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Hiramatsu et al.

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(54) **ROTATING ELECTRICAL MACHINE
HAVING A COMPACT STATOR**

(56) **References Cited**

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(65) **Prior Publication Data**

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(57) **ABSTRACT**

(51) **Int. Cl.**
H02K 3/28 (2006.01)
H02K 3/00 (2006.01)
H02K 3/04 (2006.01)

A rotating electrical machine includes a stator including at least two element coils of the same phase each having a plurality of turns and connected to each other through a coil-to-coil connection wire, the element coils being arranged in adjacent slots, respectively; and a rotor rotatably provided to the stator through a gap. The element coils of the same phase are fitted in the adjacent slots so that wound around portions of the element coils partially overlap each other. The coil-to-coil connection wire connects at a coil end portion conductor wires extending from linear conductor wire portions of innermost wires of the element coils contained in the slots.

(52) **U.S. Cl.** **310/208**; 310/195; 310/198
(58) **Field of Classification Search** 310/195,
310/198, 201, 203, 206, 207, 208, 179, 180;
H02K 3/00, 3/04, 3/12, 3/14, 3/28
See application file for complete search history.

9 Claims, 66 Drawing Sheets

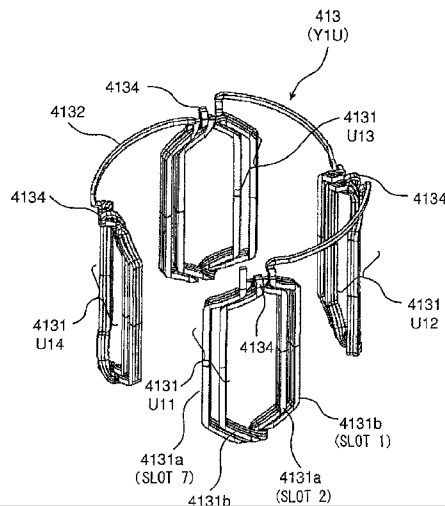


FIG. 1

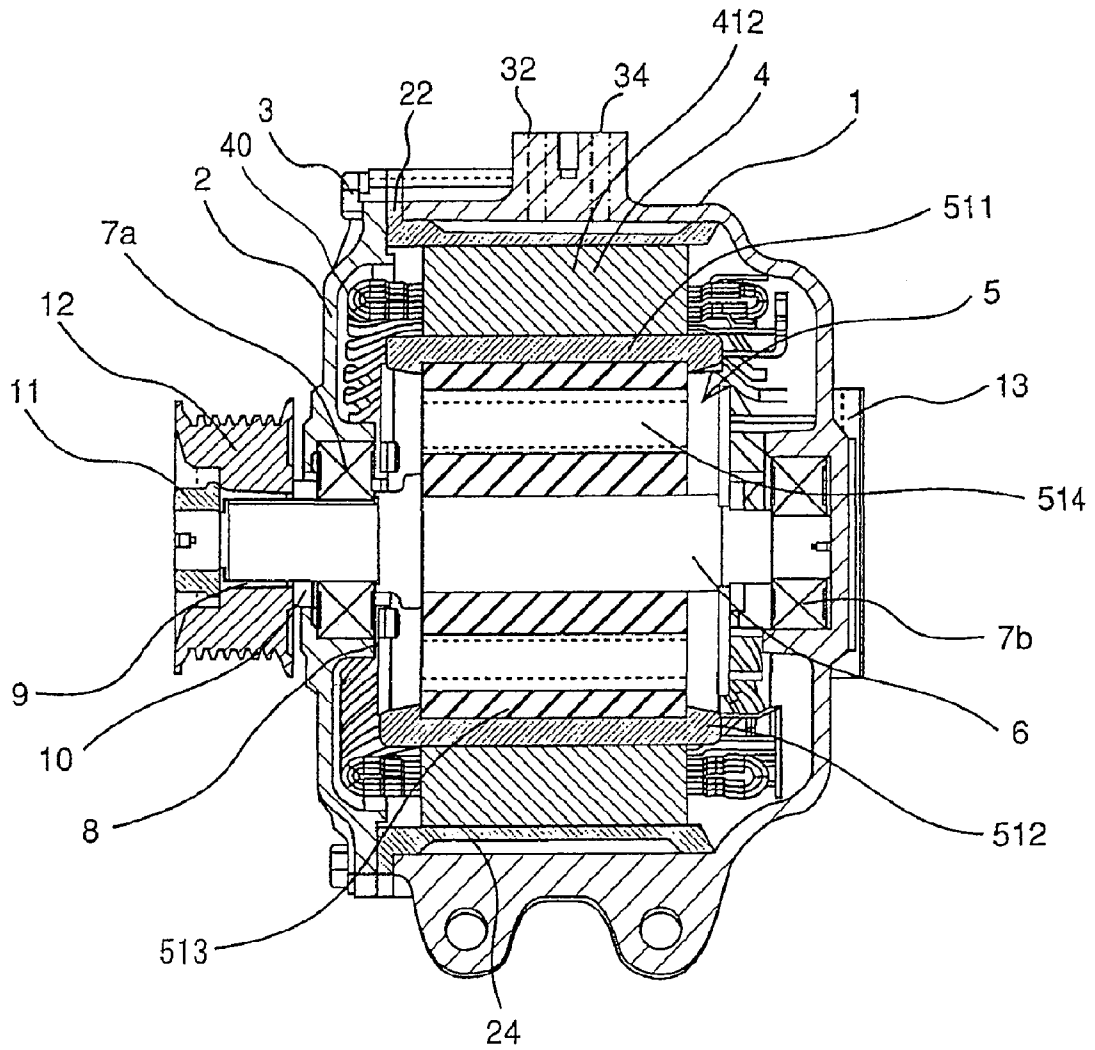


FIG.2

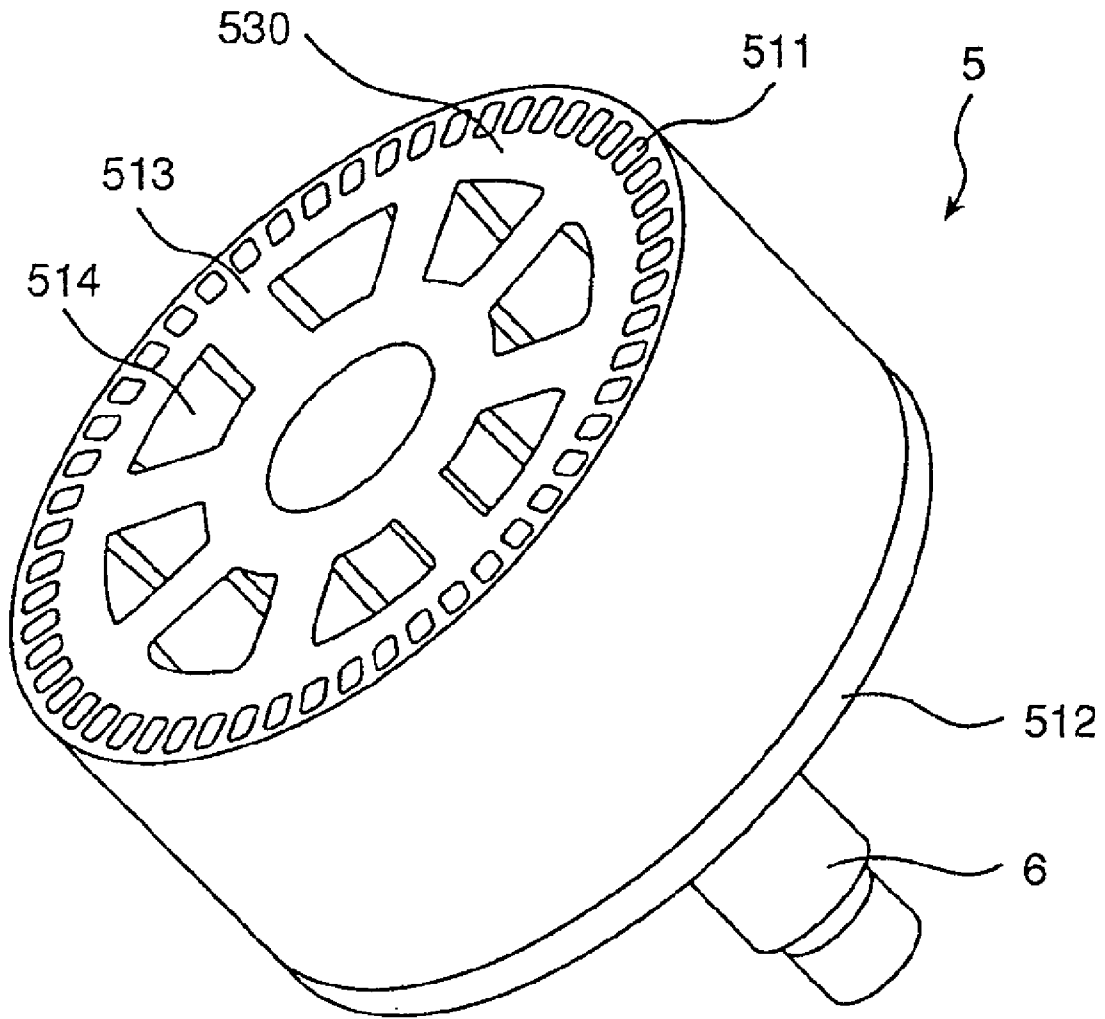
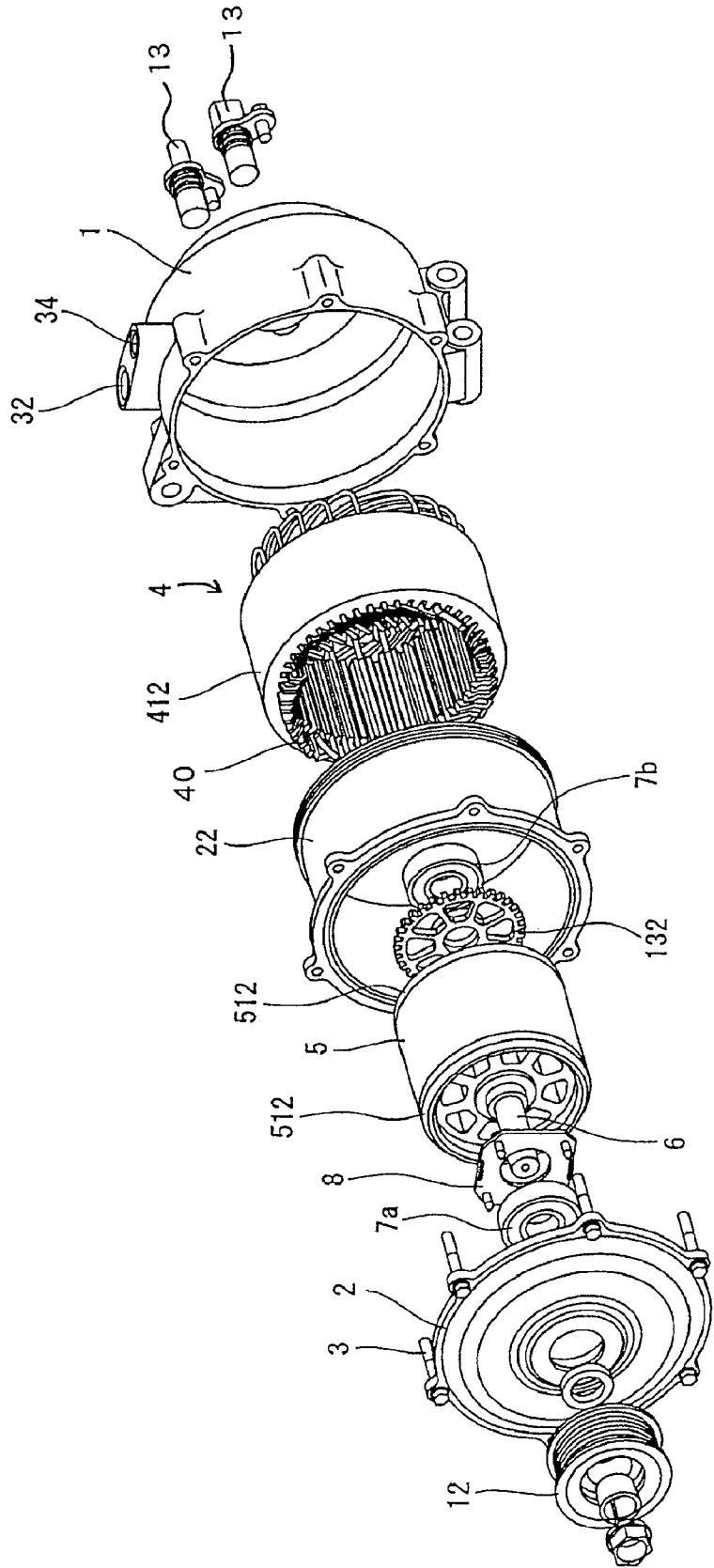
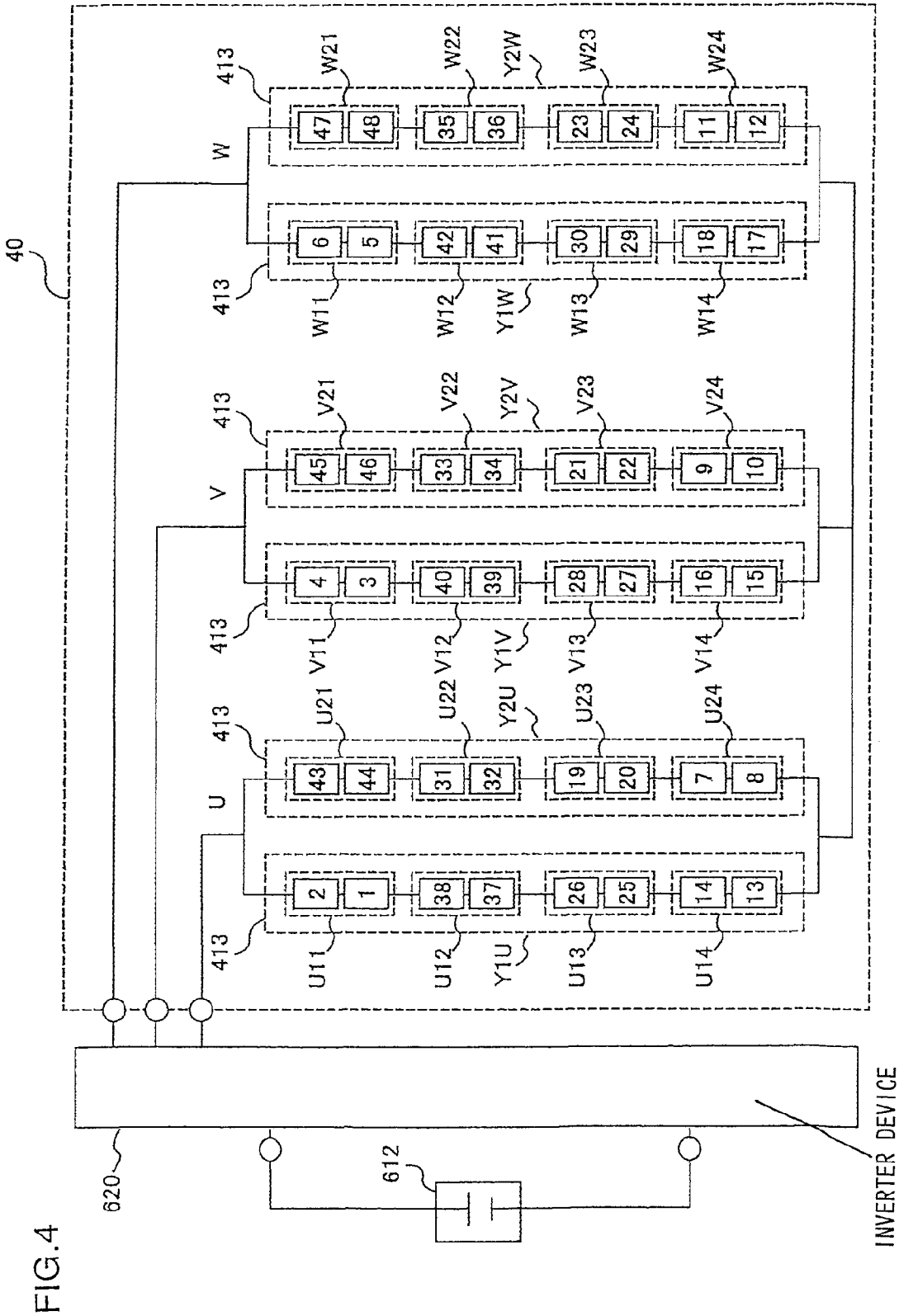


FIG. 3





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