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[54] **SELF-PROGAMMING OF ON-CHIP PROGRAM MEMORY FOR MICROCONTROLLER AT CLOCK START-UP**

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Related U.S. Application Data

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[52] **U.S. Cl.** **395/700**; 395/500; 395/800; 364/280.2; 364/DIG. 1

[58] **Field of Search** 395/375, 500, 395/575, 800, 700

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[57] **ABSTRACT**

A microcontroller fabricated on a semiconductor chip is adapted, when operating, to execute programs and instructions and, in response, to generate control signals to selectively control external apparatus. A clock generates timing signals to control the timing of the microcontroller execution and operation. An on-chip program memory has space avilable for storing a program to be executed by the microcontroller in sequential steps in successive address locations of the program memory. An instruction stored in unerasable memory on the chip initiates self-programming of the program memory with the program to be executed by the microcontroller by enabling a pointer timed by the clock to alternately read addresses containing steps of the program to be executed from off-chip memories and to write same into successive addresses of the on-chip program memory by incrementing the latter addresses with each step to be written therein.

3 Claims, 10 Drawing Sheets

