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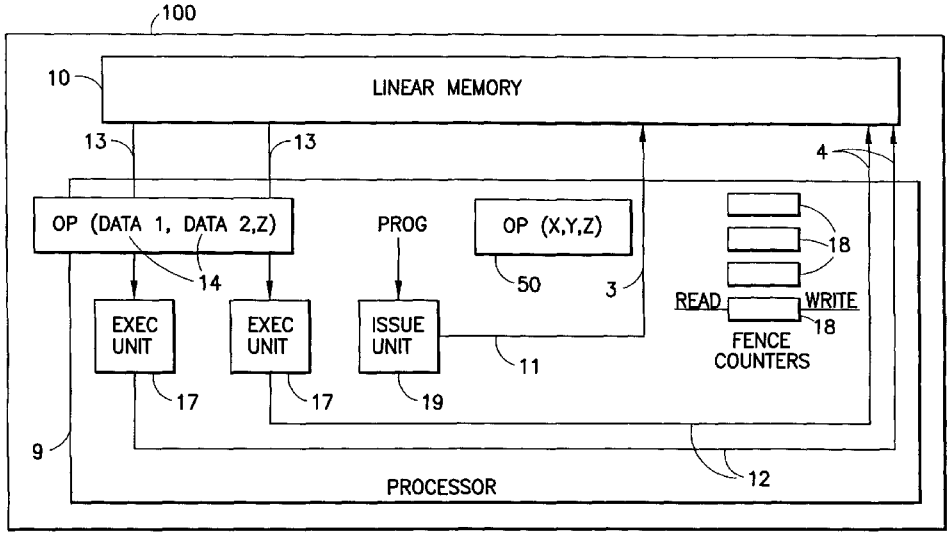
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(54) Title: ISSUANCE AND EXECUTION OF MEMORY INSTRUCTIONS TO AVOID READ-AFTER-WRITE HAZARDS



(57) Abstract: A method and apparatus for issuing and executing memory instructions so as to maximize the number of requests issued to a highly pipelined memory and avoid reading data from memory (10) before a corresponding write to memory (10). The memory is divided into a number of regions, each of which is associated with a fence counter (18) that is incremented each time a memory instruction that is targeted to the memory region is issued and decremented each time there is a write to the memory region. After a fence instruction is issued, no further memory instructions (23) are issued if the counter for the memory region specified in the fence instruction is above a threshold. When a sufficient number of the outstanding issued instructions are executed, the counter will be decremented below the threshold and further memory instructions are then issued.

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