

Title (en)

MAGNETIC-FIELD DEVICE FOR AN APPARATUS FOR ACCELERATING AND/OR STORING ELECTRICALLY CHARGED PARTICLES

Publication

**EP 0208163 B1 19890104 (DE)**

Application

**EP 86108071 A 19860612**

Priority

DE 3522528 A 19850624

Abstract (en)

[origin: US4680565A] A magnetic field device for a system for acceleration and/or storage of electrically charged particles, particularly electrons, comprises curved sections in the particle trajectory, in which an accordingly curved dipole magnet is arranged, which contains superconducting windings and a supplemental winding and with which a magnetic guidance field for the particle beam can be generated which has a weakly focusing effect due to corresponding field gradients. It should be possible to bring about these field gradients in a relatively simple manner also for a high magnetic flux density. Accordingly, it is provided for this purpose that with each dipole magnet which is at least free of iron, a superconducting supplemental winding is associated which is curved accordingly, adjoins at least with its convex outside the region of the concave inside of the curved dipole windings, and with which the necessary field gradients can be brought about in substance.

IPC 1-7

**H05H 7/04**

IPC 8 full level

**H05H 13/04** (2006.01); **G21K 1/093** (2006.01); **H05H 7/04** (2006.01)

CPC (source: EP US)

**H05H 7/04** (2013.01 - EP US); **Y10S 505/879** (2013.01 - EP US)

Cited by

USRE48047E; US4902993A; US5387891A; DE102006035101A1; DE4000666A1; US5341104A; DE102006018635A1; DE102006018635B4; US10925147B2; USRE48317E; US9730308B2; WO8806394A1; US9622335B2; US10368429B2; US10258810B2; US10456591B2; US9706636B2; US10675487B2; US9681531B2; US9962560B2; US10155124B2; US10254739B2; US9925395B2; US10279199B2; US10722735B2; US10646728B2; US10786689B2; US11213697B2; US11786754B2; US9661736B2; US9723705B2; US10434331B2; US11103730B2; US11717700B2; US9950194B2; US10653892B2; US11291861B2; US11311746B2; US11717703B2

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