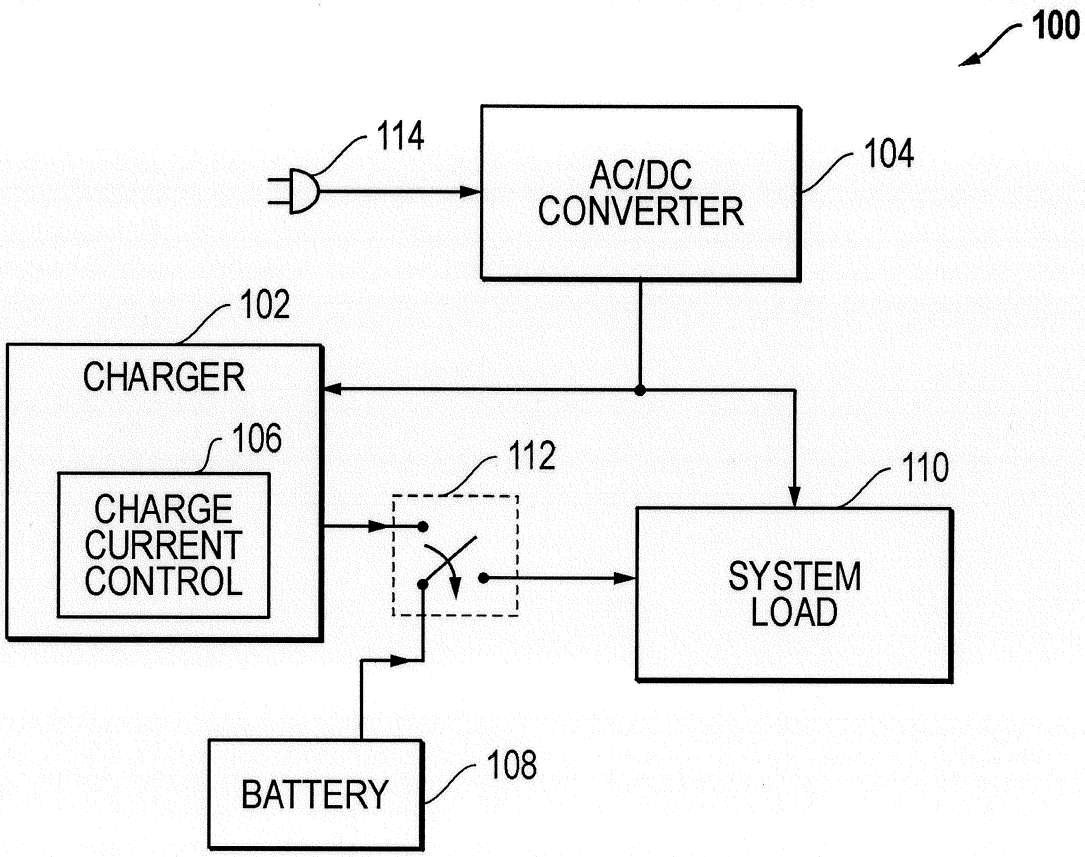

100
114
AC/DC
CONVERTER
104
102
CHARGER
106
CHARGE
CURRENT
CONTROL
112
110
SYSTEM
LOAD
BATTERY
108

FIG. 1

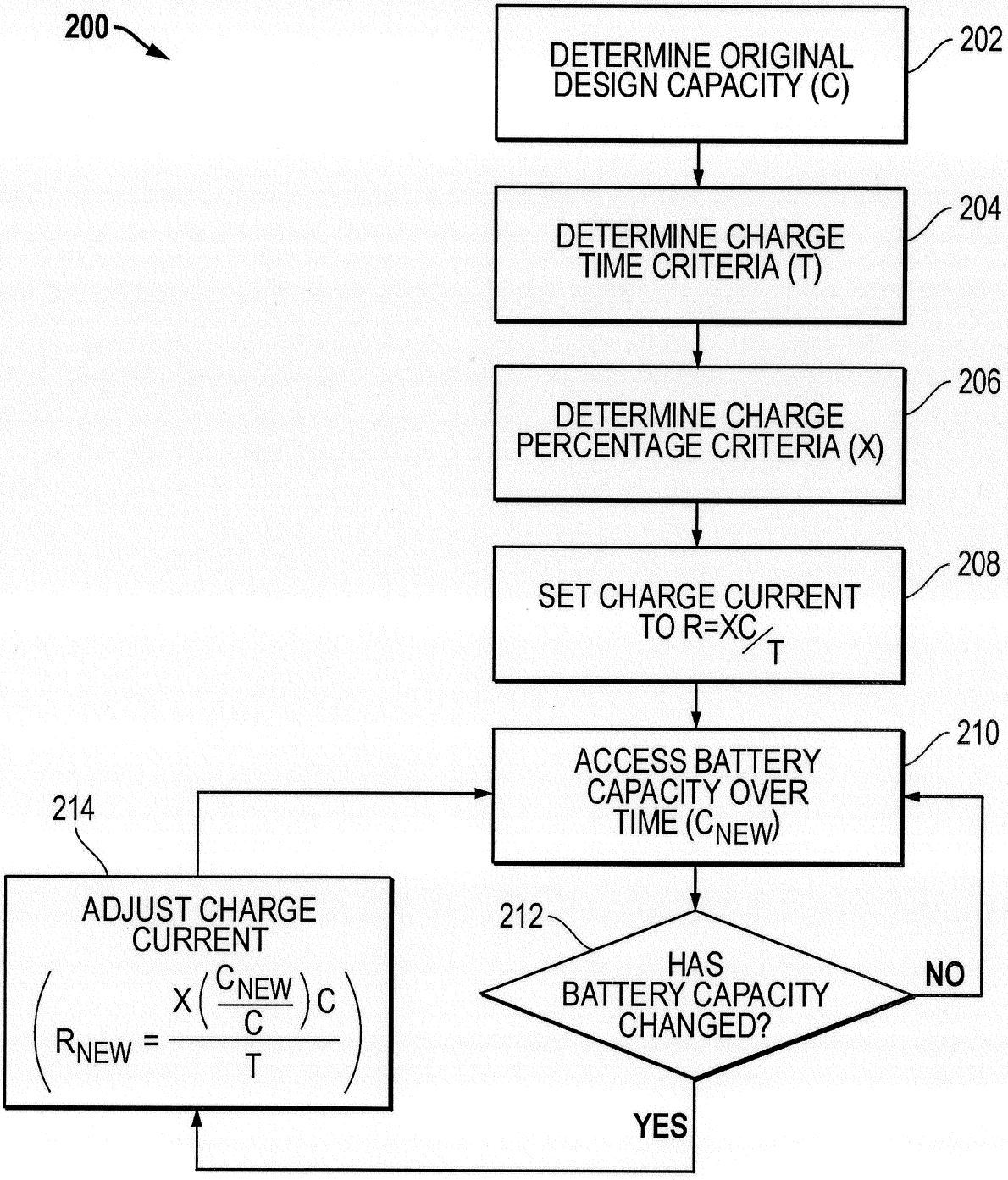

200
DETERMINE ORIGINAL DESIGN CAPACITY (C)
202
DETERMINE CHARGE TIME CRITERIA (T)
204
DETERMINE CHARGE PERCENTAGE CRITERIA (X)
206
SET CHARGE CURRENT TO R=XC/T
208
ACCESS BATTERY CAPACITY OVER TIME (C_{NEW})
210
HAS BATTERY CAPACITY CHANGED?
212
NO
YES
ADJUST CHARGE CURRENT
$R_{NEW} = \frac{X\left(\frac{C_{NEW}}{C}\right)C}{T}$
214

FIG. 2

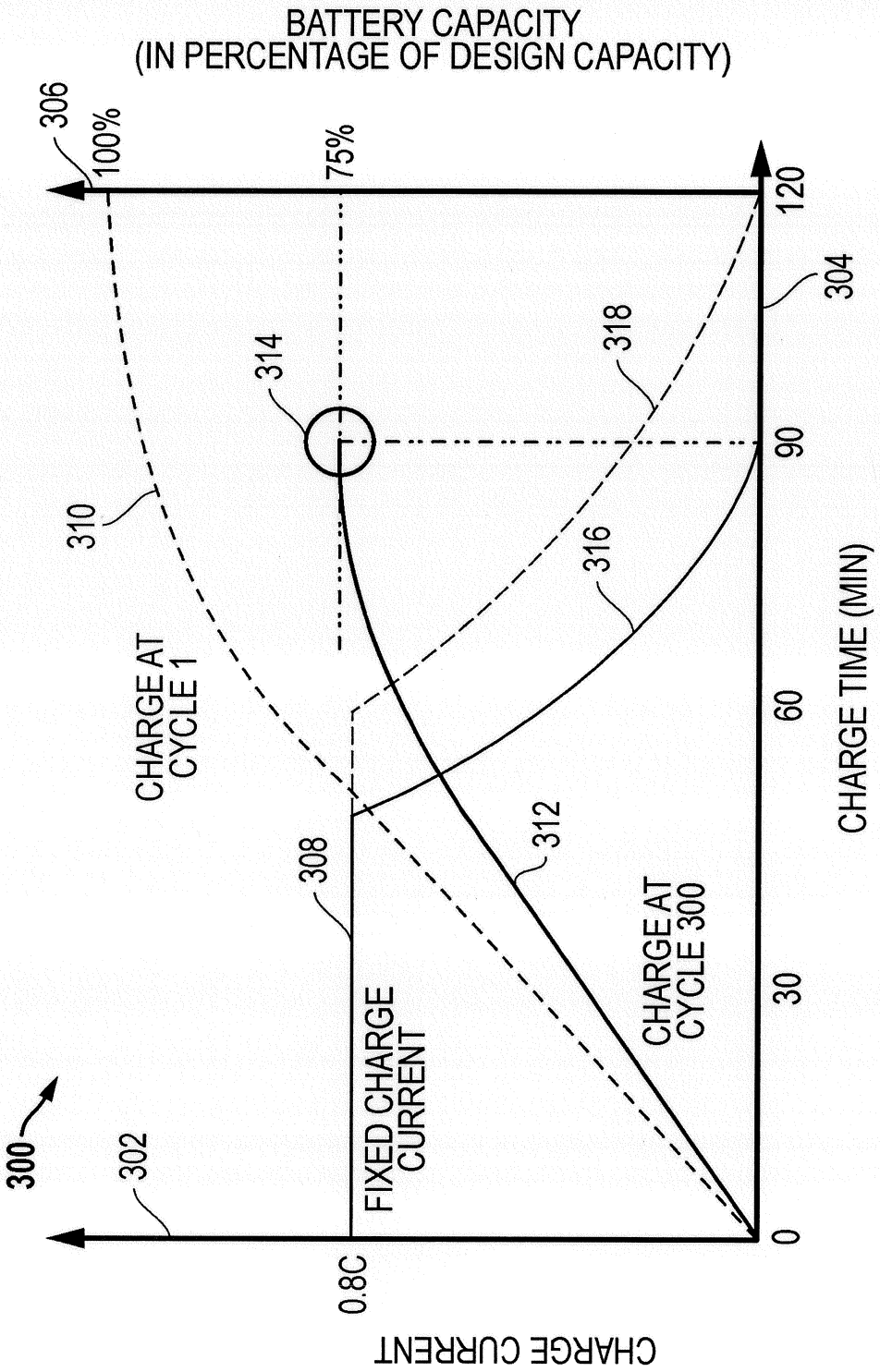


FIG. 3
(Prior Art)

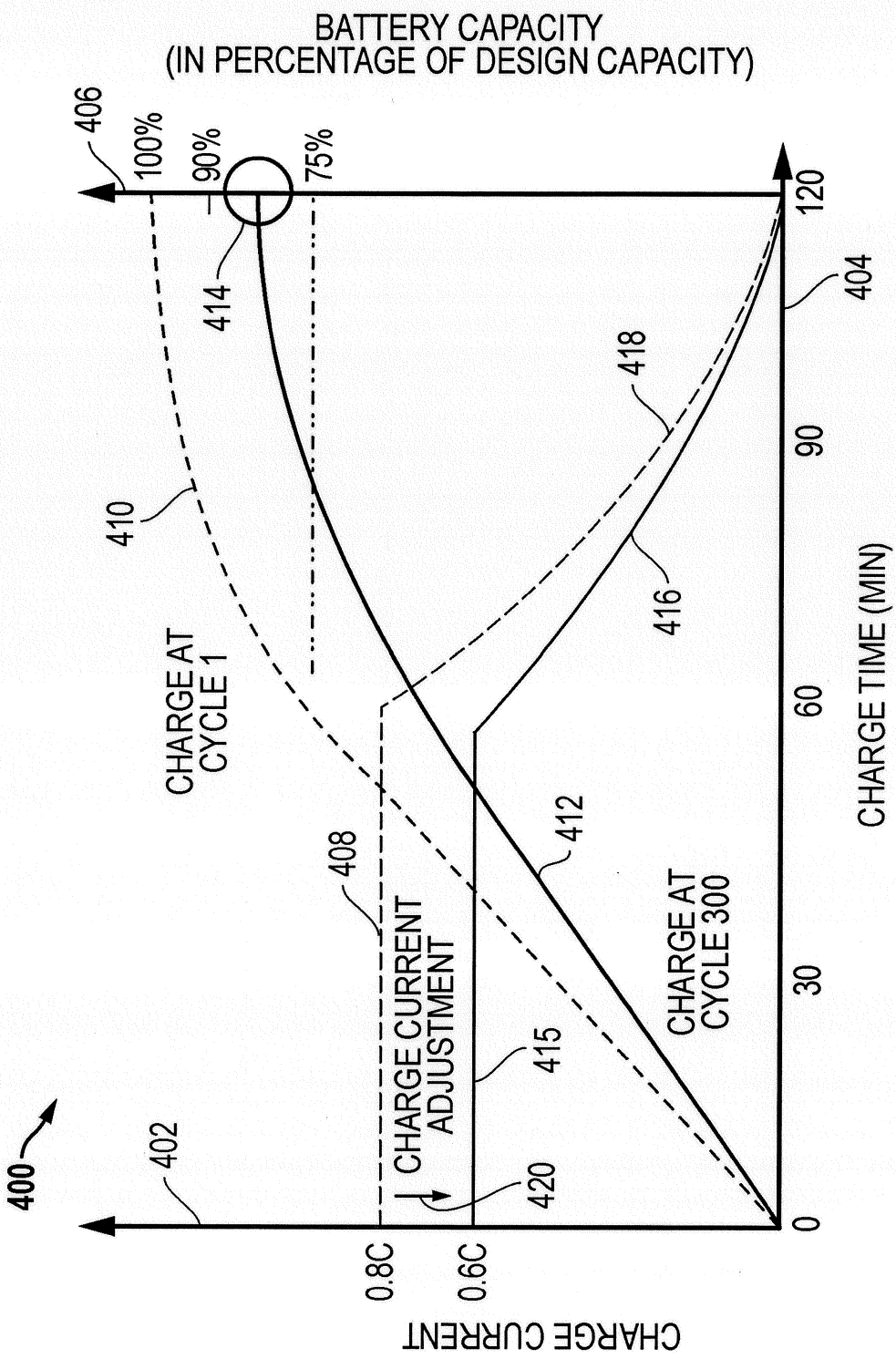

BATTERY CAPACITY
(IN PERCENTAGE OF DESIGN CAPACITY)
406
100%
90%
75%
414
410
418
416
CHARGE AT
CYCLE 1
408
412
CHARGE CURRENT
ADJUSTMENT
415
CHARGE AT
CYCLE 300
420
400
402
0.8C
0.6C
CHARGE CURRENT
0
30
60
90
120
CHARGE TIME (MIN)
404

FIG. 4