

Title (en)

Laser operated cutting and engraving device for materials of various kind for electronic control automatic embroidery machines, and working program to embroider materials of various kind for electronic computers to control such laser operated cutting and engraving device for materials

Title (de)

Eine Laser betriebene Schneid- und Graviervorrichtung für Materialien verschiedener Art für elektronischgesteuerte automatische Stickmaschinen, und ein Bearbeitungsprogramm zum Sticken von Materialien verschiedener Art für elektronische Computer zur Steuerung solcher Schneid- und Graviervorrichtungen für Materialien

Title (fr)

Dispositif de coupage et de gravure pour des tissus de diverses sortes pour machines à broder automatiques à commande électronique, et programme de travail pour le brochage de tissus de diverses sortes, pour ordinateur électronique, pour la commande de tels dispositifs de coupage et brodages pour les tissus

Publication

EP 1657337 A1 20060517 (EN)

Application

EP 05023121 A 20051024

Priority

IT PN20040078 A 20041025

Abstract (en)

Laser operated cutting and engraving device for materials for electronic control embroidery automatic machines, and/or plotters or rollers, adapted to perform cuts and engravings on pre-established positions and with pre-established forms and sizes on to the materials to embroider. Device comprising the combination of at least a first optical lens (26), operated by a galvanometric motor and provided for the accurate and instantaneous adjustment of the laser beam focal length, and at least a second optical lens (27), operated by a step-by-step motor (31) and provided for the rough adjustment of the laser beam focal length, between two pre-established positions (A and B). Device comprising an inclined guide member (41) for sliding alternately in the inclined and vertical direction of a system (43) comprising a laser beam source (24), the two optical lenses (26, 27) and two laser beam deflection mirrors (28, 29), so as to deviate the same on to surfaces as wide as possible of the cutting plane (13) onto which the materials (32) to be worked are arranged. Moreover, it is also described the method to embroider materials utilized in this device.

IPC 8 full level

D05C 7/10 (2006.01)

CPC (source: EP)

D05C 7/10 (2013.01)

Citation (search report)

- [A] EP 0753372 A1 19970115 - TOKAI IND SEWING MACHINE [JP]
- [A] EP 0549357 A1 19930630 - NIPPON PETROCHEMICALS CO LTD [JP], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 014, no. 315 (M - 0995) 6 July 1990 (1990-07-06)

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DOCDB simple family (application)

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