

Title (en)

Device for the controlled displacement of a weft thread

Title (de)

Einrichtung zum gesteuerten Bewegen eines Kettfadens

Title (fr)

Dispositif pour le déplacement commandé d'un fil de trame

Publication

EP 1016743 B1 20030416 (DE)

Application

EP 99811031 A 19991110

Priority

- EP 99811031 A 19991110
- EP 98811213 A 19981209

Abstract (en)

[origin: EP1016743A1] Mechanism (1) to move a warp yarn (9) in a loom has a swing pendulum (2) with an integrated electrical coil (3) and a fixed permanent magnet (4). Balanced settings of the pendulum give three positions, in each setting, where a balance is maintained by forces between the permanent magnet and energized coil in the upper and lower settings, and with the coil not energized for the center setting. Mechanism (1) to move a warp yarn (9) in a loom to place it in one of three positions, in the upper, center or lower setting. It has a swing pendulum (2) on an axis (20), with an integrated electrical coil (3) and a fixed permanent magnet (4). Preferred Features: The guide for the warp (9) is an eyelet (50) or hook at a sliding section (5), with a ribbon link (6) to the pendulum (2). The pendulum (2) has a strip laying surface (23) for the ribbon link (6), which can be ridged, giving a curved surface which follows a circle round the pendulum axis (20). Two sliding sections (5,5') move two warps (9). The movements are asymmetrical so that, with an energized coil (3), one warp (9) is in the upper position and the other warp is in the lower setting. When the coil (3) is not energized, both warps (9) are simultaneously at the center position. The sliding section (5) can be replaced by a guide to move a number of warps at the same time. The electrical coil (3) is a flat ring. The magnetic field generated by the coil is at the center point of the ring, parallel to the pendulum axis (20). The permanent magnet (4) has a plate shape, parallel to the coil. The magnetizing of the permanent magnet (4) is equal to the magnetic field of the coil, with an opposite orientation. Permanent magnets (4), of an identical configuration, can be at ferromagnetic carrier plates (7) on both sides of the pendulum (2). The pendulum (2) has at least one non-ferromagnetic plate (21) to carry the coil (3), to dampen the pendulum movements by eddy currents. Permanent magnets (4), each on one side of the pendulum (2) in pairs, give the balanced settings for the upper and lower positions, with opposing orientations in the pairs.

IPC 1-7

D03C 13/00; **D03C 7/00**

IPC 8 full level

D03C 7/00 (2006.01); **D03C 11/00** (2006.01); **D03C 13/00** (2006.01)

CPC (source: EP)

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Cited by

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