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(54) Title: ELECTRO-MECHANICAL CLUTCH FOR DOWNHOLE TOOLS

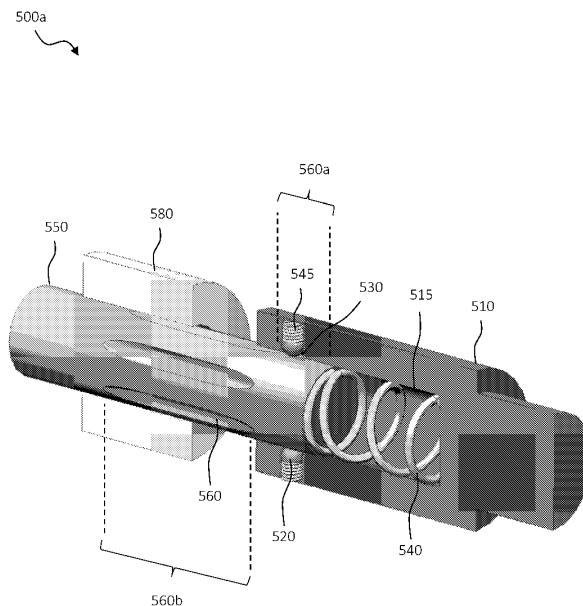


FIG. 5A

(57) Abstract: Provided is a clutch assembly, a SSSV, and a method for operating an SSSV. The clutch assembly, in one aspect, includes an output coupler housing, an input shaft, and an electromagnet coupled to the input shaft. In at least one aspect, the electromagnet is configured to axially translate the output coupler housing from a de-coupled state to a coupled state when the electromagnet is energized. The clutch assembly, in one aspect, further includes one or more grooves located in one of an outer surface of the input shaft or an inner surface of the central opening, and one or more engagement members located in the other of the inner surface of the central opening or the outer surface of the input shaft.

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