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(54) **Controlling door dwell time.**

(57) The present invention is directed to controlling the door dwell time of an elevator car door based on traffic conditions. In the present invention, a door dwell sensor emits radiation and senses reflected radiation in the presence of a potential passenger. As an elevator car arrives at a floor, its door is preferably initially held open a first predetermined time period (300). Thereafter, if boarding traffic is detected, the door is further held open a second predetermined time period (306). If the total amount of time that the elevator car door has been open (310) is less than a predetermined maximum amount of time, the present invention again detects for the presence of boarding traffic. If boarding traffic is detected, the door is again held open a second predetermined time period. This process continues until either boarding traffic is not detected, or the door has remained open for the predetermined maximum amount of time. When boarding traffic is not detected, or when the door has remained open for the predetermined maximum amount of time, the elevator car door will begin to close (312). The predetermined maximum amount of time can be a fixed value, a variable based on the reason the elevator car stopped at the floor, or a variable based on a predicted door dwell time, which takes into account predicted number of boarding and deboarding passengers at the floor.

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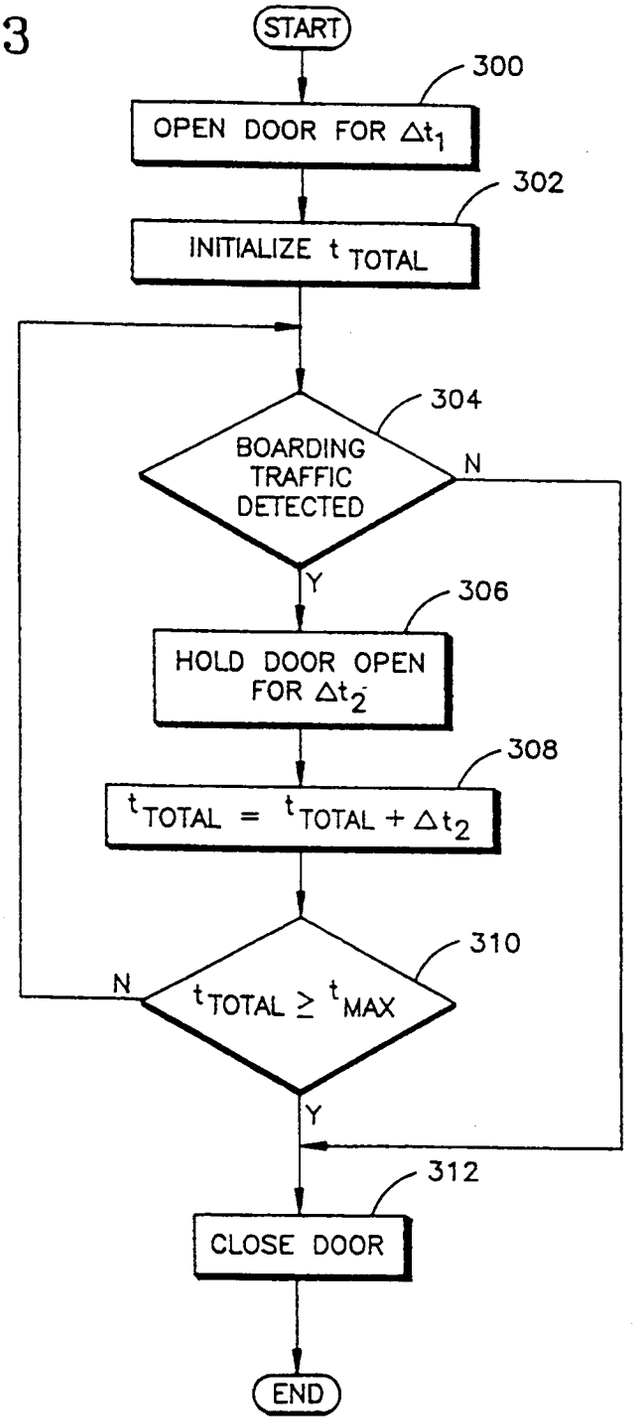
FIG.3


START
300
OPEN DOOR FOR Δt_1
302
INITIALIZE t_{TOTAL}
304
BOARDING TRAFFIC DETECTED
N
Y
306
HOLD DOOR OPEN FOR Δt_2
308
$t_{TOTAL} = t_{TOTAL} + \Delta t_2$
310
N
$t_{TOTAL} \geq t_{MAX}$
Y
312
CLOSE DOOR
END

European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 91 30 3215

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	US-A-4 491 199 (SHEA ET AL) * column 1, line 27 - line 54 * * column 5, line 48 - column 10, line 12; figures 1-8 *	1,3,4, 9-12	B66B13/14
A	US-A-3 580 360 (KEIPER) * column 1, line 20 - line 46 * * column 14, line 59 - column 15, line 55; figure 1 *	1,4	
A	US-A-3 545 572 (HALLENE ET AL) * column 1, line 54 - column 2, line 16 * * column 7, line 11 - column 8, line 37; figures 1-4 *	1,4	
A	US-A-3 404 753 (MAGEE) * column 1, line 49 - column 2, line 19 *	1,3,4,6, 9	
A	US-A-3 513 945 (HALL ET AL) * column 10, line 39 - line 52; figures 1-4 *	1,3,4,6, 9	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
A	US-A-4 874 063 (TAYLOR) * column 19, line 9 - column 20, line 19 *	10-12	B66B E05F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	21 NOVEMBER 1991	CLEARY F.M.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
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