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GOTANI et al.(10) **Pub. No.: US 2022/0360113 A1**(43) **Pub. Date: Nov. 10, 2022**(54) **FOREIGN OBJECT DETECTION DEVICE,
POWER TRANSMISSION DEVICE, POWER
RECEPTION DEVICE, AND POWER
TRANSMISSION SYSTEM**(71) Applicant: **TDK CORPORATION**, Tokyo (JP)(72) Inventors: **Akira GOTANI**, Tokyo (JP); **Kazuki
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(57)

ABSTRACT

A foreign object detection device includes a plurality of coils (240) each including a first conductive pattern mounted on one surface of a detection coil substrate (220) to be excited and thus generate a vibration signal, a detector (26) to detect the existence of a foreign object on the basis of the vibration signal, a first connecting line (230) to connect one terminals (T1) of the individual coils (240) to the detector (26), and a second connecting line (232) to connect the other terminals (T2) of the individual coils (240) to the detector (26). The first connecting line (230) and the second connecting line (232) extend in substantially identical paths in at least segments mounted on the detection coil substrate (220).

