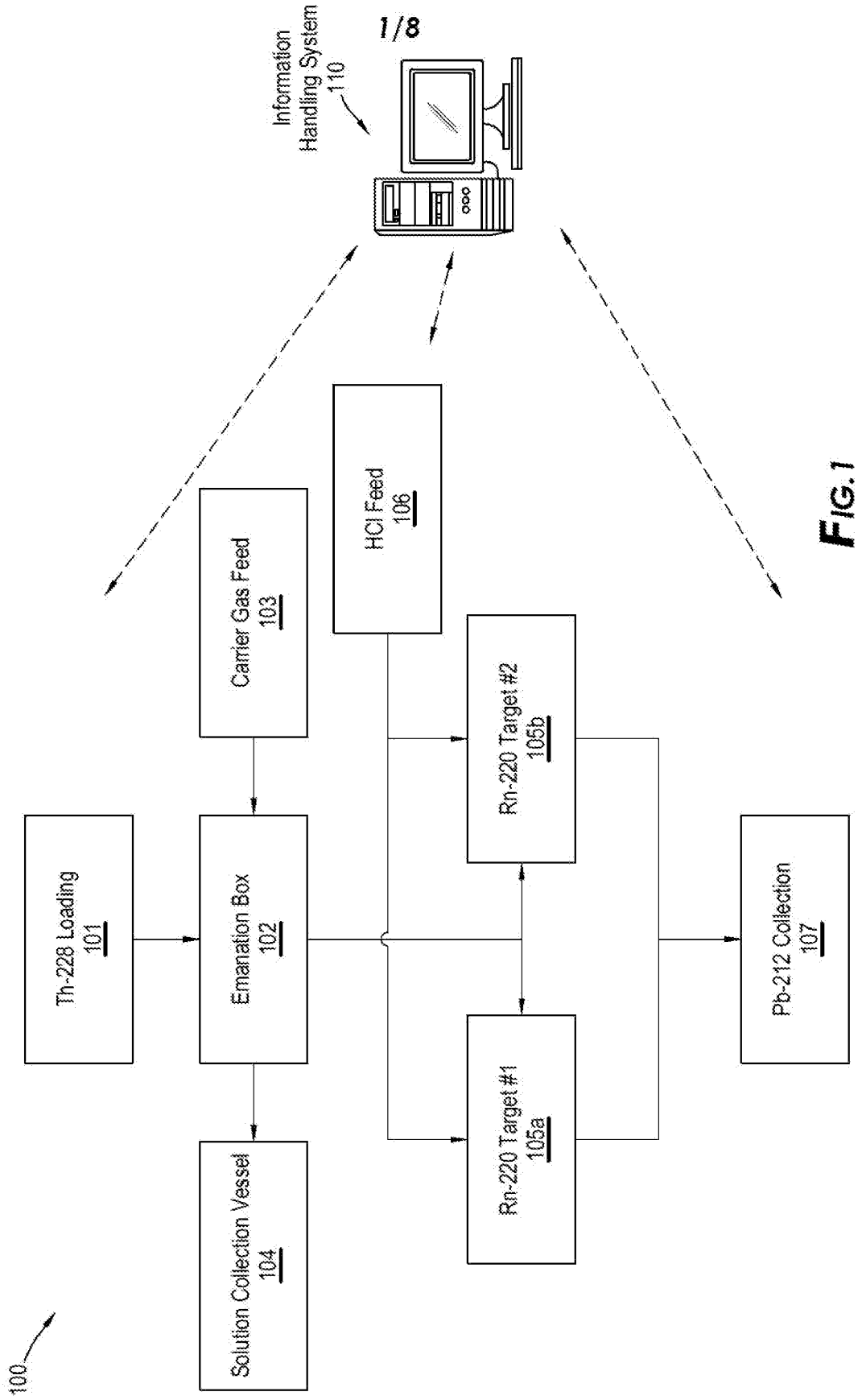

Information Handling System 110
HCl Feed 106
Carrier Gas Feed 103
Rn-220 Target #2 105b
Th-228 Loading 101
Emanation Box 102
Pb-212 Collection 107
Rn-220 Target #1 105a
Solution Collection Vessel 104
100

FIG. 1

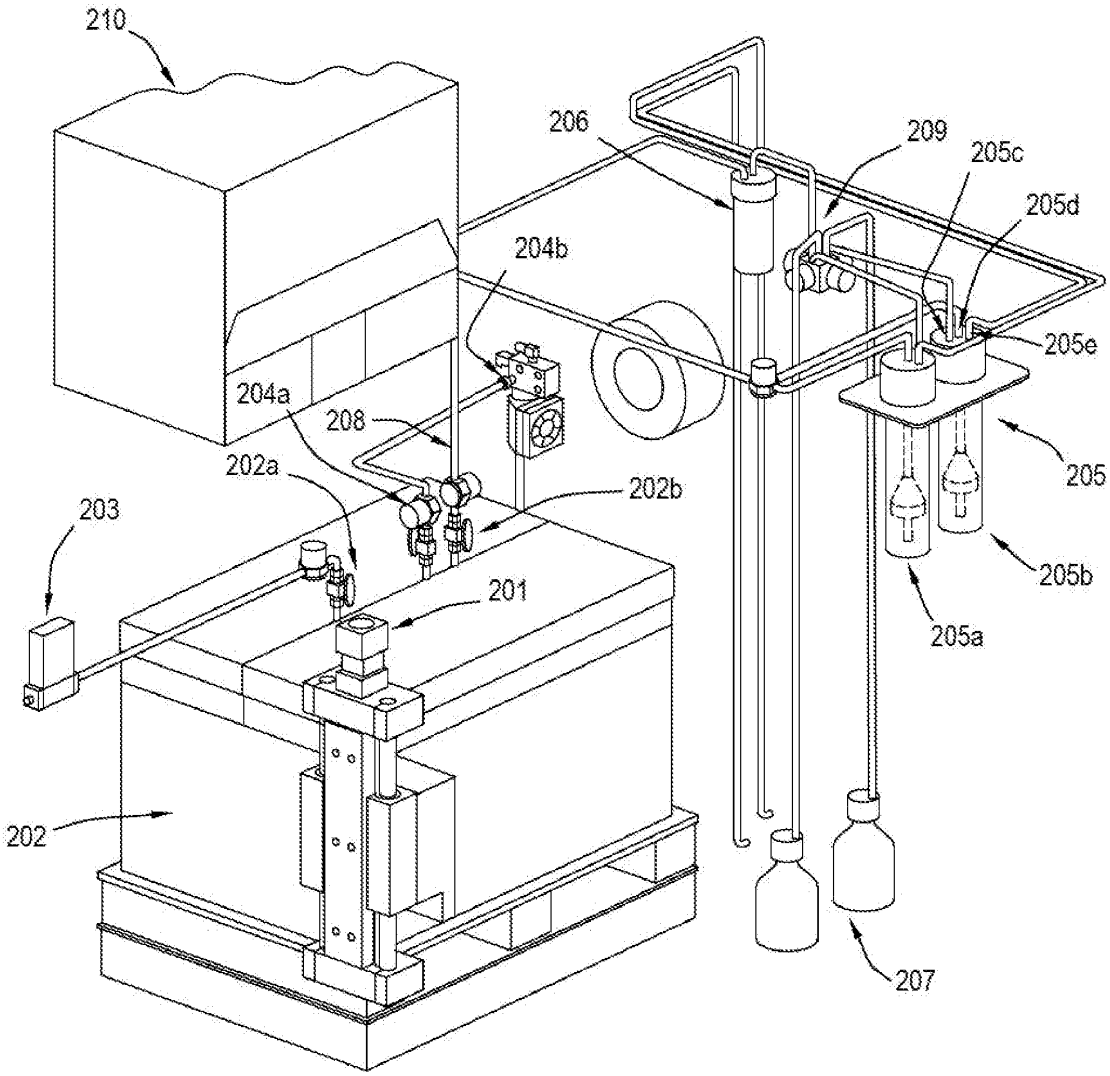

210
206
209
205c
205d
204b
205e
204a
208
205
202a
202b
203
205b
201
205a
202
207

FIG.2

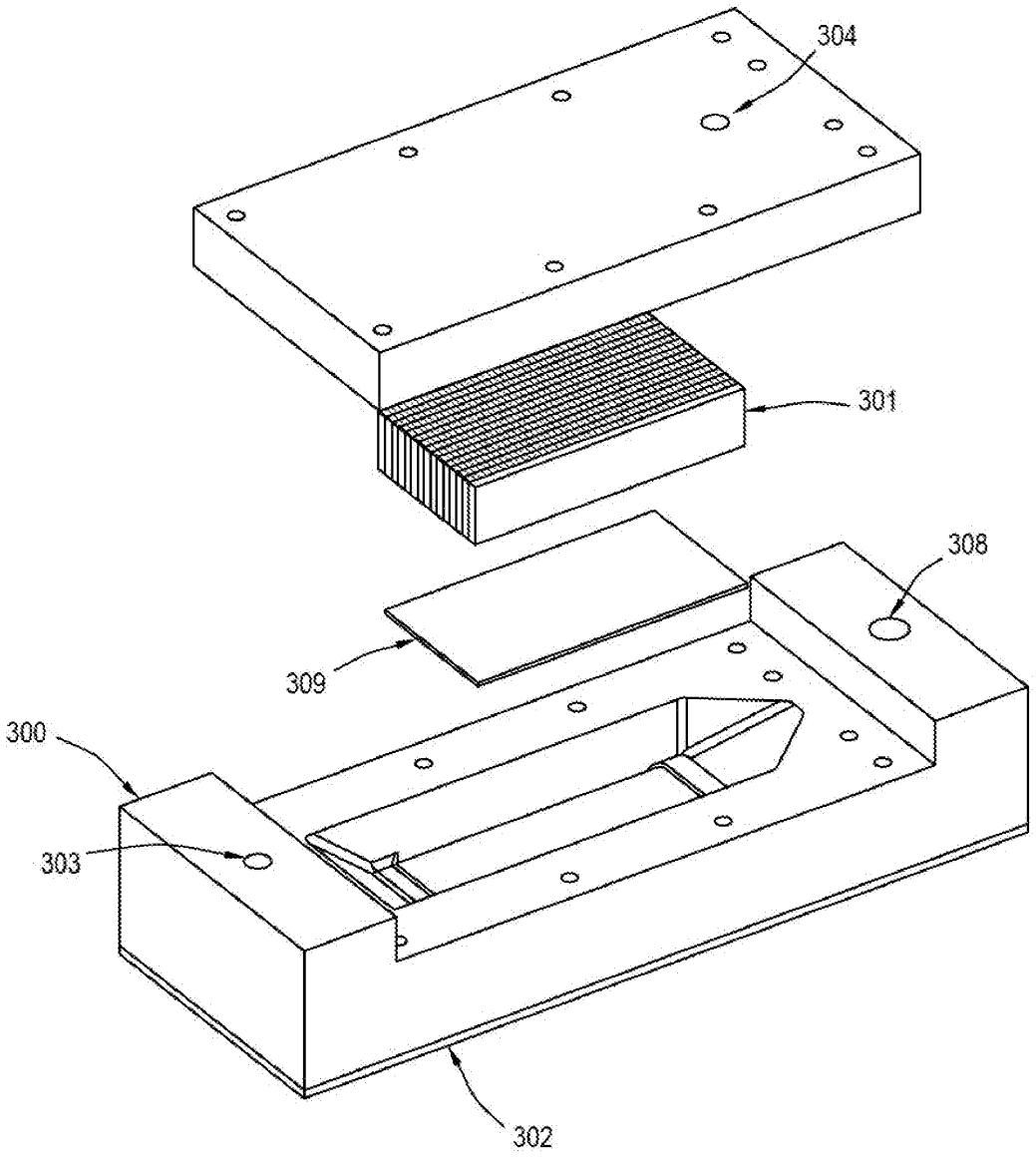


FIG.3

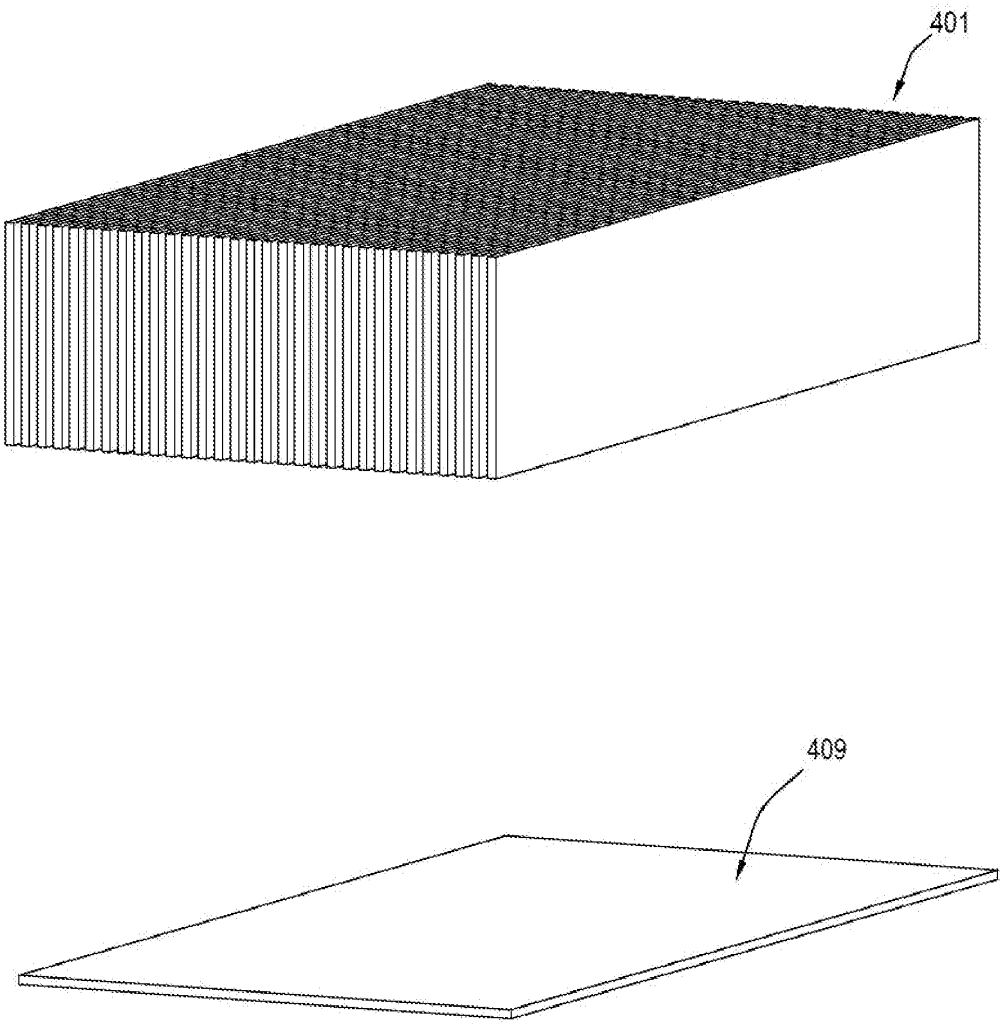


FIG.4

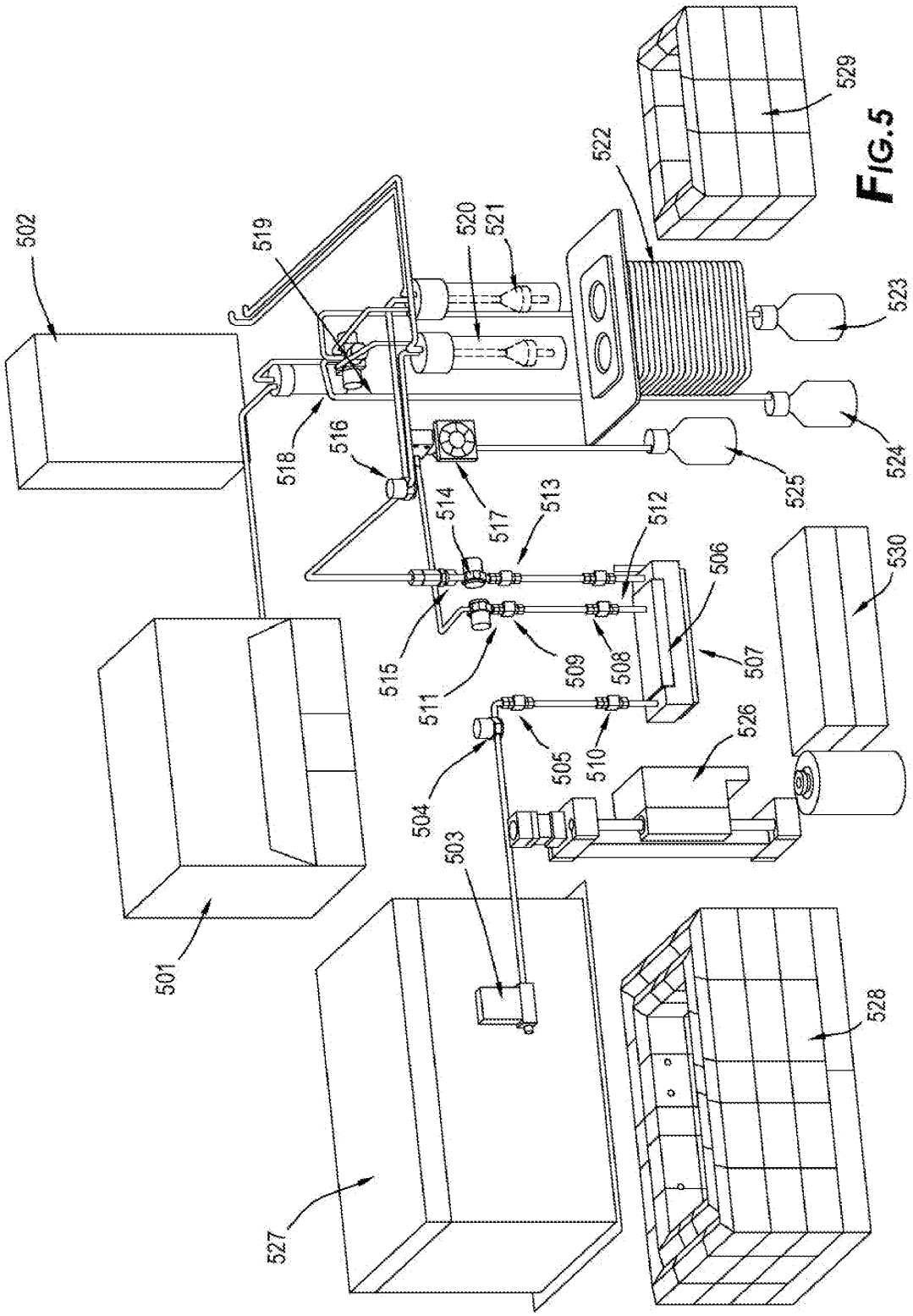

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FIG.5

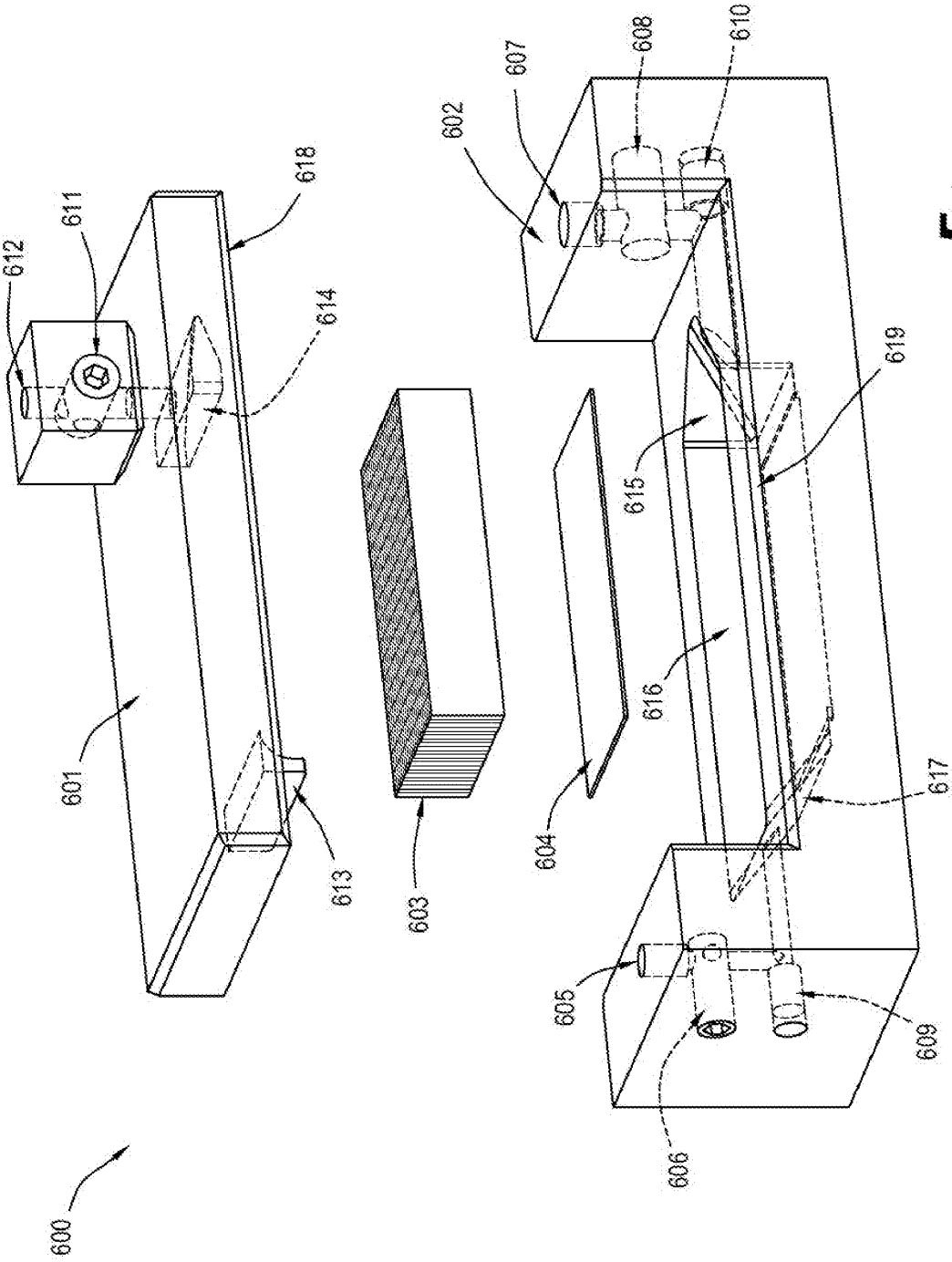

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FIG.6

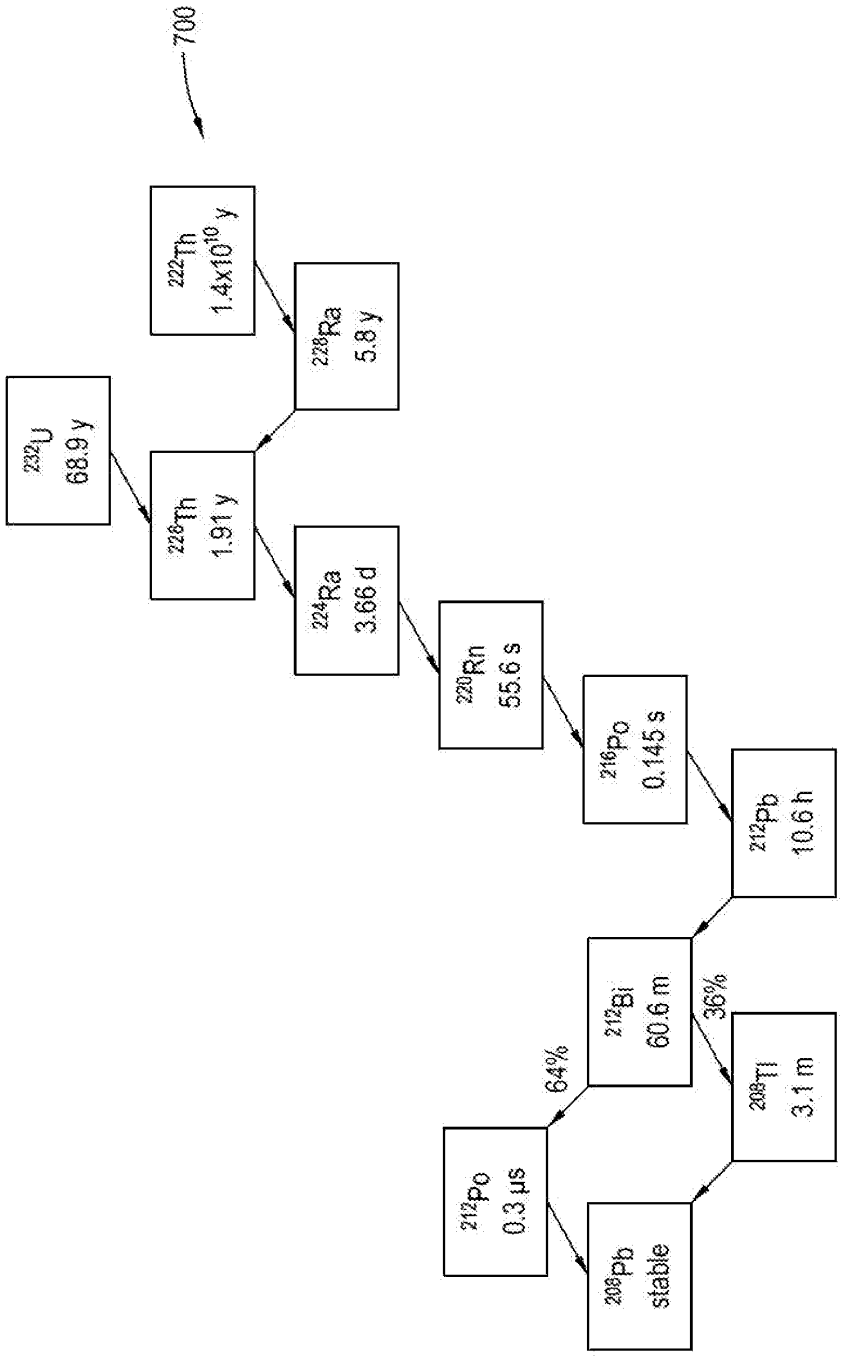

700
232U 68.9 y
228Th 1.91 y
222Th 1.4x10^10 y
228Ra 5.8 y
224Ra 3.66 d
220Rn 55.6 s
216Po 0.145 s
212Pb 10.6 h
212Bi 60.6 m
64%
36%
212Po 0.3 µs
208Tl 3.1 m
208Pb stable

FIG.7

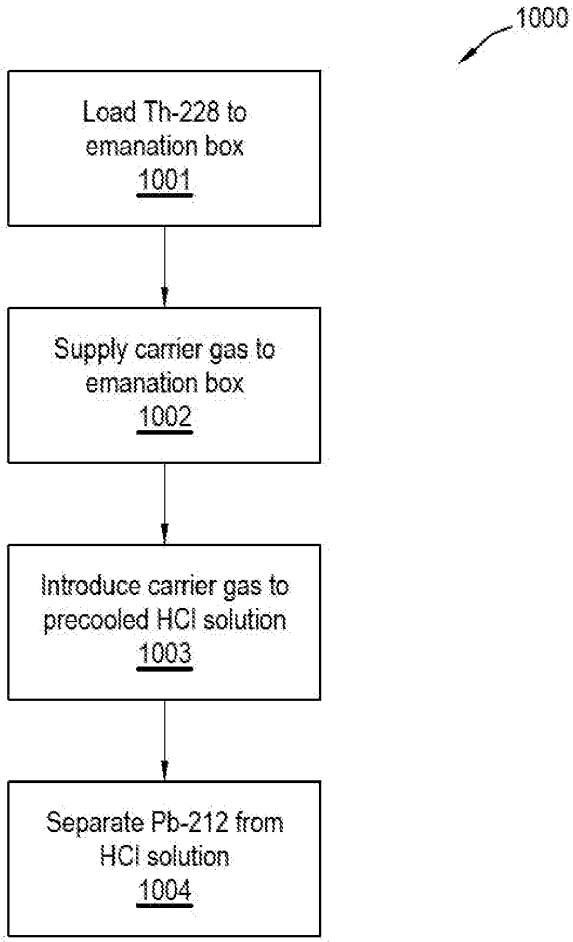

1000
Load Th-228 to emanation box
1001
Supply carrier gas to emanation box
1002
Introduce carrier gas to precooled HCl solution
1003
Separate Pb-212 from HCl solution
1004

FIG.8