



US 20220368136A1

(19) **United States**(12) **Patent Application Publication****Court et al.**(10) **Pub. No.: US 2022/0368136 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **DISCHARGE DEVICE HAVING A
SHORT-CIRCUITING ELEMENT, AND
DISCHARGE METHOD**(52) **U.S. Cl.**
CPC **H02J 7/0013** (2013.01); **H01M 10/441**
(2013.01)(71) Applicant: **Robert Bosch GmbH**, Stuttgart (DE)(57) **ABSTRACT**(72) Inventors: **Denis Court**, Korb (DE); **Matthias
Walter**, Stuttgart (DE); **Olaf
Herrmann**, Stuttgart-Feuerbach (DE);
Roman Di Santo, Stuttgart (DE);
Sebastian Krieger, Ulm (DE)

A discharge device for discharging a plurality of battery cells having an unknown state-of charge is disclosed. The discharge device includes a contact-connection element for the electrical contact-connection of respective battery cells in the plurality of battery cells, and a short-circuiting element. The contact-connection element includes, for each individual battery cell in the plurality of battery cells, an electrical contact having a non-return device. Each of the non-return devices is configured to prevent any return flow of electricity from the respective battery cells, via the contact-connection element, into a battery cell which is assigned to the respective non-return device such that electricity is removed in a unidirectional manner from the respective battery cell. Respective electrical contacts of the contact-connection element are electrically coupled in the direction of flow of electricity, down-circuit of the respective non-return devices. The short-circuiting element is configured to short-circuit the plurality of battery cells.

(21) Appl. No.: **17/741,779**(22) Filed: **May 11, 2022**(30) **Foreign Application Priority Data**

May 14, 2021 (DE) 10 2021 204 914.1

Publication Classification(51) **Int. Cl.**
H02J 7/00 (2006.01)
H01M 10/44 (2006.01)