

Title (en)

Electromagnetic actuator, in particular for driving print hammers.

Title (de)

Elektromagnetische Betätigungsvorrichtung, insbesondere für Druckhammerantriebe.

Title (fr)

Dispositif d'actionnement électromagnétique notamment de marteaux d'impression.

Publication

EP 0216943 A1 19870408 (DE)

Application

EP 85109847 A 19850806

Priority

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Abstract (en)

1. Electromagnetic actuator mechanism for switching, stroke or impact motions, comprising a clapper armature (1) and an electromagnet (2) consisting of an excitation coil (3) and a magnetizable yoke structure (4), wherein the clapper armature is attracted by the yoke structure upon excitation of the electromagnet, characterized in that the yoke structure has a substantially E-shaped cross-section with two outer legs (5, 6), one center leg (7) and a base (8) common to all legs, and said cross-section lies in the magnetic flux plane, wherein the pole face (7A) of the center leg (7), encompassed by the excitation coil (3), faces the clapper armature (1), and the free ends of the outer legs are so bent in a direction towards each other that a magnetic operating gap (9) is formed between their pole faces (5A, 6A), outside or inside of which the pole face (7A) of the center leg (7) is positioned, the motional plane (1A) of the clapper armature (1) extends perpendicularly to the plane (4A) of the magnetic flux (4B) of the yoke structure (4) of the electromagnet, upon excitation of the electromagnet (2), the clapper armature (1) is pulled inside the operating gap (9) in a known manner by the forces occurring between its pole faces (5A, 6A) and the clapper armature, and in the process, the clapper armature (1) is increasingly attracted by the pole face (7A) of the center leg (7), with substantially half of the magnetic flux of the center leg passing across the clapper armature (1) to one pole face (5A, 6A) of the operating gap (9), and the length of the clapper armature (1) between its pivotal axis (10) and the operating gap (9) is more than twice the width of the clapper armature (1) between the pole faces (5A, 6A) of the operating gap (9).

Abstract (de)

Ein Schwenkanker (1) wird bei Erregung des Elektromagneten (3, 4) in einen Arbeitsspalt (9) gezogen, wobei er in zunehmendem Maße zusätzlich von dem Pol (7A) eines Elektromagnetjochschenkel (7) angezogen wird. Die Bewegungsebene (1A) des Schwenkankers (1) verläuft senkrecht zur Ebene (4A) des Magnetflusses (4B) der Jochstruktur (4) des Elektromagneten.

IPC 1-7

H01F 7/08

IPC 8 full level

B41J 2/275 (2006.01); **H01F 7/08** (2006.01)

CPC (source: EP)

H01F 7/081 (2013.01)

Citation (search report)

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EP0778592A3; FR2801721A1; EP1103989A3; WO9641947A1

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