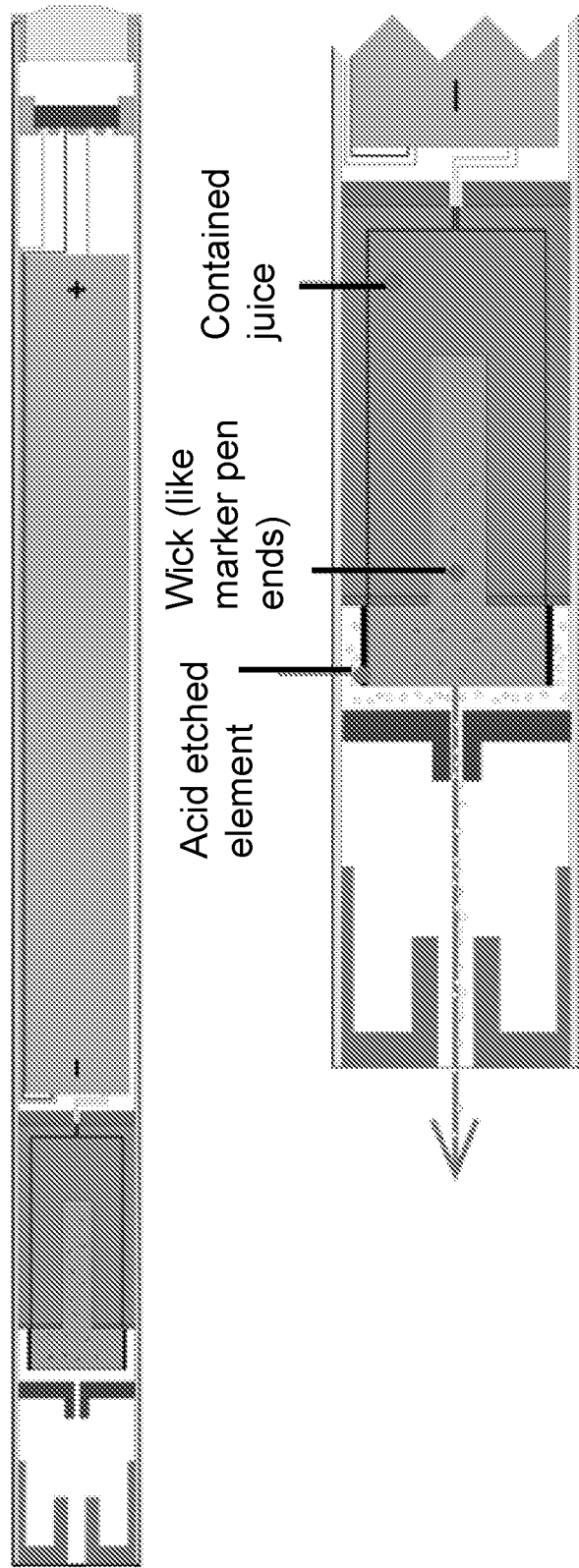


FIGURE 92

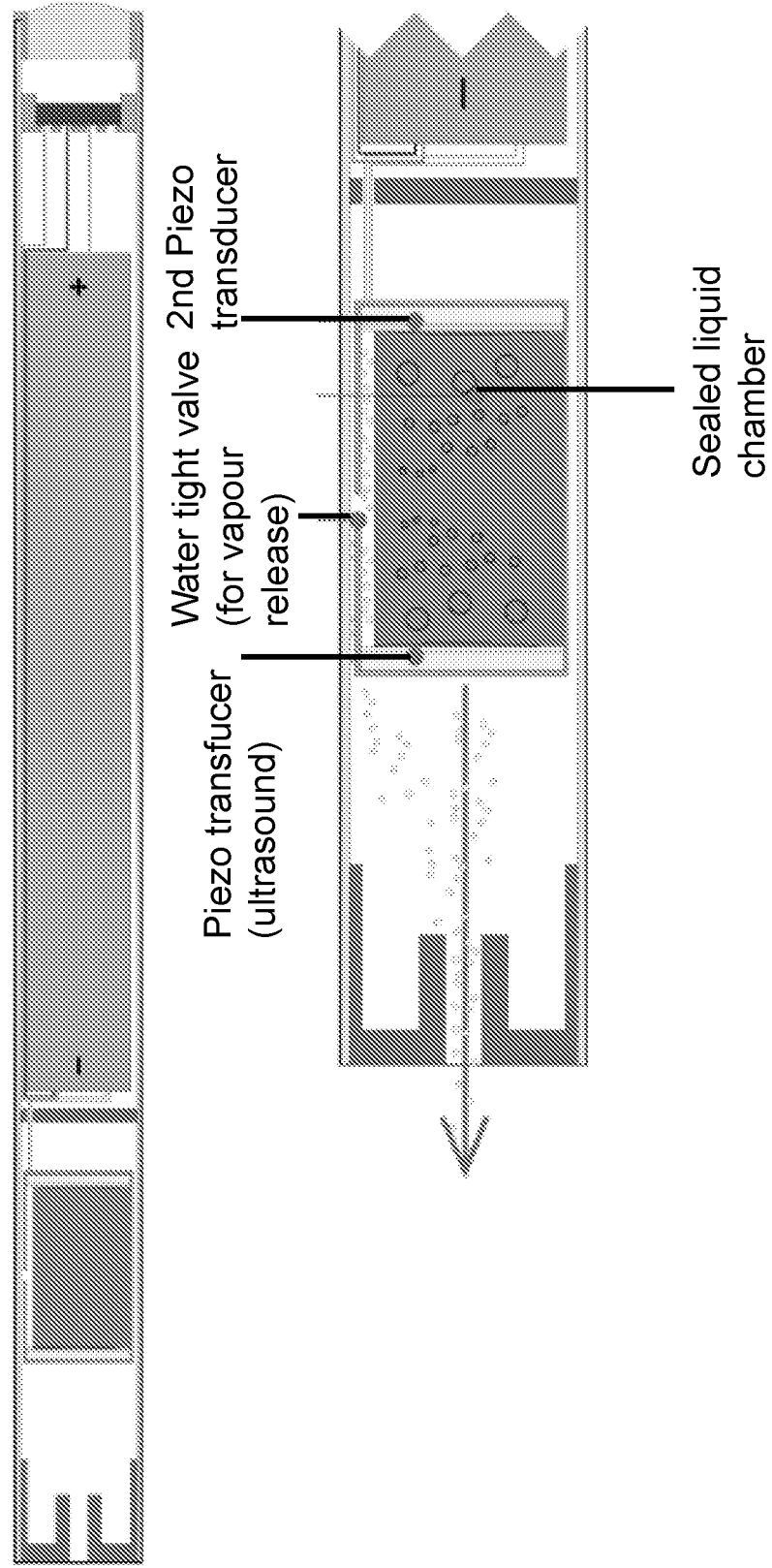


FIGURE 93

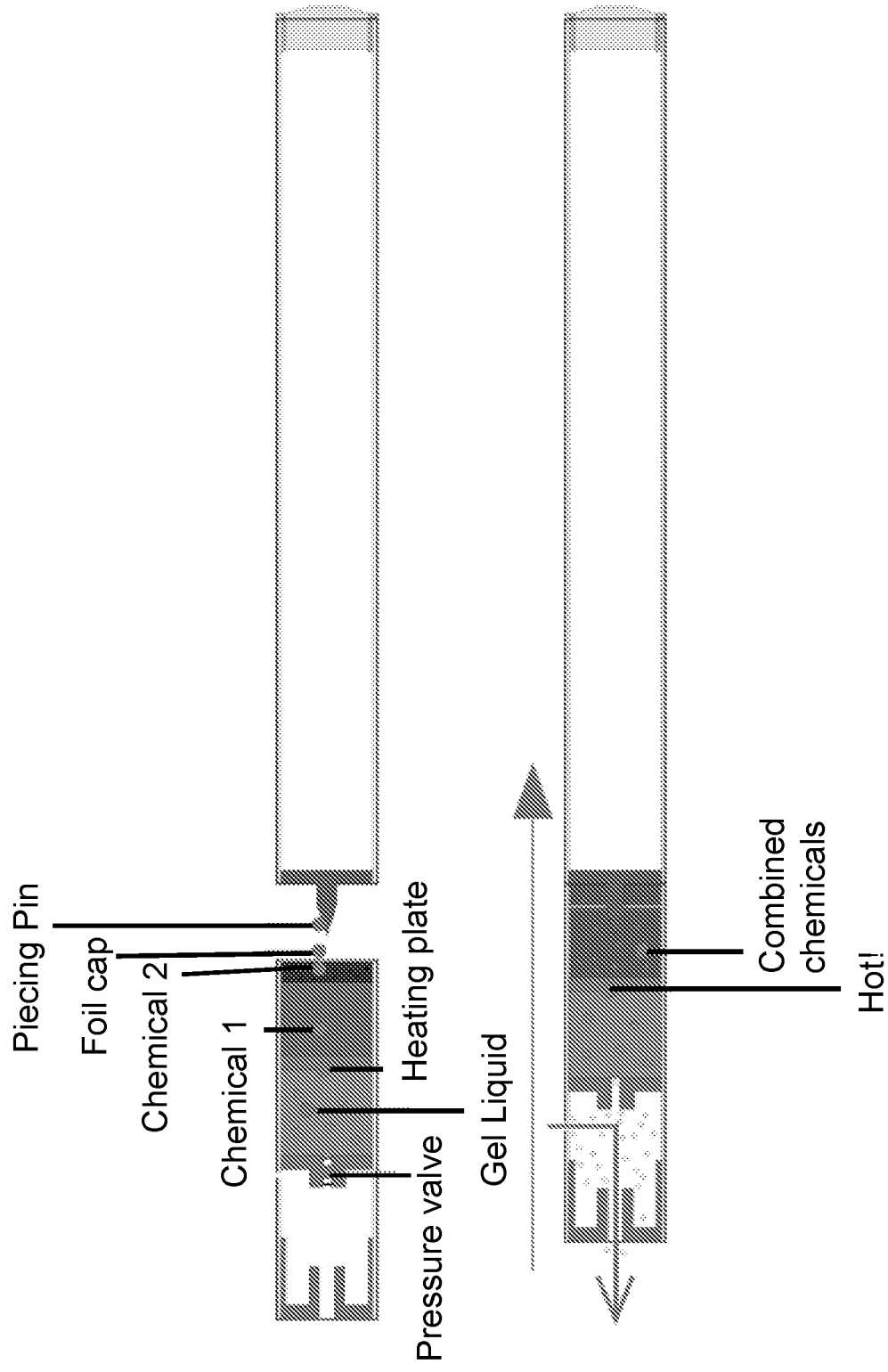


FIGURE 94