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(54) **POWER SUPPLY UNIT FOR A VEHICLE ELECTRICAL SYSTEM OF A MOTOR VEHICLE**

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CPC ***B60L 11/06*** (2013.01); ***H02P 9/305*** (2013.01); ***H02P 9/48*** (2013.01)

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See application file for complete search history.

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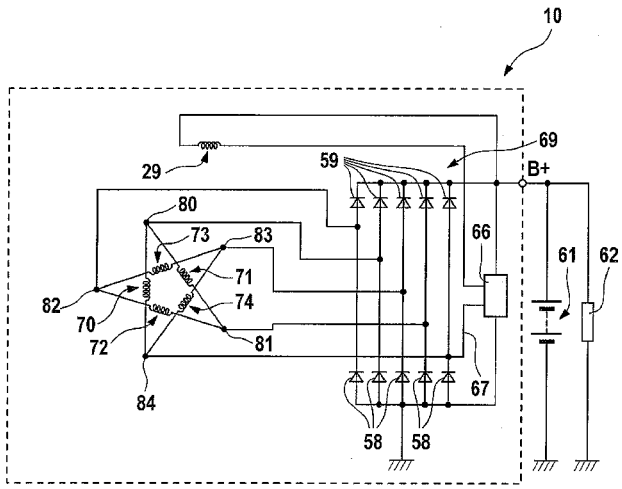
(57) **ABSTRACT**

An improved power supply unit for a vehicle electrical system of a motor vehicle, which has an a.c. generator, that provides a phase signal, having an excitation coil, a field regulator assigned to the excitation coil and a rectifier having rectifier elements for the rectification of the generator voltage supplied by the a.c. generator. The field regulator has a voltage detection range for the evaluation of the phase signal having a minimum value and a maximum value, the maximum value being adjusted to the nominal voltage of a power supply unit of the motor vehicle.

10 Claims, 1 Drawing Sheet