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Allen et al.

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[54] **MASTER-SLAVE LATCHES AND POST INCREMENT/DECREMENT OPERATIONS**

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[52] **U.S. Cl.** **712/202**; 711/132; 711/219; 365/230.08

[58] **Field of Search** 711/219, 132; 395/378, 595; 712/202; 365/230.08

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[57] **ABSTRACT**

The stack pointer is used for generating the next unutilized location in the stack memory device in order to indicate where a current value in the program counter is to be written. The stack pointer also generates a directly preceding location to the next unutilized location in order to read the last value of the program counter that was written to the stack memory device. The stack pointer will select the next unutilized location in the stack memory device for a write operation and the directly preceding location to the next unutilized location in the stack memory device for a read operation. The stack pointer will further perform either a post increment or post decrement operation on the next unutilized location in the stack memory device after execution of a current instruction.

26 Claims, 1 Drawing Sheet

