

**(19) World Intellectual Property
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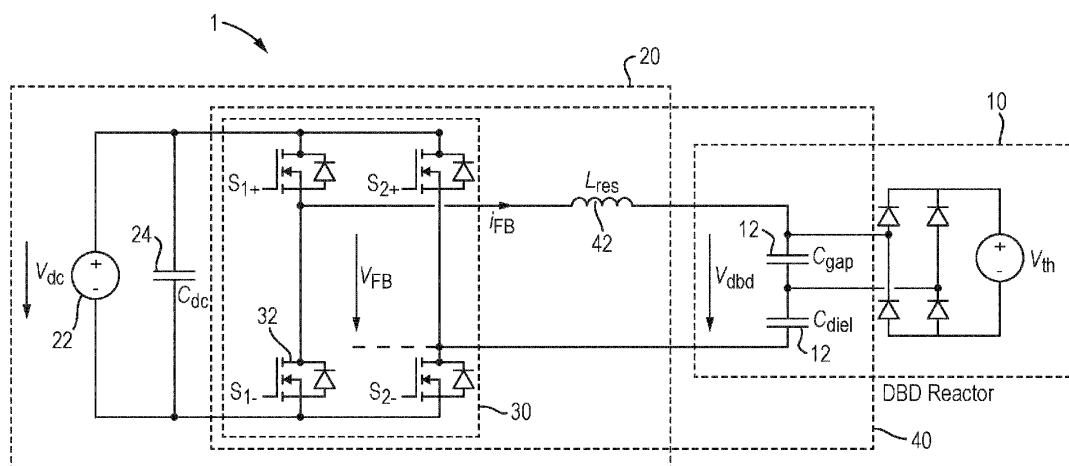
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Fig. 5



(57) Abstract: There is provided a drive circuit for a dielectric barrier discharge device. The drive circuit comprises: a power supply connectable in use across a dielectric discharge gap, the dielectric discharge gap providing a capacitance; and an inductance between the power supply and the dielectric discharge gap when connected thereby establishing a resonant tank in use, wherein power is provided in use to the tank in pulse-trains and only during a pulse-train, a pulse frequency of each pulse-train being tuneable in use to a resonant frequency of the tank, power provided by each pulse-train charging and maintaining the tank to a threshold at which discharge ignition occurs, discharge ignition events per pulse-train being limited to a maximum number based on the drive circuit being arranged in use to prohibit each pulse-train transferring power to the resonant tank after the maximum number has occurred.

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