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(54) **Title:** SYSTEM AND METHOD FOR TRANSFERRING ELECTRIC ENERGY TO A VEHICLE USING A PLURALITY OF SEGMENTS OF A CONDUCTOR ARRANGEMENT

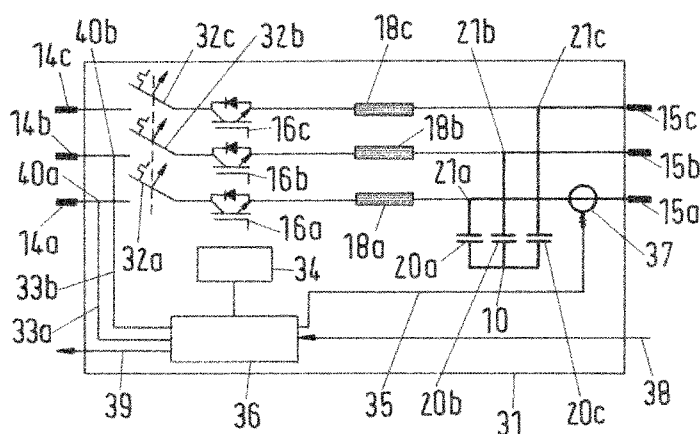


Fig.3

(57) **Abstract:** The invention relates to a system for transferring electric energy to a vehicle (81; 91), in particular to a track bound vehicle (81) such as a light rail vehicle or to a road automobile (91) such as a bus, wherein - the system comprises an electric conductor arrangement (connected to 14) for producing an alternating electromagnetic field and for thereby transferring electromagnetic energy to the vehicle, - the conductor arrangement comprises a plurality of consecutive segments (connected to 15), wherein each segment extends along a different section of the path of travel of the vehicle, - the system comprises an alternating current supply for conducting electric energy to a plurality of the segments, wherein the segments are electrically connected in parallel to each other with the alternating current supply, - each segment is coupled to the supply via an associated switching unit (13) adapted to switch on and off the segment by connecting or disconnecting the segment to/from the supply, - each segment is coupled to the associated switching unit (switches 16) via a constant current source (18, 20) adapted to keep the electric current through the segment constant - while the segment is switched on - independently of the electric power which is transferred to one or more vehicles travelling along the segment.



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