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**YAMAGUCHI et al.**(10) **Pub. No.: US 2022/0368141 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **SECONDARY BATTERY PROTECTION  
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SYSTEM, AND METHOD FOR PROTECTING  
SECONDARY BATTERY**(52) **U.S. Cl.**CPC ..... *H02J 7/0031* (2013.01); *H02J 7/00302*  
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**ABSTRACT**(73) Assignee: **MITSUMI ELECTRIC CO., LTD.**,  
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A secondary battery protection circuit includes a potential-difference control circuit. The potential-difference control circuit provides, when overcharge is detected by an overcharge detection circuit, a control terminal of a charge control transistor with feedback on a potential-difference detection signal to control a potential difference between an electrode of a secondary battery and a terminal for a load and charger. The potential-difference control circuit provides, when overdischarge is detected by an overdischarge detection circuit, a control terminal of each of the charge control transistor and a discharge control transistor with feedback on the potential-difference detection signal to control the potential difference.

