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(19) **United States**(12) **Patent Application Publication****Cho et al.**(10) **Pub. No.: US 2023/0231244 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **BATTERY MODULE INCLUDING  
SECONDARY BATTERY AND BUS BAR****Publication Classification**(51) **Int. Cl.****H01M 50/505** (2006.01)**H01M 50/209** (2006.01)**H01M 50/533** (2006.01)(52) **U.S. Cl.****CPC** ..... **H01M 50/505** (2021.01); **H01M 50/209**(2021.01); **H01M 50/533** (2021.01); **H01M****2220/20** (2013.01)(71) Applicant: **LG Energy Solution, Ltd.**, Seoul (KR)(72) Inventors: **Hyun-Young Cho**, Daejeon (KR);  
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**Yong-Seok Choi**, Daejeon (KR)(73) Assignee: **LG Energy Solution, Ltd.**, Seoul (KR)(21) Appl. No.: **18/124,885**(22) Filed: **Mar. 22, 2023****Related U.S. Application Data**(63) Continuation of application No. 16/961,442, filed on  
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**ABSTRACT**

A battery module includes a plurality of secondary batteries, each including an electrode assembly and an electrolyte accommodated in an inner space of an exterior case. The battery module also includes an electrode lead having a body and a plate-shaped head portion. A first end of the body is electrically connected to a positive electrode plate or a negative electrode plate of the electrode assembly, and a second end of the body protrudes outward from the exterior case. The plate-shaped head extends in both directions perpendicular to the protruding direction of the body from the second end. The battery module also includes a bus bar having a plate shape with a slit extending inwardly from one end thereof so as to receive a portion of the body. The electrode lead and the bus bar may be at least partially made of an electrically conductive material.

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