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**Uchiyama**(10) **Pub. No.: US 2022/0352825 A1**(43) **Pub. Date: Nov. 3, 2022**(54) **POWER SOURCE APPARATUS AND IMAGE FORMING APPARATUS**(52) **U.S. Cl.**CPC ..... *H02M 3/33569* (2013.01); *H02M 1/346* (2021.05); *G03G 15/5004* (2013.01); *H02M 1/08* (2013.01)(71) Applicant: **CANON KABUSHIKI KAISHA**,  
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**ABSTRACT**

A power source apparatus including: a transformer including a primary coil, a secondary coil, and an auxiliary coil, and has a primary side and a secondary side which are insulated from each other; a rectifier circuit including a first output terminal and a second output terminal; a smoothing capacitor; a switching element; a first series circuit having a capacitor and a first rectification element connected in series; and a second series circuit having a second rectification element and the auxiliary coil connected in series. The number of turns of the auxiliary coil is smaller than the number of turns of the primary coil. A product a ratio between the number of turns of the auxiliary coil and the number of turns of the secondary coil and an output voltage on the secondary side of the transformer is equal to or lower than a voltage of the smoothing capacitor.

