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Baron

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(54) **AUTOMATIC MUSIC GENERATING METHOD AND DEVICE**

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Jun. 23, 1999 (FR) 99 08278

(51) **Int. Cl.**[7] **A63H 5/00**; G04B 13/00; G10H 7/00

(52) **U.S. Cl.** **84/609**; 84/610; 84/613; 84/649; 84/650

(58) **Field of Search** 84/600–602, 609–613, 84/615, 622–625, 634, 637, 649–653, 659–660, 666–669

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,982,643 A * 1/1991 Minamitaka 706/902
5,375,501 A 12/1994 Okuda 84/611
5,525,749 A 6/1996 Aoki 84/609
5,990,407 A * 11/1999 Gannon 84/604
6,031,171 A * 2/2000 Tohgi et al. ..... 84/470 R
6,124,543 A * 9/2000 Aoki 84/609
6,188,010 B1 * 2/2001 Iwamura ..... 84/477 R
6,326,538 B1 * 12/2001 Kay 84/635

FOREIGN PATENT DOCUMENTS

EP 288 800 A2 A3 11/1988 ..... G10H/1/00

OTHER PUBLICATIONS

Yap Siong Chua, Composition Based on Pentatonic Scales: A Computer Aided Approach, IEEE,Los Alamitos, CA, USA, Jul. 1991, pp. 67–71.

* cited by examiner

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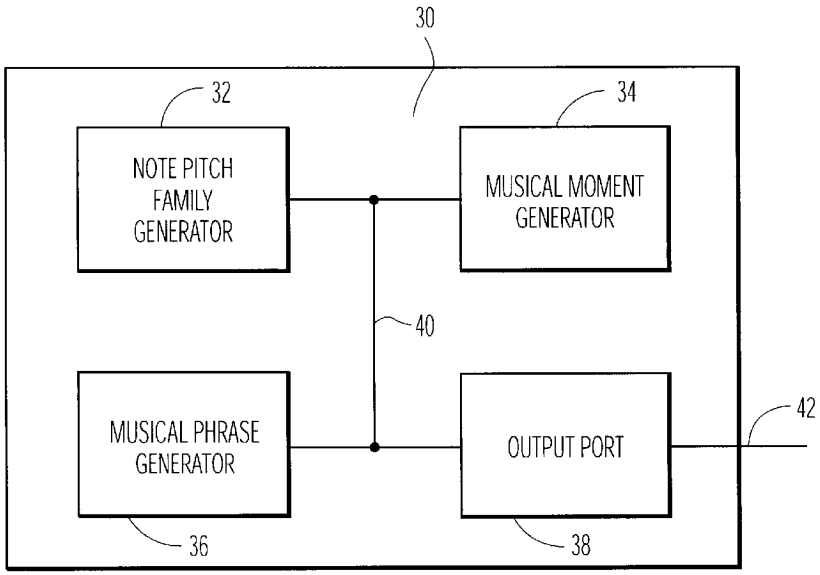
(57) **ABSTRACT**

The invention concerns a music generating method which consists in: an operation defining musical moments during which at least four notes are capable of being played, for example, bars or half-bars; an operation defining two families of note pitches, for each musical moment, the second family of note pitches having at least one note pitch which does not belong to the first family; an operation forming at least a succession of notes having at least two notes, each succession of notes being called a musical phrase, succession wherein, for each moment, each note whereof the pitch belongs exclusively to the second family is exclusively surrounded with notes of the first family; and an operation producing the output of a signal representing each pitch of each succession of notes.

41 Claims, 23 Drawing Sheets



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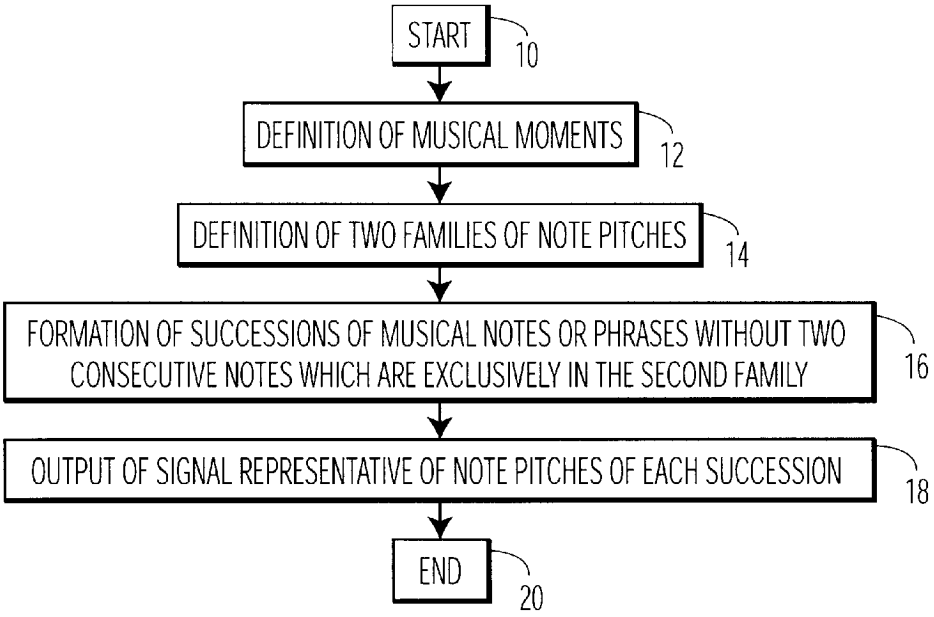

FIG. 1

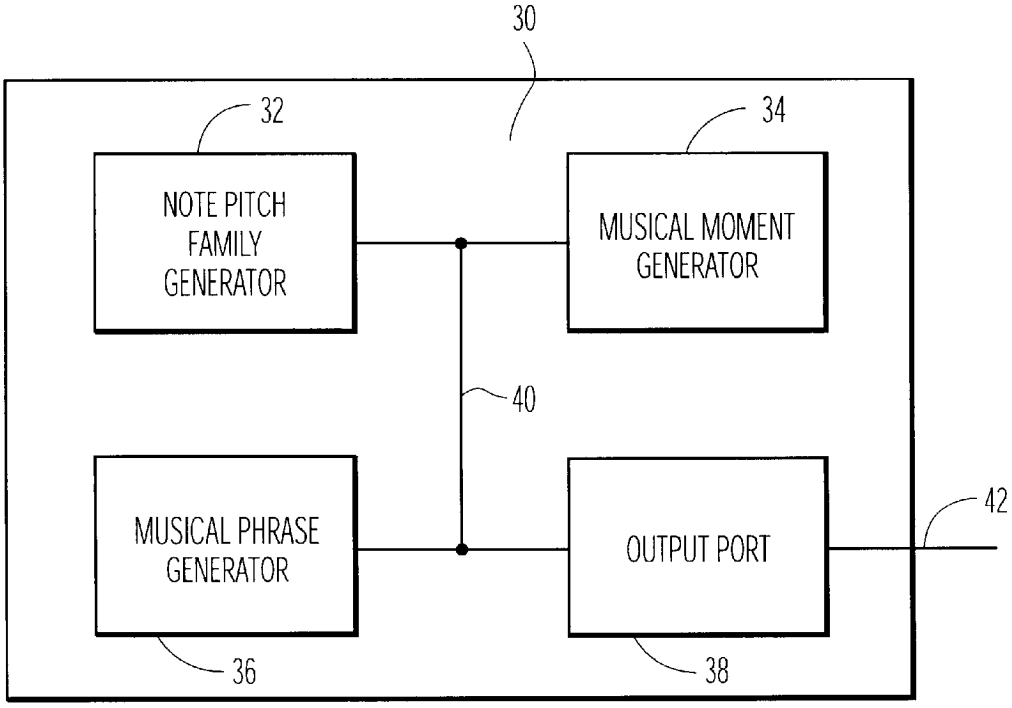

FIG. 2

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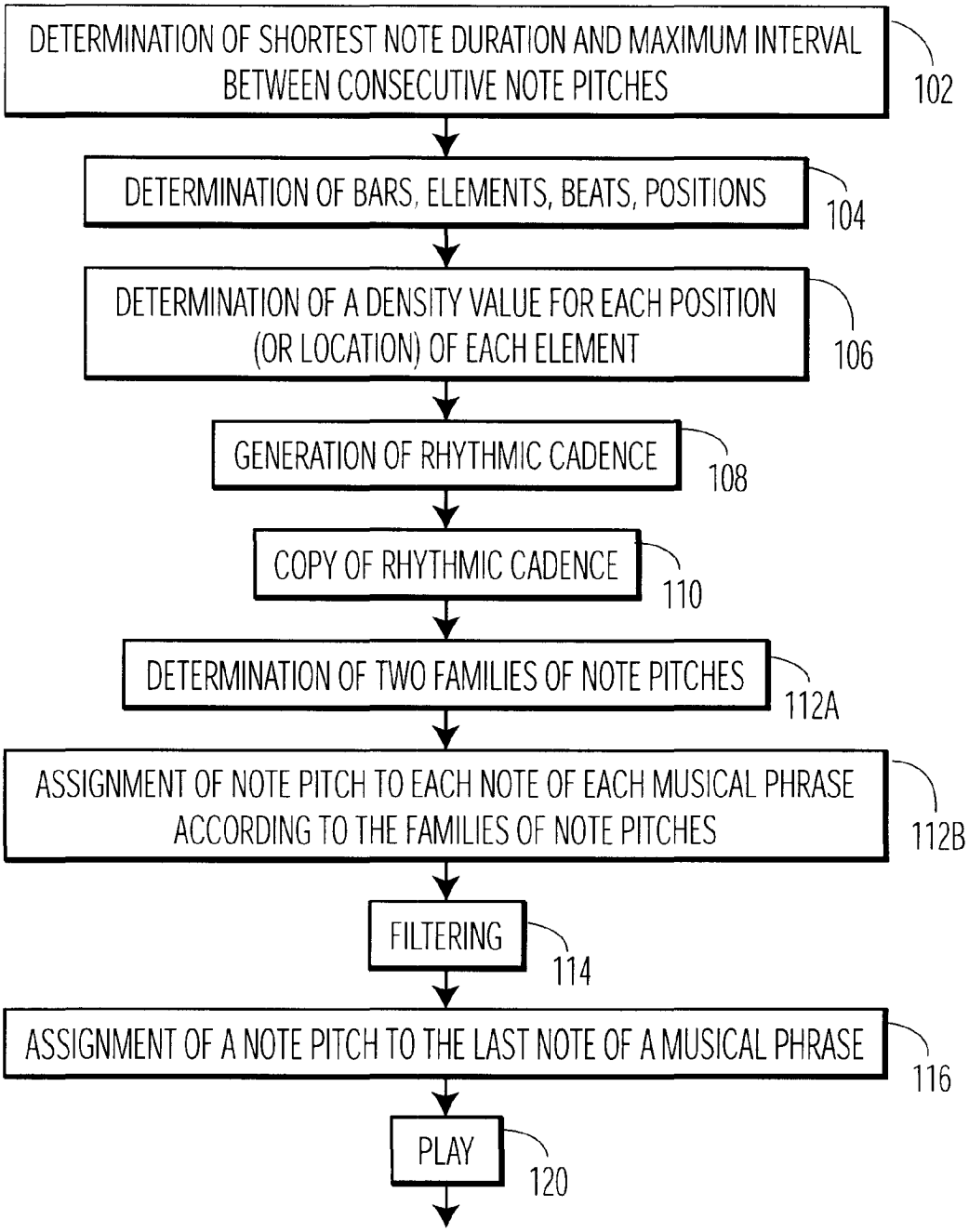

FIG. 3

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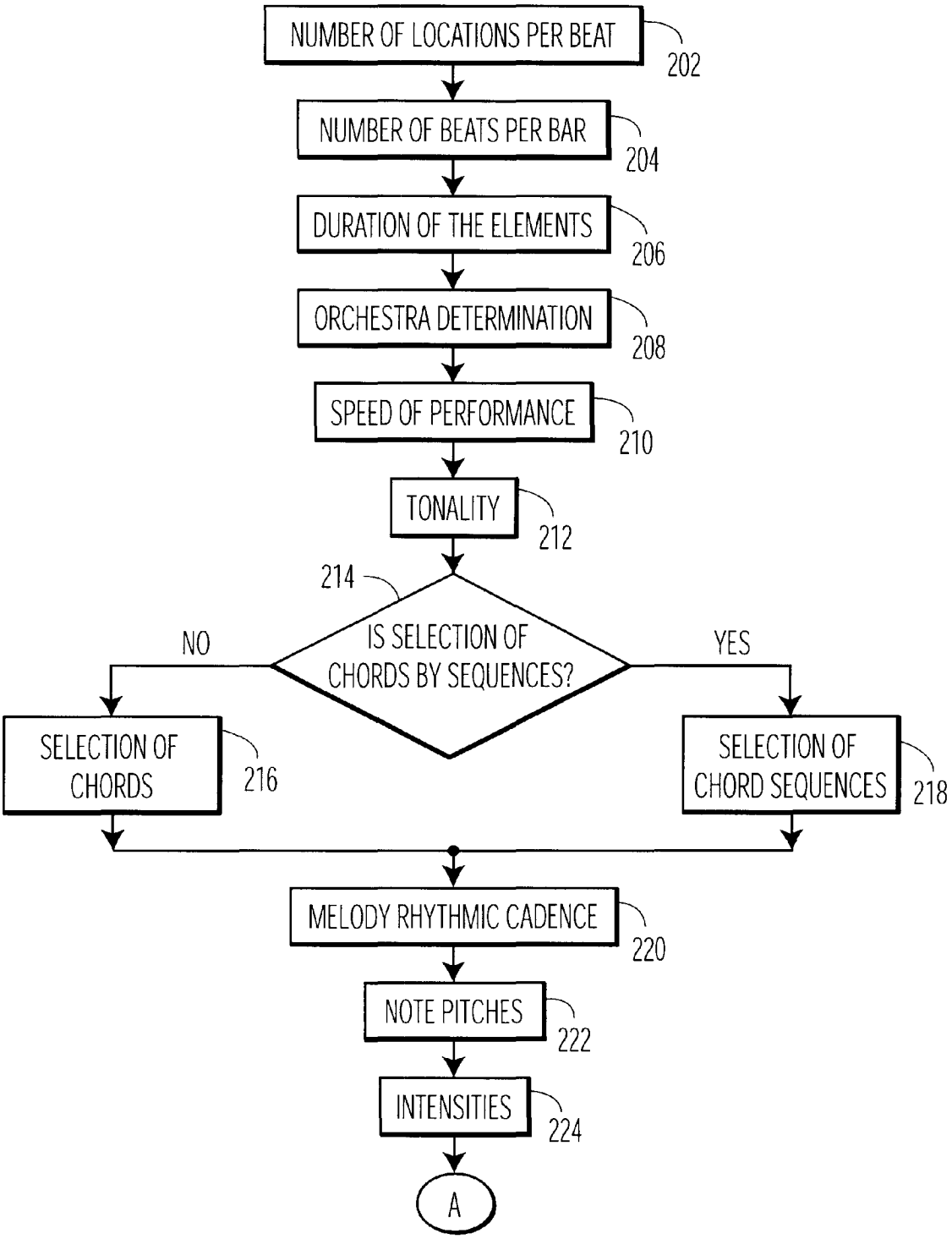

FIG. 4A

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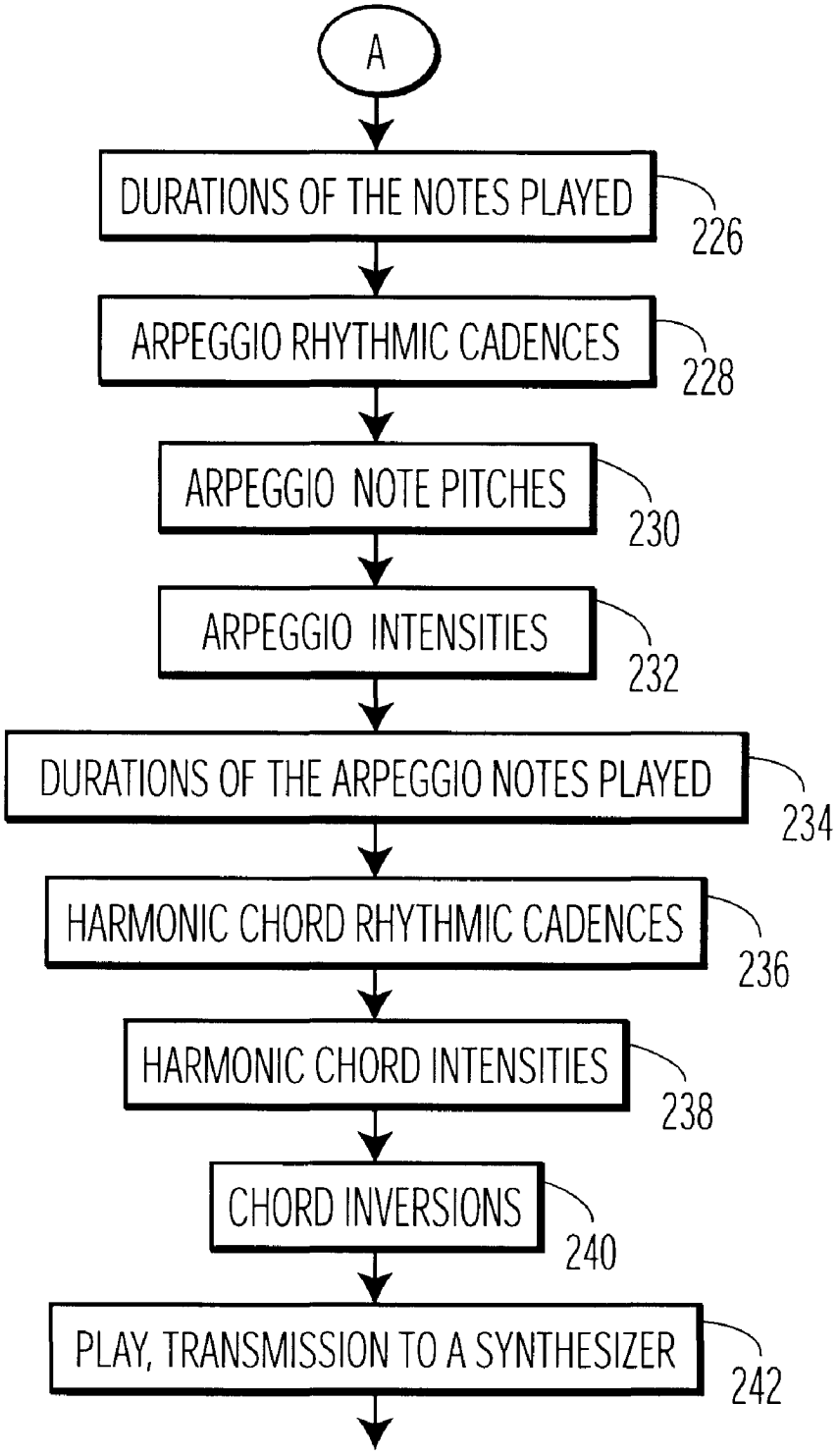

FIG. 4B

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