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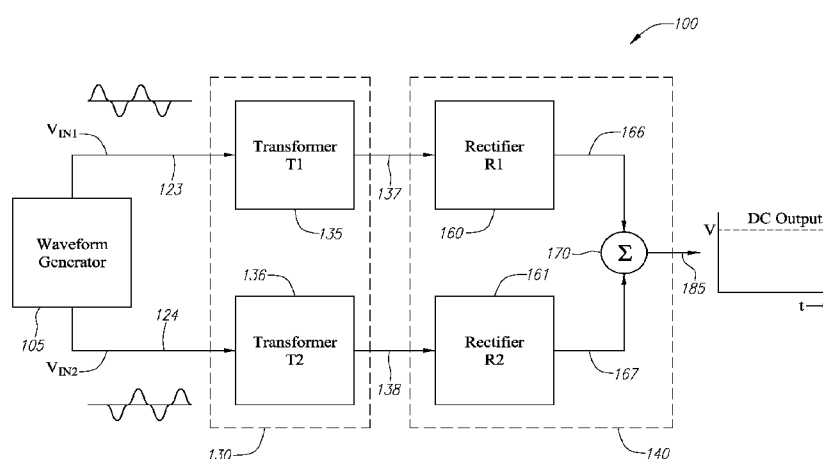


FIG. 1

(57) Abstract: A power supply includes two or more input waveforms being shaped or selected so that after being separately level-shifted and rectified, their additive combination results in a DC output waveform with substantially no ripple. The power supply may comprise a waveform generator, a level conversion stage for step up or down conversion, a rectification stage, and a combiner. The waveform generator may generate complementary waveforms, preferably identical but phase offset from each other, such that after the complementary waveforms are level-converted, rectified and additively combined their sum will be constant, thus requiring no or minimal smoothing for generation of a DC output waveform. The level conversion may be carried out using transformers or switched capacitor circuits. Feedback from the DC output waveform may be used to adjust the characteristics of the input waveforms.