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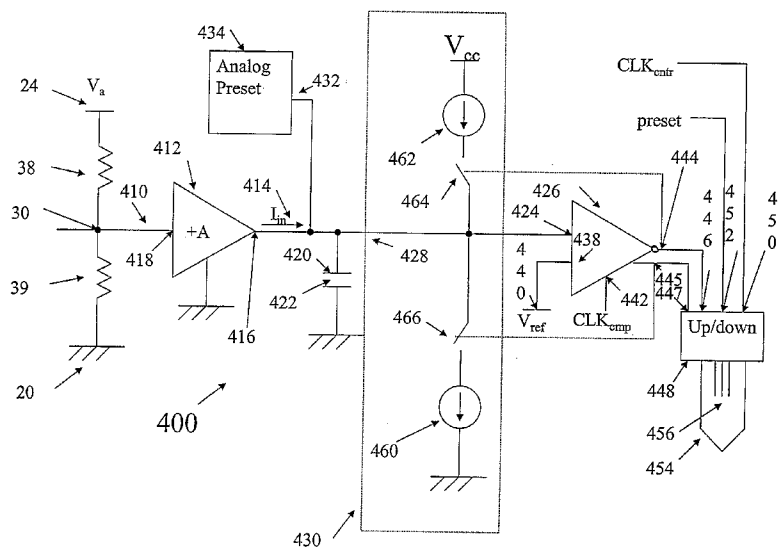
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(54) Title: METHODS AND APPARATUS FOR MEASURING CURRENT AS IN SENSING A MEMORY CELL



(57) Abstract: Apparatus and methods sense or measure an input current, such as a current indicating a logic state of a memory cell. A sensing circuit includes an amplifier, a capacitor, a current source circuit, a clocked comparator and a clock counter. The current source circuit operates responsive to an output of the comparator to supply or withdraw current to and from the capacitor during respective charging and discharging intervals. The count in the clocked counter results from periodic comparisons of the capacitor voltage with a reference voltage and is, therefore, related to the logic state of the memory cell. The magnitude of current supplied during charging is less than the magnitude withdrawn during discharging, allowing use of a smaller counter.