Title (en)

PLUNGER TYPE ELECTROMAGNET.

Title (de)

KOLBENARTIGER ELEKTROMAGNET.

Title (fr)

ELECTRO-AIMANT A NOYAU MOBILE.

Publication

EP 0380693 B1 19940608

Application

EP 89908518 A 19890725

Priority

- JP 114989 A 19890109
- JP 443489 U 19890120
- JP 8900742 W 19890725
- JP 11272888 U 19880830
- JP 19758188 A 19880808
- JP 22635188 A 19880912
- JP 28681688 A 19881115
- JP 31963188 A 19881220

Abstract (en)

[origin: WO9001780A1] An attraction blade plate is disposed on a plunger of a plunger type electromagnet to improve the shape of the plunger and the shape of a fixed core, or a cylinder equipped with a single flange and made of a magnetic material is fitted to the axial-direction end portion of a coil bobbin. According to each technical means, the change rate of permeance of a magnetic path at the time of attraction can be made great and high sensitivity of the electromagnet can be accomplished. Attraction retention force is controlled by adjusting the area of the contact surface between the fixed core and a movable core. A permanent magnet is shaped in a toroidal shape and the direction of magnetization is formed in the direction of the thickness of the toroidal shape. Accordingly, magnetization of the permanent magnet becomes easier and the number of components can be reduced. In this manner, a compact and light-weight electromagnet can be mass-produced.

IPC 1-7

H01F 7/08; H01F 7/16; F16K 31/06

IPC 8 full level

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CPC (source: EP)

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Citation (examination)

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Cited by

EP0644561A1; EP1225609A3; FR2792108A1; CN104051123A; CZ301419B6; EP1811536A1; FR2896615A1; US5959519A; CN1065357C; US5497135A; EP3166116A1; CN106683824A; NL1007072C2; DE4334031A1; DE4334031C2; DE4332960A1; US8013698B2; US6404312B1; WO9320568A1; WO9733293A1; US6262648B1; US10851907B2; US10319549B2; US11201025B2; US6940376B2; US7075398B2; US6816048B2; WO9914769A1; WO0165573A3; WO2012101148A1

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