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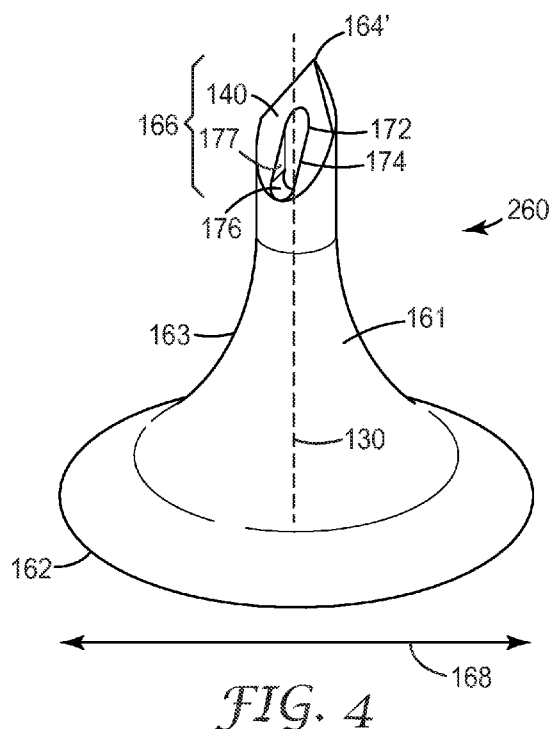
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(54) Title: HOLLOW MICRONEEDLE WITH BEVEL OPENING



(57) Abstract: An article having at least one microneedle (160, 260) is provided. The microneedle includes a base (162), an elongated body (161) having a central axis (130) and a body diameter (168), a tip portion (166), a first channel (170), and a second channel (176). The tip portion includes a tip (164), a beveled surface (140), and a bevel opening (172) in the beveled surface. The first channel extends axially from the bevel opening through at least a portion of the elongated body and has a first wall that is substantially aligned with the central axis. The second channel extends radially from the first channel to the bevel opening and has a second wall that is oriented substantially orthogonal to the central axis. The first channel and second channel merge to form the bevel opening.



MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, ML, MR, NE, SN, TD, TG).

— *as to the applicant's entitlement to claim the priority of
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