Title (en)
ZIG-ZAG SEWING MACHINE

Publication
EP 0377404 A3 19900829 (FR)

Application
EP 89810868 A 19891113

Priority
CH 443988 A 19881130

Abstract (en)
[origin: EP0377404A2] In this sewing machine, the needle bar (1) is mounted slidably in two bearings (12, 13), the outer face of which has a spherical profile and which are engaged pivotally in respective seats of complementary profile formed in a fixed support (14) as regards the upper bearing and in a movable lever (15) as regards the lower bearing. This lever is alternately tilted in two opposite directions under the action of a stepping motor (18) engaging directly on the movable lever (15) as a result of the meshing of a pinion (19) with a peripheral toothing (17) which the movable lever carries. The motor, fixed support, movable lever, bearings and needle bar form an independent and removable unit. <IMAGE>

IPC 1-7
D05B 3/02; F16C 25/04

IPC 8 full level
D05B 3/00 (2006.01); **D05B 3/02** (2006.01)

CPC (source: EP KR US)
D05B 3/02 (2013.01 - EP KR US)

Citation (search report)
- [A] FR 881686 A 19430505 - INT BUTTON HOLE SEWING MACHINE
- [A] DE 596356 C 19340504 - CARL J LEHMANN FA
- [A] FR 2198500 A5 19740329 - ARVAI T [FR]
- [A] US 3026831 A 19620327 - JOHNSON RALPH E

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EA005356B1; EP0619510A1

Designated contracting state (EPC)
CH DE ES FR GB IT LI SE

DOCDB simple family (publication)
EP 0377404 A2 19900711; **EP 0377404 A3 19900829**; **EP 0377404 B1 19930526**; AU 4570289 A 19900607; AU 4570389 A 19900607; AU 621421 B2 19920312; AU 621422 B2 19920312; BR 8906042 A 19900619; BR 8906043 A 19900619; CA 2003958 A1 19900531; CA 2003959 A1 19900531; CH 676999 A5 19910328; CN 1025537 C 19940727; CN 1025538 C 19940727; CN 1043169 A 19900620; CN 1043172 A 19900620; DD 289301 A5 19910425; DD 289302 A5 19910425; DE 68906774 D1 19930701; DE 68906774 T2 19940105; DE 68907884 D1 19930902; DE 68907884 T2 19940310; EP 0377403 A2 19900711; EP 0377403 A3 19900822; EP 0377403 B1 19930728; ES 2043096 T3 19931216; ES 2044212 T3 19940101; JP H02182284 A 19900716; JP H02182285 A 19900716; KR 900008093 A 19900602; KR 910009993 A 19910628; PT 92429 A 19900531; PT 92429 B 19950809; PT 92430 A 19900531; PT 92430 B 19950912; RU 2050425 C1 19951220; US 5063865 A 19911112; US 5099776 A 19920331; ZA 899035 B 19900926; ZA 899171 B 19900926

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