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(54) Title: EXPANDABLE BUMPER FOR AN ELECTRODE

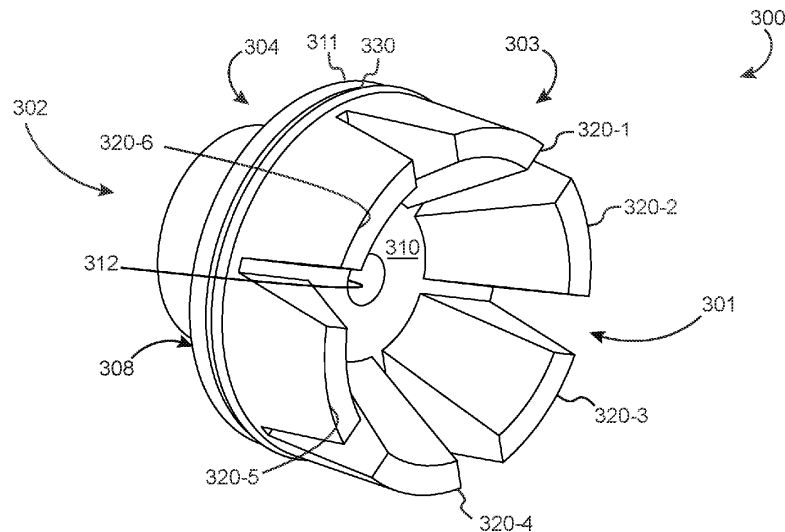


FIG. 3A

(57) **Abstract:** A bumper for preventing a forward portion of an electrode from penetrating a target comprises a rearward portion and an expandable portion. The rearward portion is configured to couple the bumper to a forward portion of an electrode. The expandable portion may comprise a plurality of members. The expandable portion is configured to transition from a collapsed state to an expanded state after being launched toward a target. The expanded state comprises a greater contact area than the contact area of the collapsed state. The greater contact area of the expanded state is configured to distribute a force of impact on the target to prevent penetration into the target. The transition from the collapsed state to the expanded state may be configured to increase a duration of impact with the target, thereby reducing a force of impact on the target to prevent penetration into the target.

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