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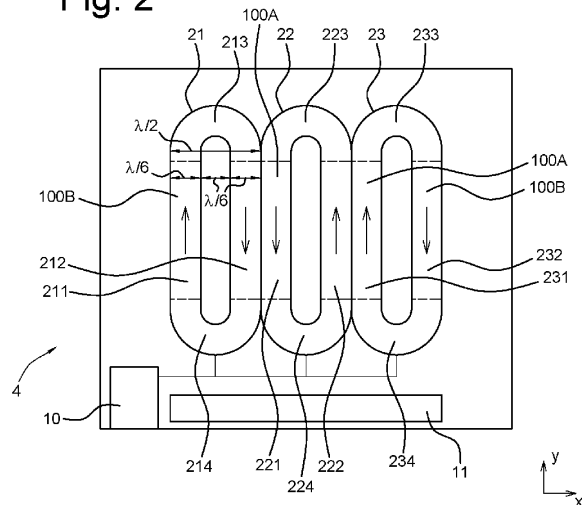
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(54) Title: MAGNETIC FIELD GRADIENT APPARATUS AND APPARATUS FOR SEPARATION

Fig. 2



(57) Abstract: The invention relates to a magnet apparatus for generating a magnetic field, the magnet apparatus comprising: at least three coils arranged besides each other along a first axis in a first plane, wherein each coil comprises a conductor comprising a material having superconducting properties at an operating temperature, the coils further comprise two legs and two bent end sections in the first plane, wherein a first and a second leg are arranged parallel to each other along a second axis in the first plane transverse to the first axis, and the two bent sections are arranged opposite to each other; and a controller arranged to control currents through the respective coils to obtain a current distribution in the first plane, wherein a current direction of the current distribution is alternating between opposite directions parallel to the second axis, with a period λ along the first axis. The invention also related to a magnetic density separation apparatus comprising the magnet apparatus.

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