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[54] **METHOD OF CONTROLLING TWA LINK IN A COMMUNICATIONS ADAPTER BY MONITORING BUFFER FILL LEVELS**

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[52] U.S. Cl. 370/24; 370/26; 370/31

[58] Field of Search .... 370/24, 36, 37, 31, 370/32, 84, 94.1, 94.2, 60, 60.1, 61, 29, 108; 375/7, 8; 178/71 R, 71 A, 71 B

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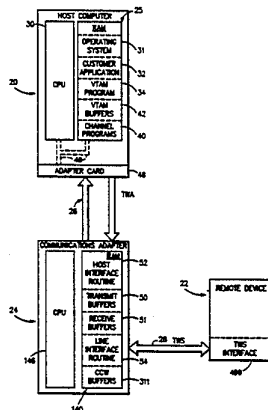
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Assistant Examiner—Shick Hom
Attorney, Agent, or Firm—Arthur J. Samodovitz

[57] **ABSTRACT**

A communications adapter interconnects a first device exhibiting a two way alternate (TWA) protocol and a second device exhibiting a two way simultaneous (TWS) protocol. The communications adapter comprises a transmit buffer for storing data received from the first device via a first communication link for transmission to the second device via a second communication link, and a receive buffer for storing data received from the second device via the second communication link for transmission to the first device via the first communication link. Data can be transferred in either direction between the transmit or receive buffer and the first device faster than in the same direction between the transmit or receive buffer and the second device. To optimize the overall transfer rate in both directions between the first and second devices, the second communication link is kept busy in both directions by preventing the receive buffer from filling with data from the second device while the first device transmits data to the transmit buffer, and preventing the transmit buffer from emptying due to reading by the second device while the first device reads data from the receive buffer.
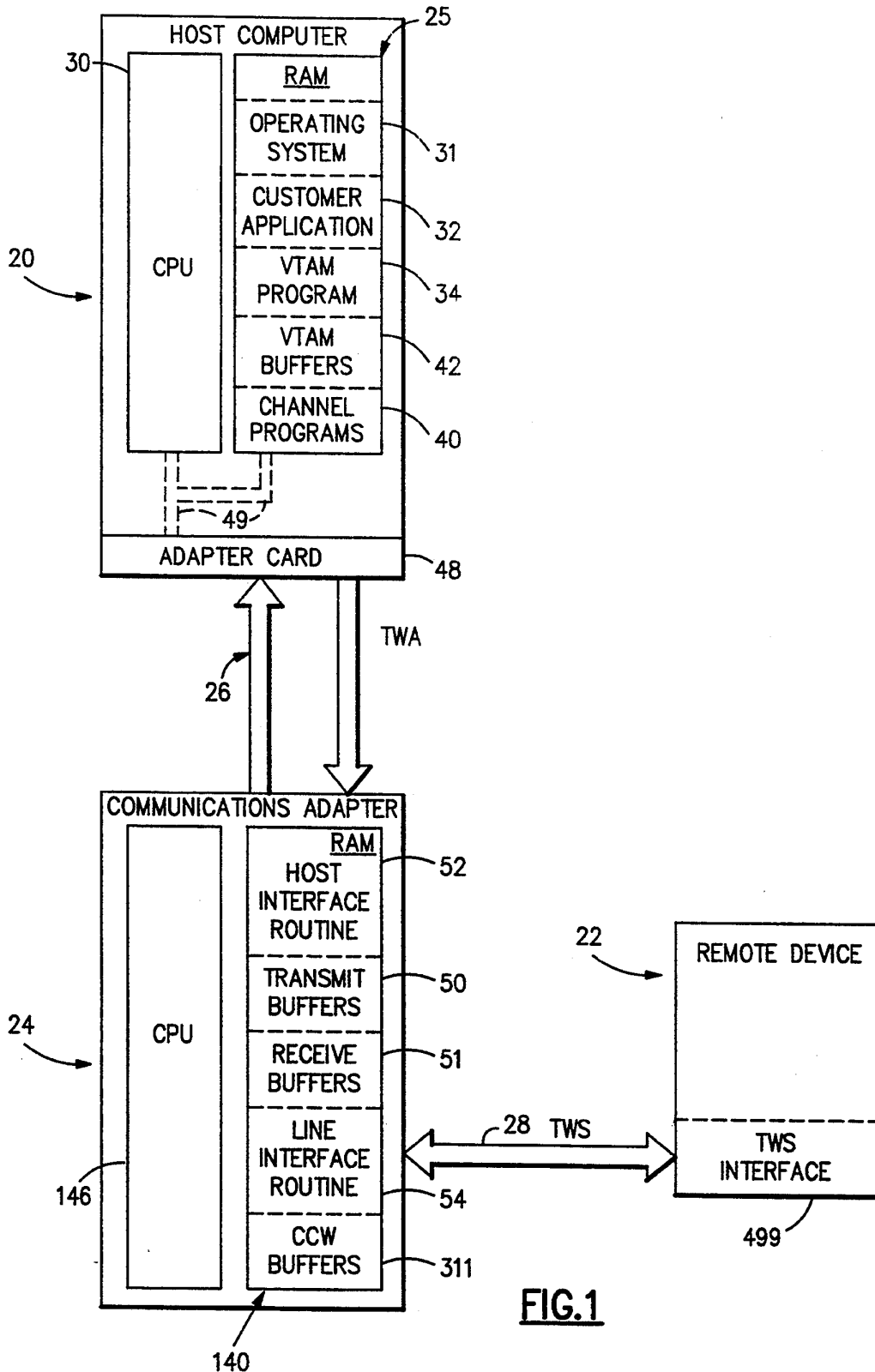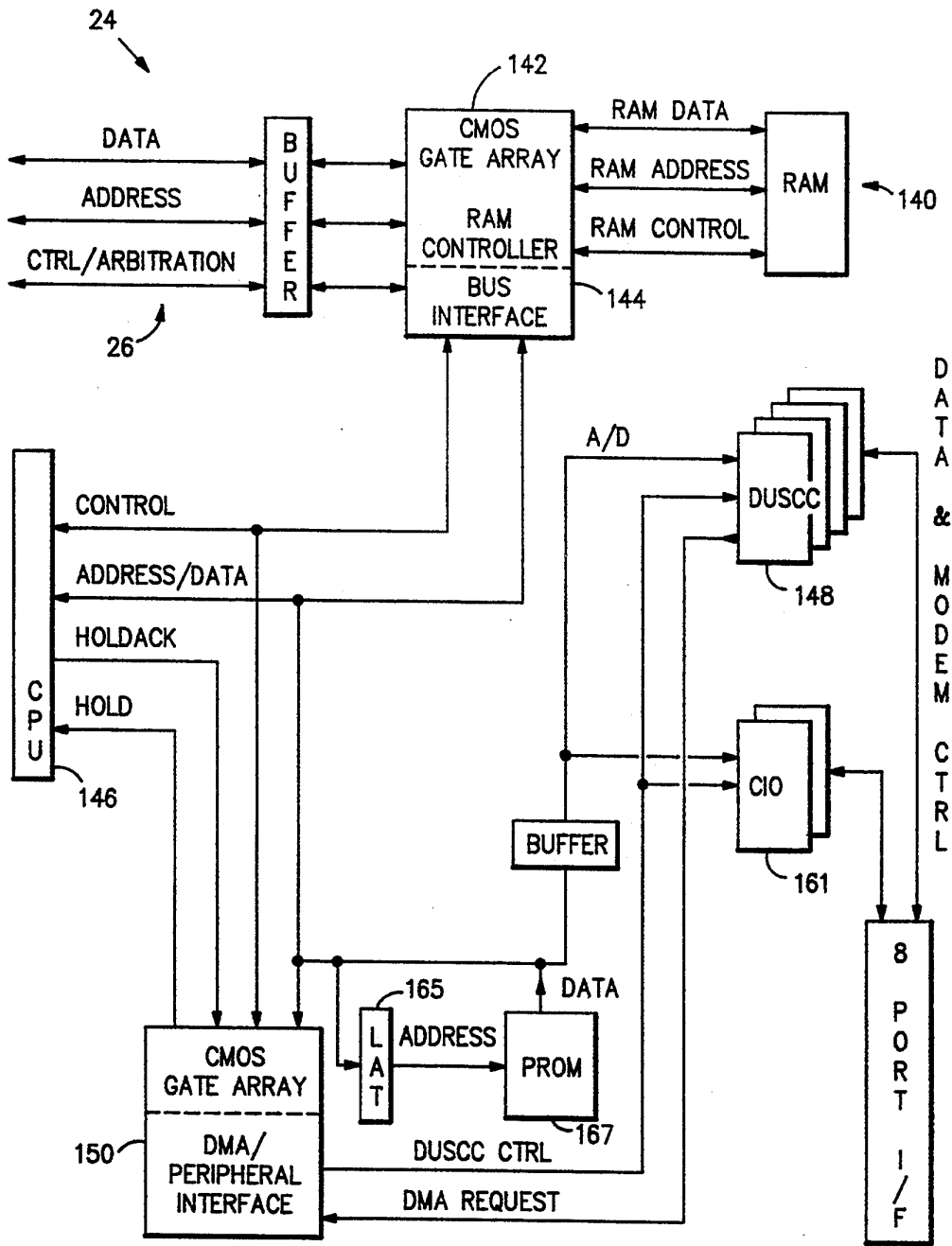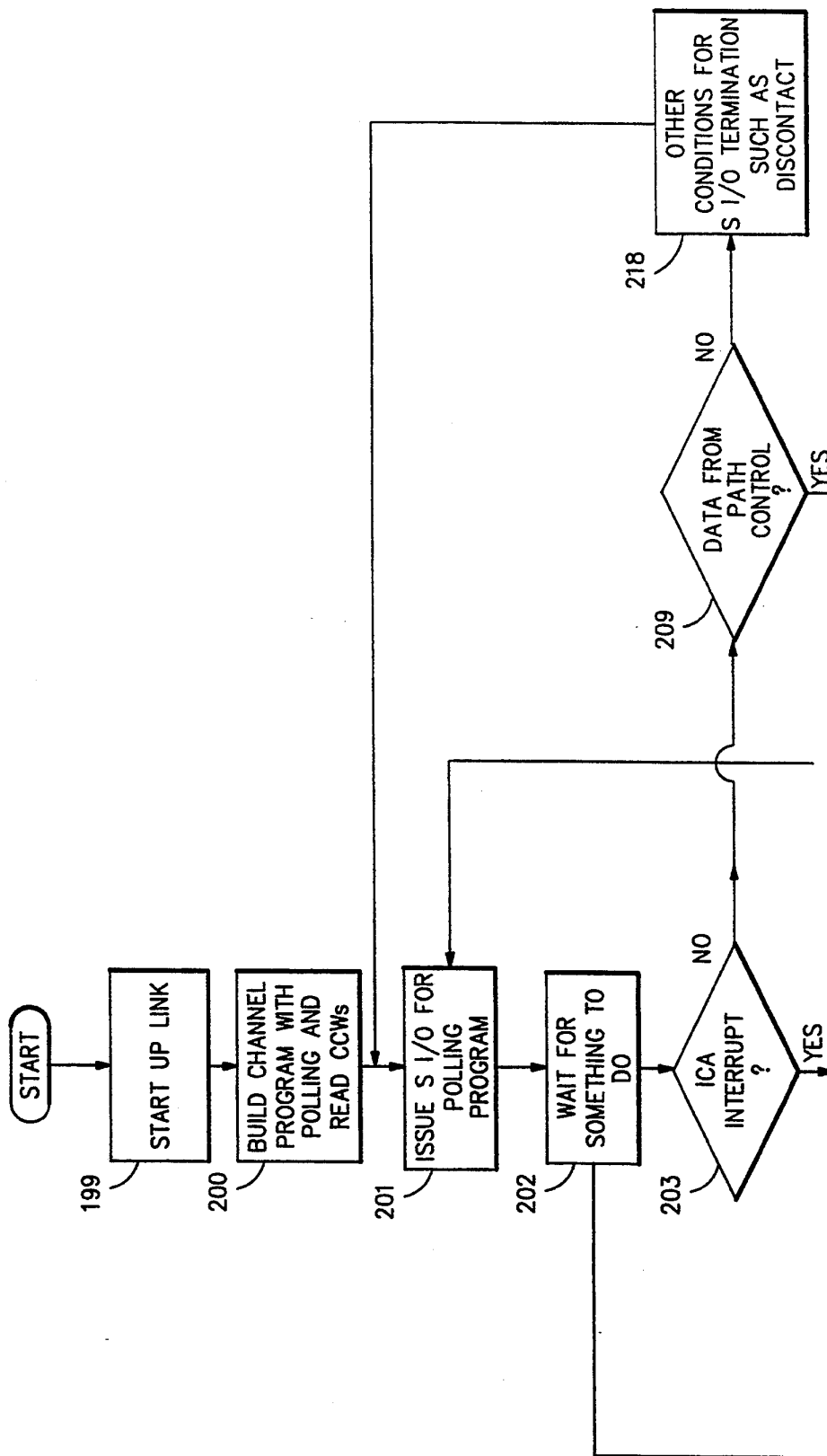
28 Claims, 9 Drawing Sheets

FIG.1

FIG.2

FIG.3A

FIG.3

FIG.3A
FIG.3B

FIG.3B

DOCKET ALARM
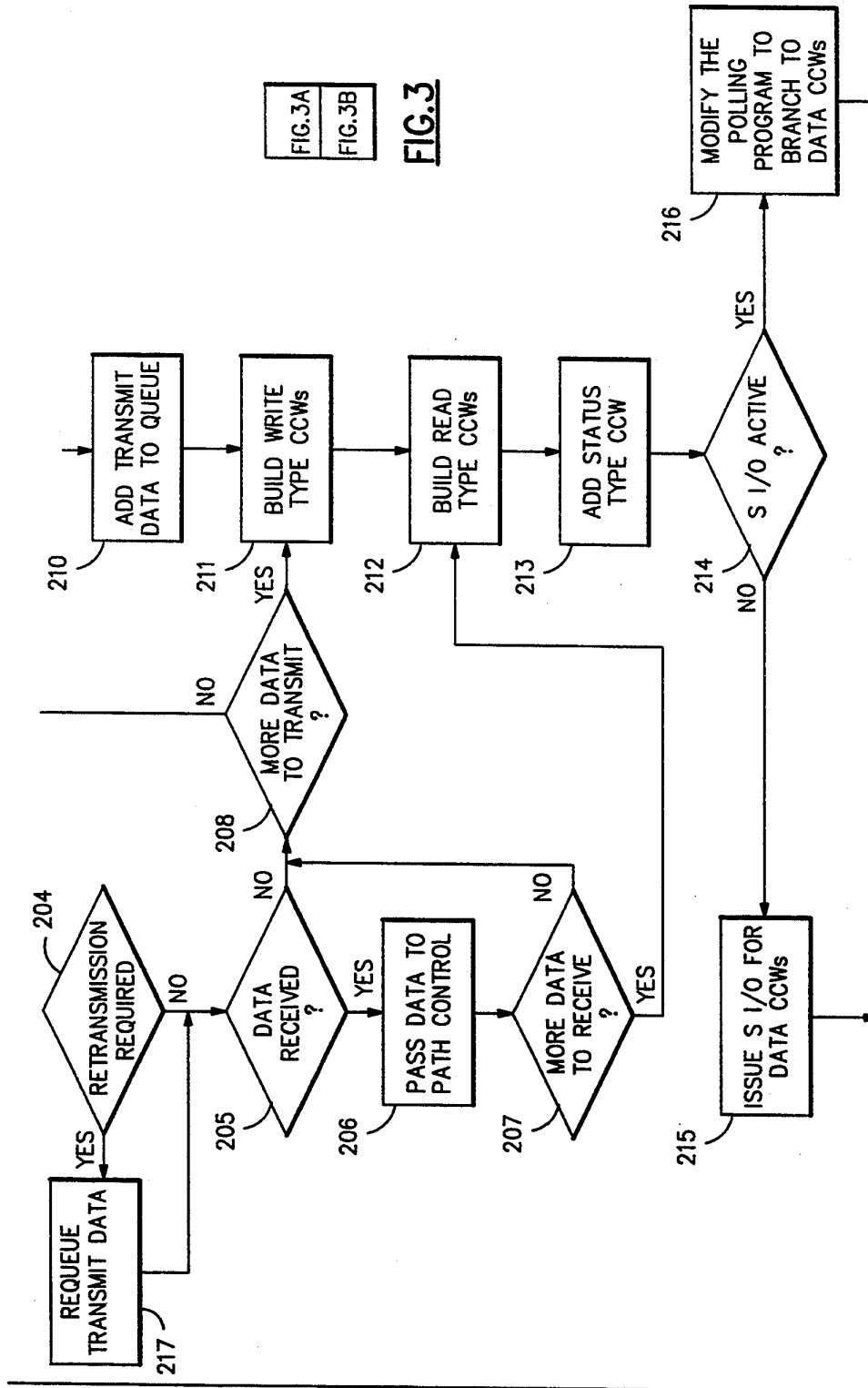
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