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(54) **MOTOR DRIVING APPARATUS HAVING  
FAULT DIAGNOSTIC FUNCTION**

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(57) **ABSTRACT**

A motor driving apparatus capable of detecting during operation a ground fault and a phase-to-phase short circuit by distinguishing one from the other is provided while minimizing an increase in cost. The sum of three-phase AC currents supplied from a three-phase AC power supply to an AC/DC converter is detected by a current sensor. When overcurrent is detected by an overcurrent detector, if the sum of the currents detected by the current sensor is zero, it is determined that the fault is a phase-to-phase short circuit, but if the sum is not zero, it is determined that the fault is a ground fault.

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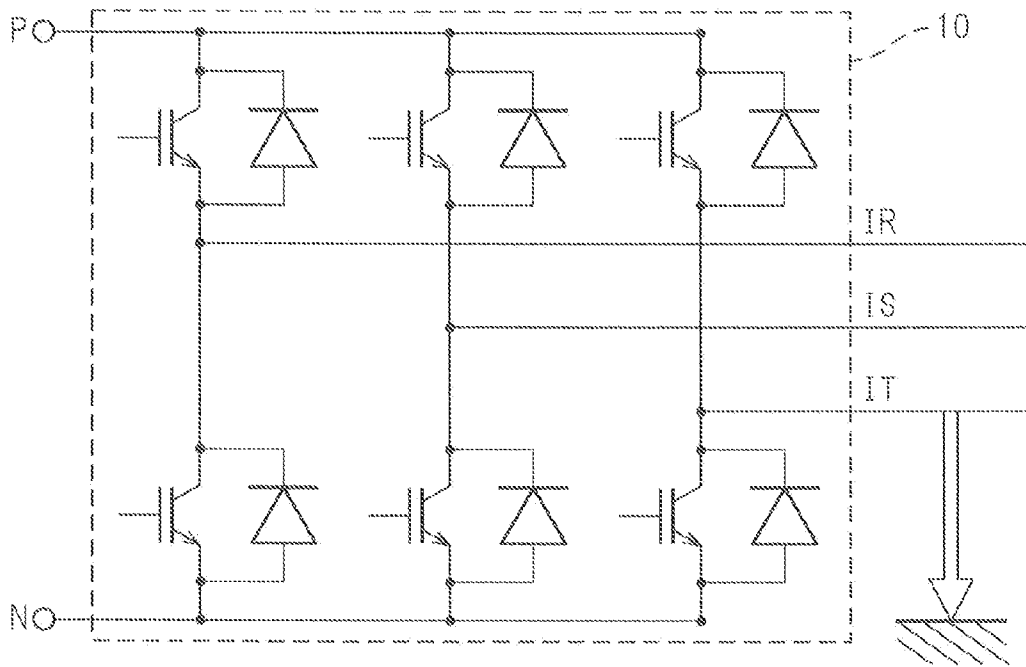


Fig. 1

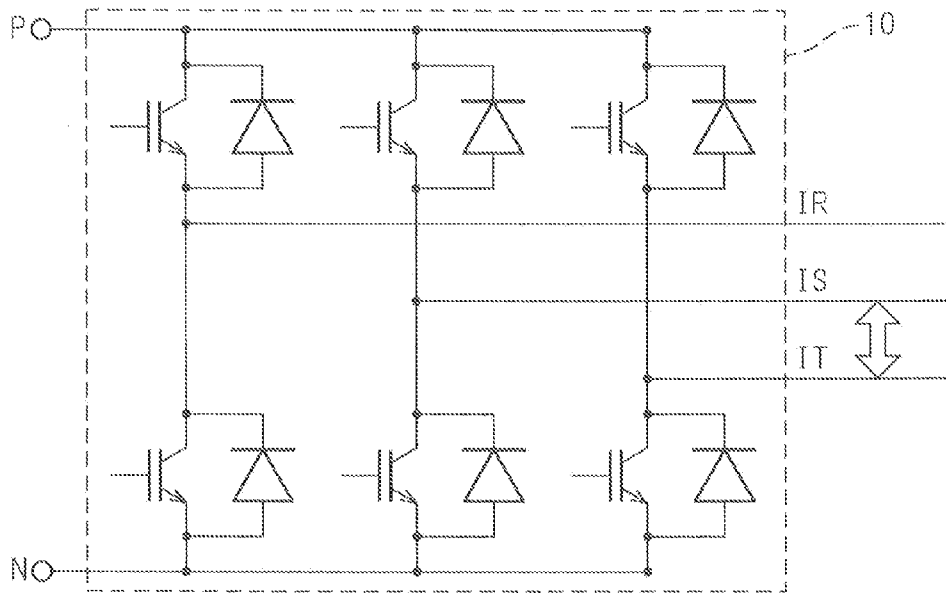


Fig. 2

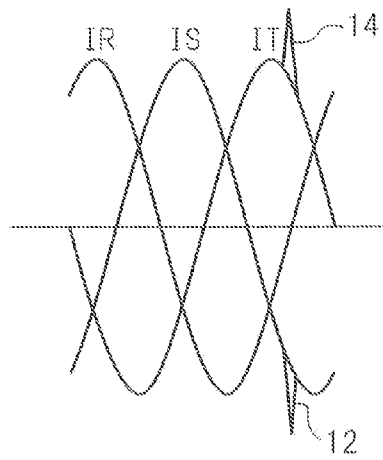


Fig.3

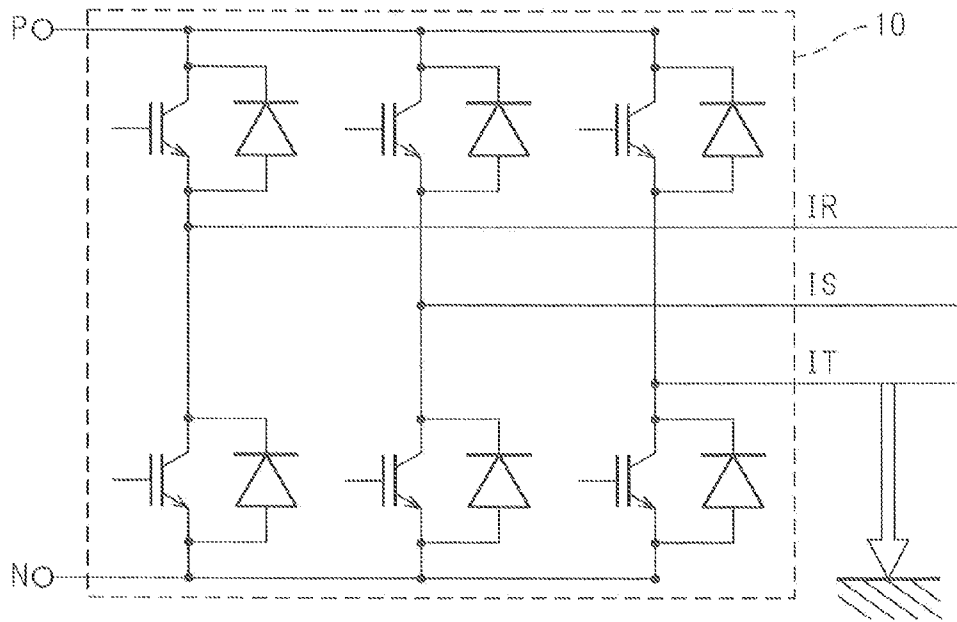


Fig.4

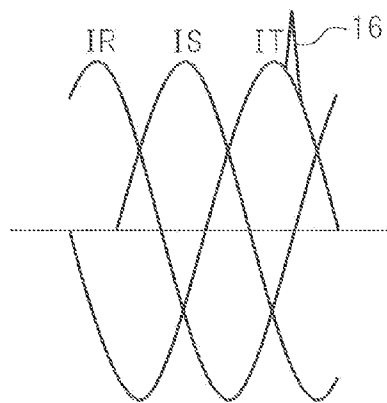


Fig. 5

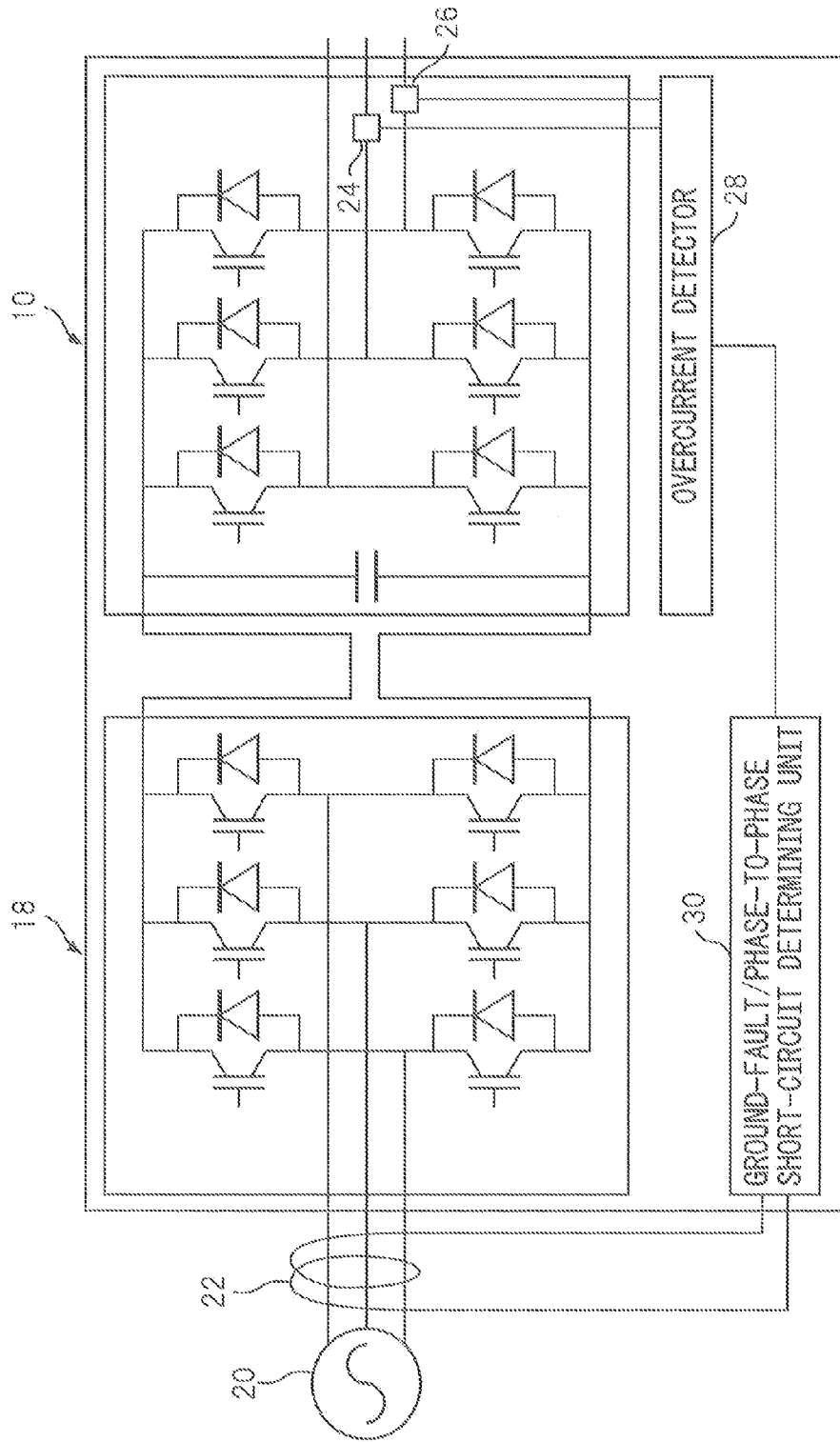
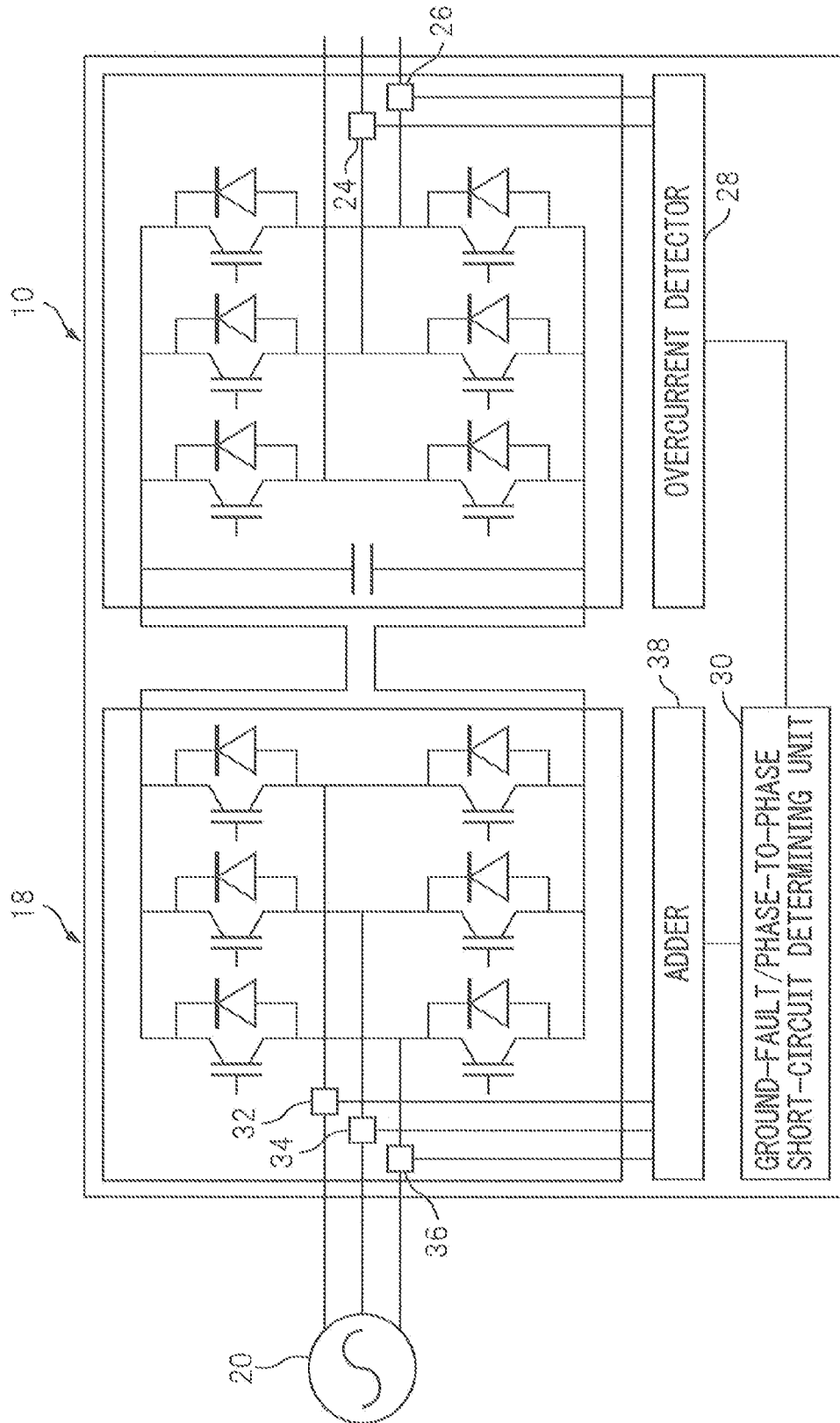


Fig. 6



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