

[54] EXTENDED OVERLOAD PROTECTION CIRCUIT FOR A SWITCH MODE POWER SUPPLY HAVING CYCLE DETECTOR, MEMORY AND FLIP-FLOP INHIBITION

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[51] Int. Cl.⁴ H02M 3/335; H02H 7/122

[52] U.S. Cl. 363/21; 363/49; 363/56

[58] Field of Search 363/21, 56; 361/95, 361/96, 97

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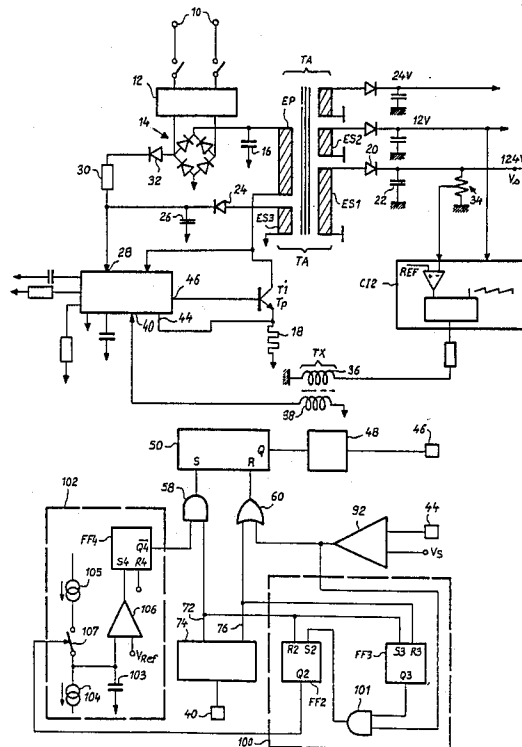
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[57] ABSTRACT

A protection device for switch mode power supplies includes a main switch controlled by the output signals of a flip-flop. The flip-flop input receives regulation control signals. A first protection circuit supplies priority signals with respect to the regulation signals on the reset input of the flip-flop. The protection device also includes a cycle detector of the first protection circuit, a memory for accumulating at each cycle a value proportional to the duration between a signal of the detector and the set signal associated with the regulation cycle of the following cycle, and inhibiting of the flip-flop when the memory has accumulated a signal higher than a predetermined threshold.

6 Claims, 4 Drawing Sheets



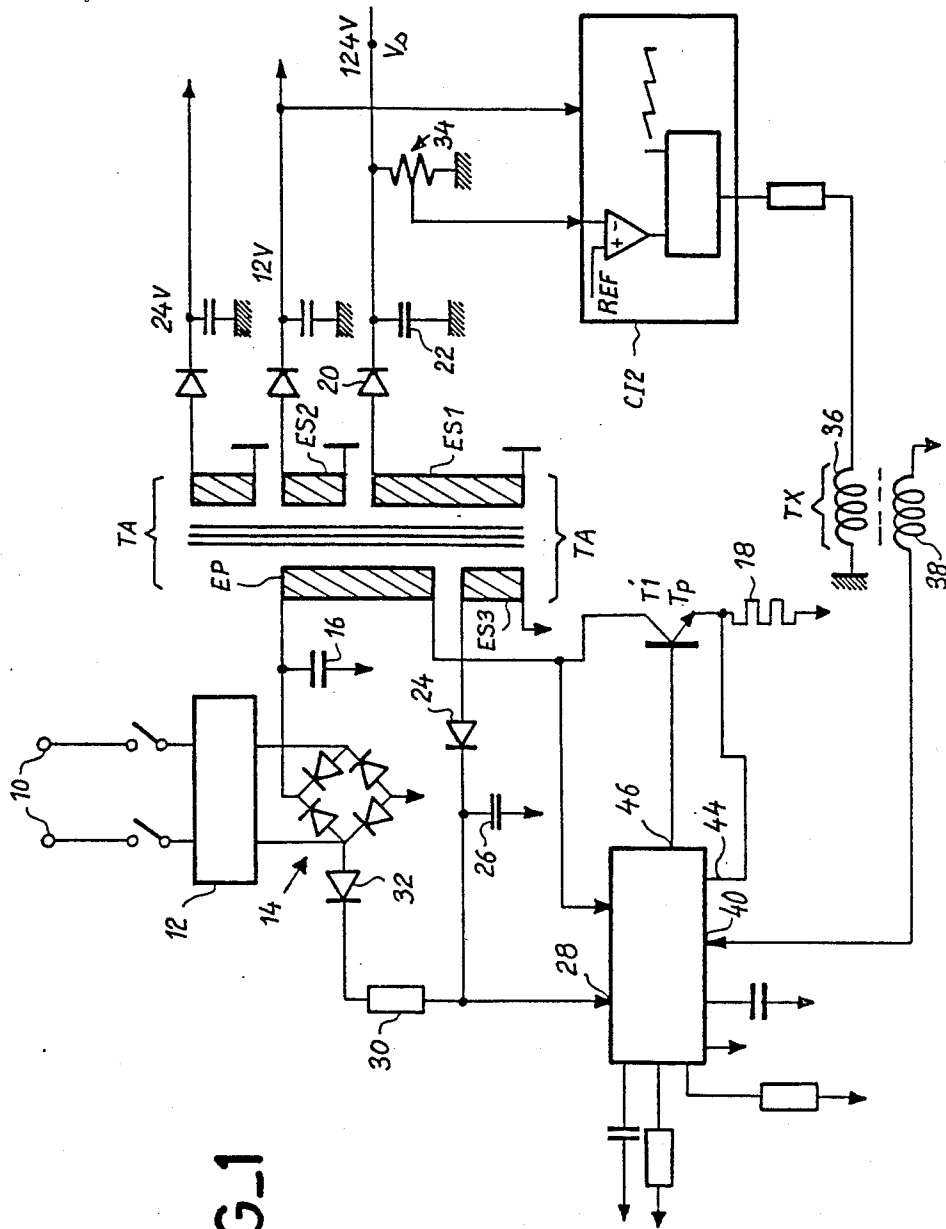
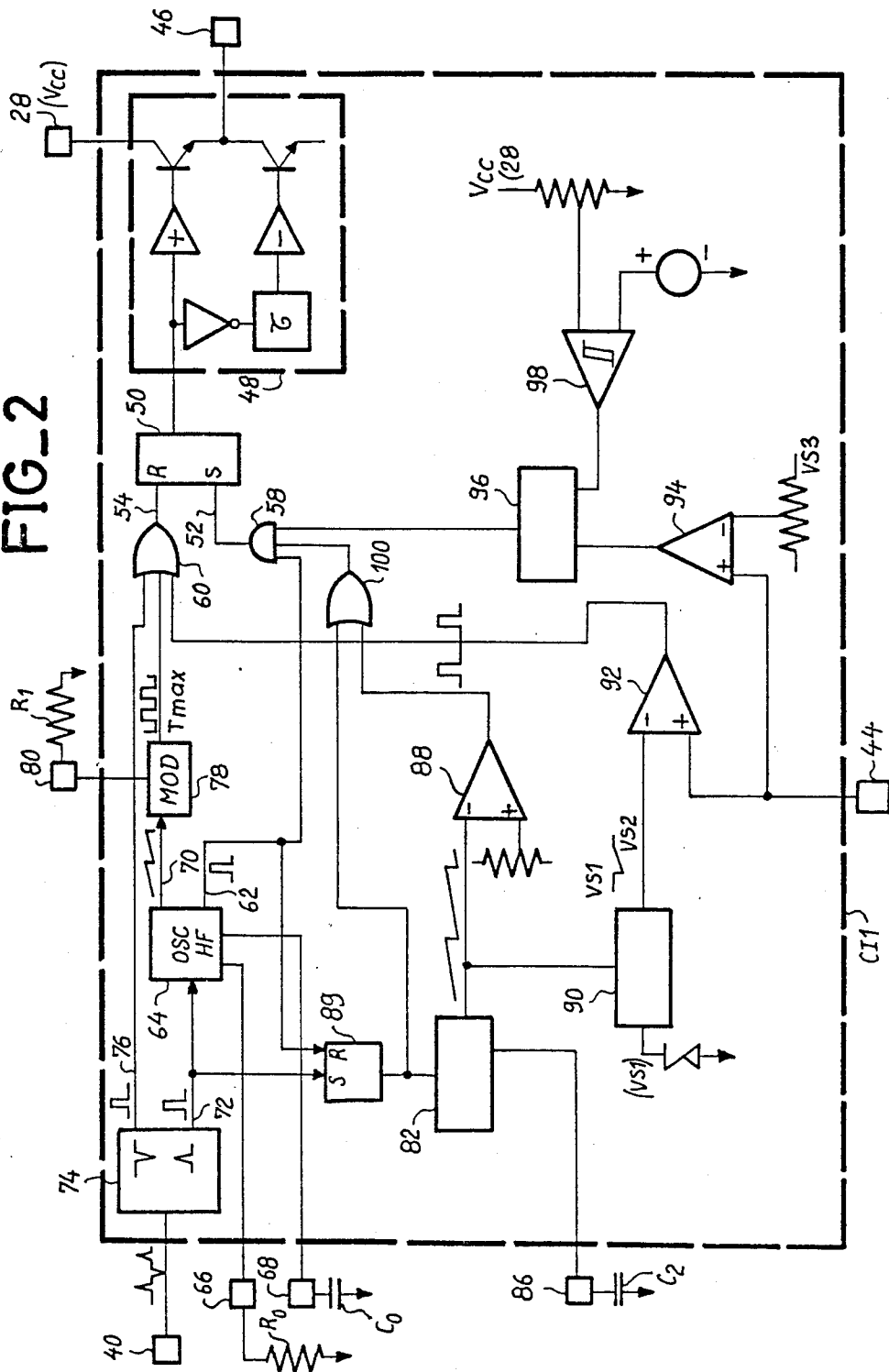
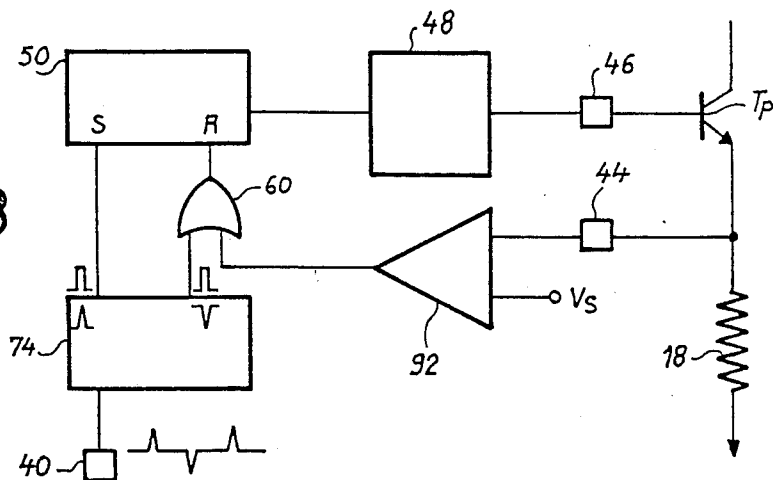


FIG. 1

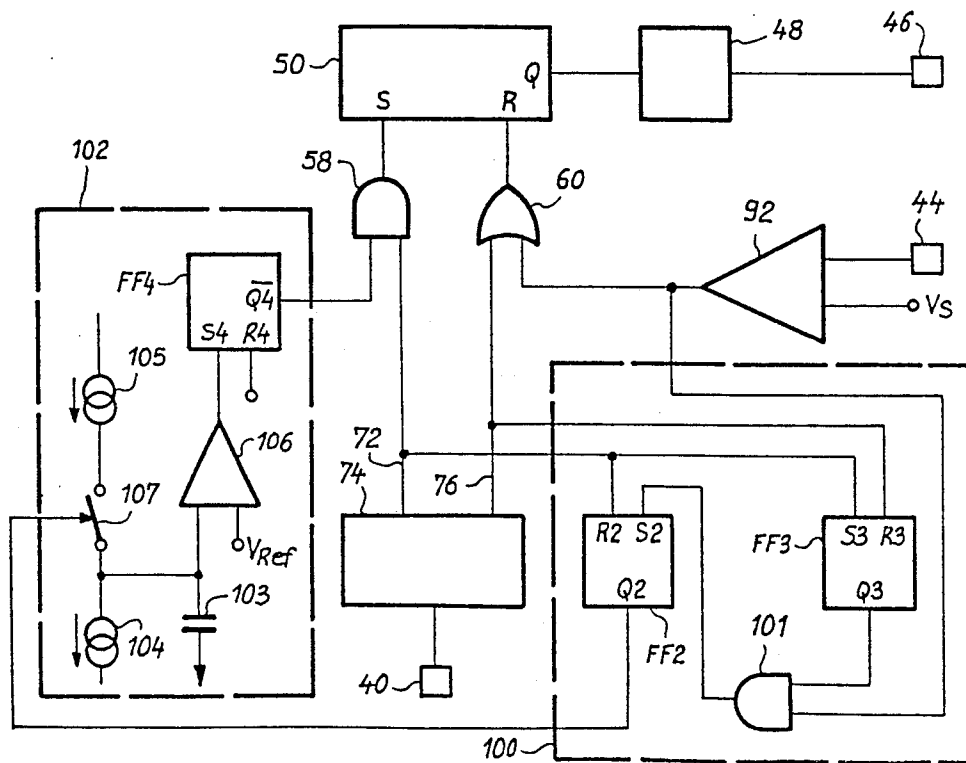
FIG_2

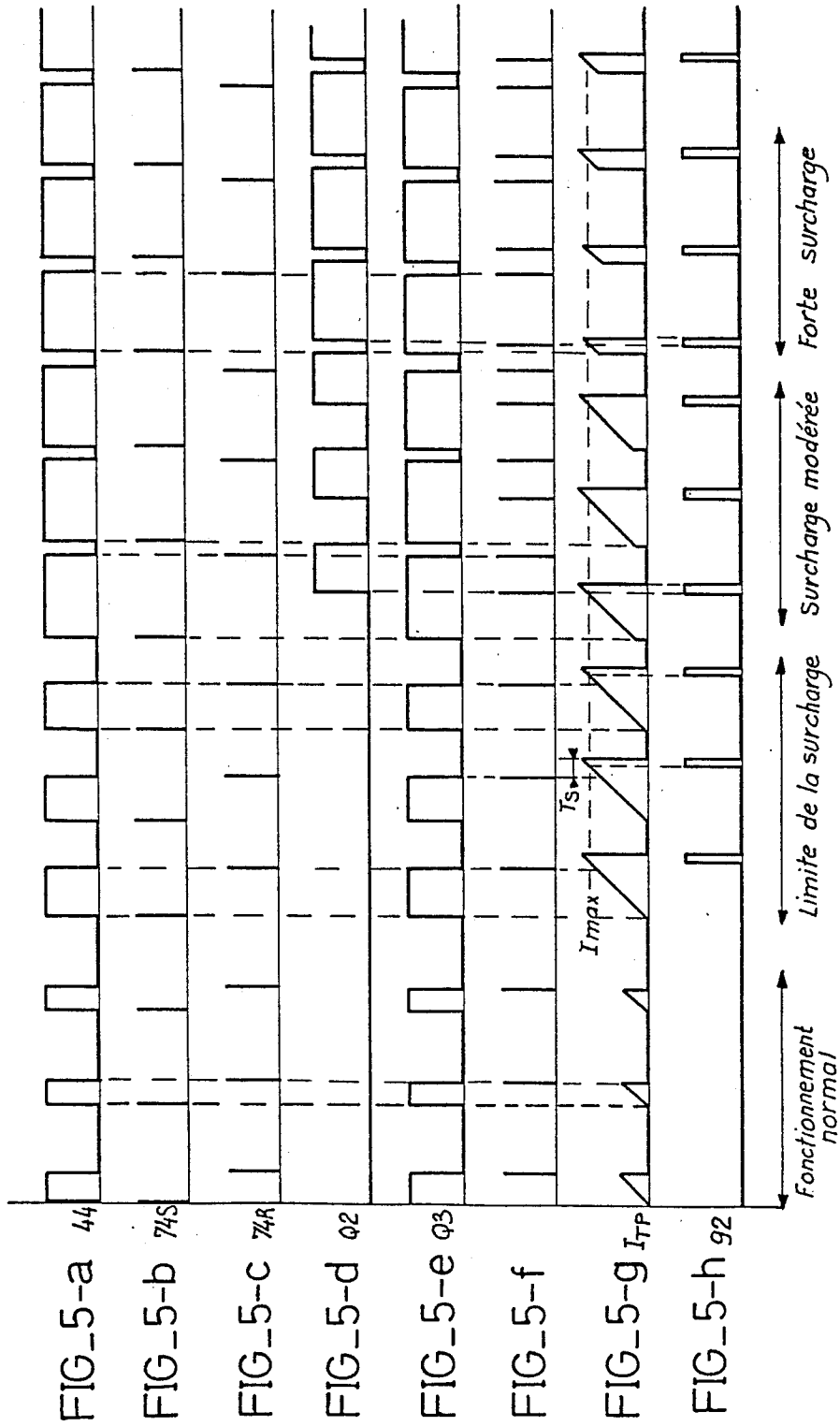


FIG_3



FIG_4





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