## United States Patent 1191

### Andersen et al.

### [54] STORAGE INTERFACE UNIT

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- [73] Assignee: Sperry Rand Corporation, New York, N.Y.
- [22] Filed: Nov. 11, 1974
- [21] Appl. No.: 522,553
- [51] Int. Cl.<sup>2</sup>..... G06F 13/00; G11C 9/06
- [58] Field of Search...... 340/172.5; 444/1

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Primary Examiner-Gareth D. Shaw

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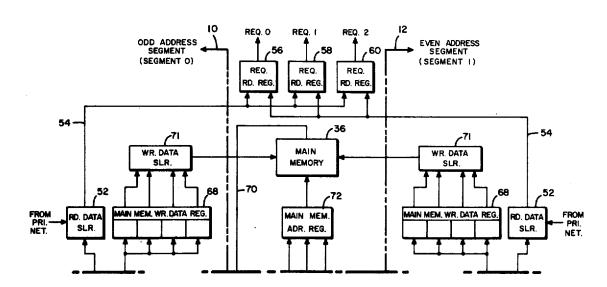
Attorney, Agent, or Firm—Thomas J. Nikolai; Kenneth T. Grace; Marshall M. Truex

### ABSTRACT

[57]

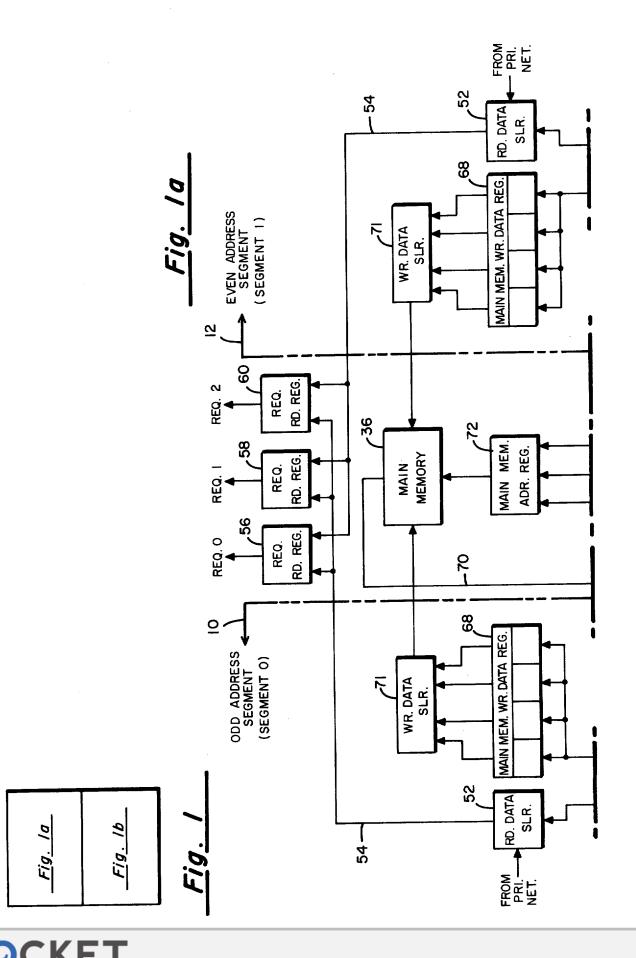
A storage interface unit adapted to serve as a high speed buffer between plural requestor units and a relatively low speed main memory in a data processing system. The high speed buffer provides temporary storage for a limited number of blocks of data stored in the main memory. When a particular address is requested by a requestor unit, a check is made to determine if that address is resident in the high speed buffer and if so, it is available to the requestor unit for reading or writing. If the desired address is not resident in the high speed buffer, a block in the buffer is selected for replacement. In accordance with the present invention, when a block is to be displaced from the buffer and a new block is requested from the main memory, during the interval that the new block is requested from the main memory, the block to be displaced is checked for modifications. If any word of the old block has been modified since it was obtained originally from main memory the entire block is read into a temporary holding register and is restored in the main memory while the new block is being entered into the buffer storage.

### 2 Claims, 11 Drawing Figures



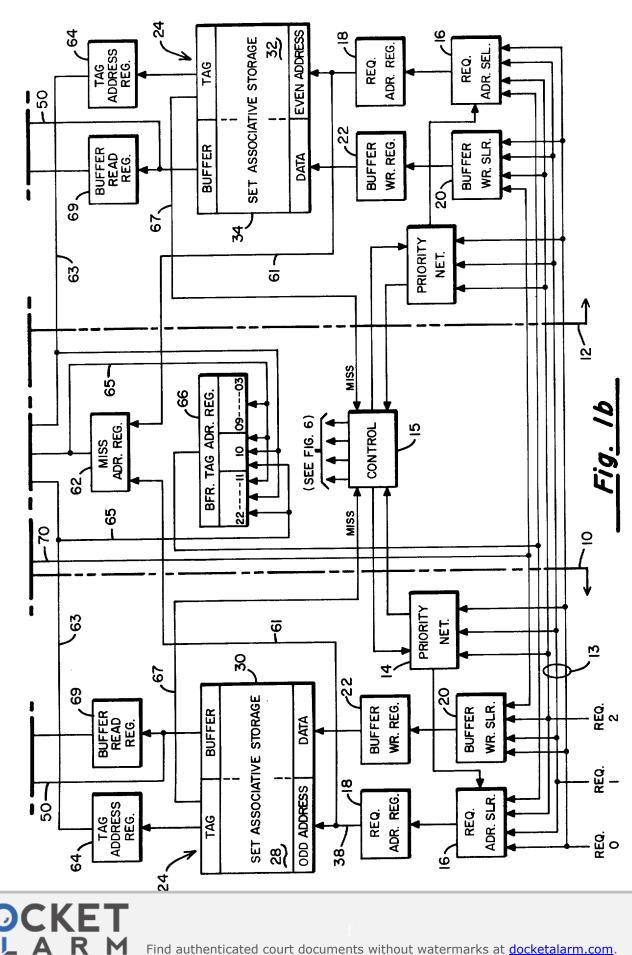
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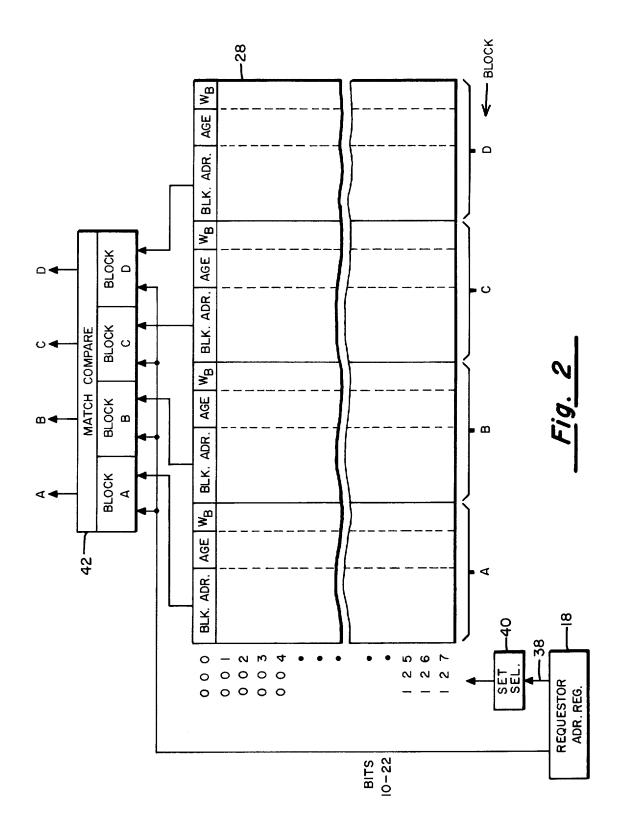


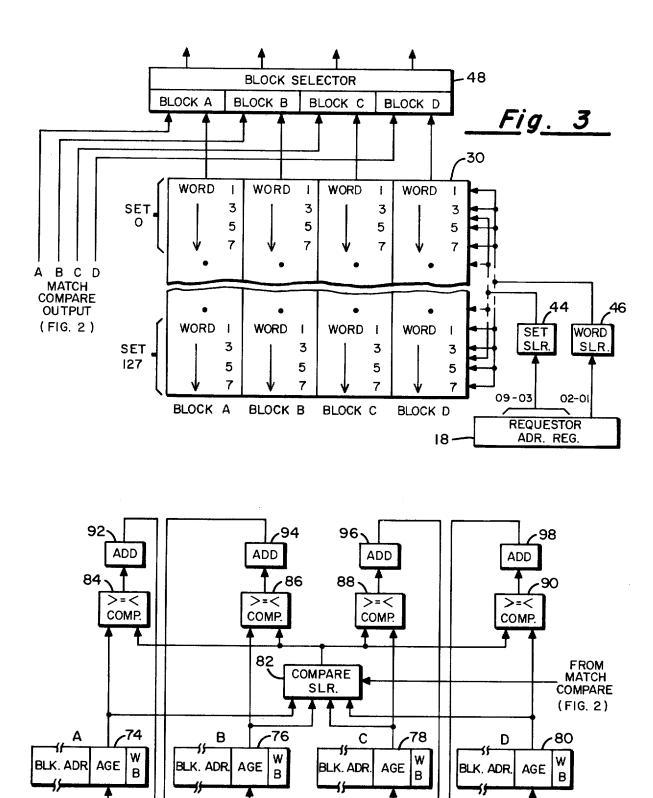
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*Fig.* 4

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