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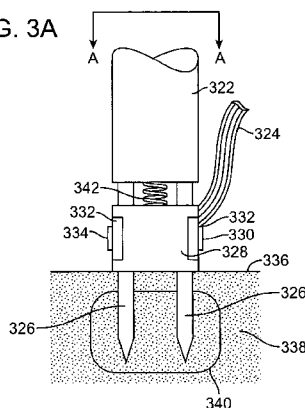
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FIG. 3A



(57) Abstract: A systems and methods for controlling temperature in a cryogenic device includes providing a device having a probe and a heater element. A distal region of the probe is engaged with the target region. Measuring and recording current temperature of a proximal region of the probe and time of the measurement is used to determine slope of a temperature curve defined by two points. The first point is defined by the current temperature and time of measurement and a second point is defined by a previous measurement of proximal region temperature and time of measurement. When the slope is less than a slope threshold value a treatment flag is activated, treatment start time is recorded and the proximal region is heated with the heater element. Heating is discontinued and the treatment flag is deactivated after elapsed treatment time exceeds a duration threshold value.