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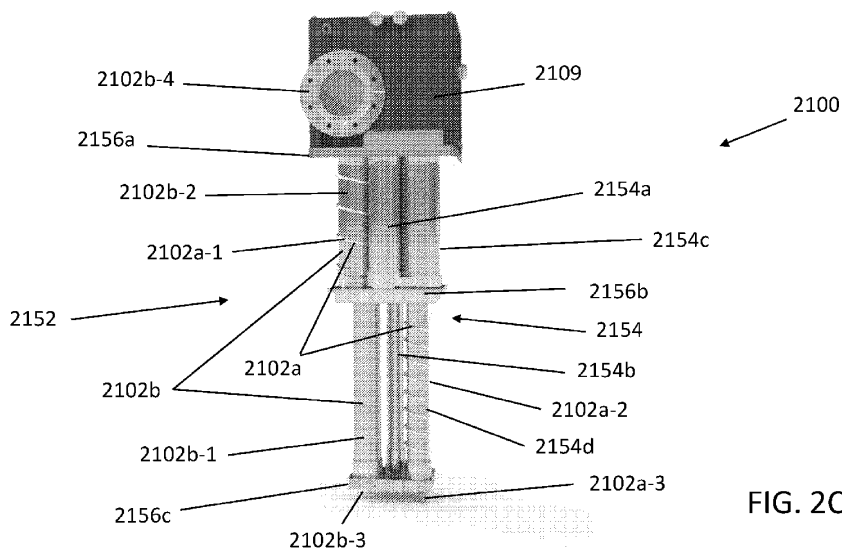


FIG. 2C

(57) Abstract: There is provided a regenerative cryogenic system comprising a pulse tube assembly comprising one or more stages configured to generate cryogenic temperatures below 4.2 Kelvin, one or more flanges configured to provide vacuum interface or thermalization, the one or more flanges coupled to the pulse tube assembly, and a still pumping line integrated with the one or more of the flanges, the still pumping line configured to provide a flow path for still gas of a dilution refrigerator.

[Continued on next page]

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