

Title (en)
Button hole sewing machine

Title (de)
Knopfloch-Nähmaschine

Title (fr)
Machine à coudre des boutonsnières

Publication
EP 1722021 A1 20061115 (DE)

Application
EP 06007650 A 20060412

Priority
DE 102005021768 A 20050511

Abstract (en)
In a buttonhole sewing machine with a buttonhole cutting device (13) including a cutting unit with a knife (45) and an upper cutting block (15) having an anvil (64) to be moved downwards against the knife, the cutter unit has two parallel knives (45, 46) and a drive for displacing the knives (transverse to the needle and anvil movement directions) between two end mountings, at each of which only one of the knives is contacted with anvil surface. A buttonhole sewing machine comprises an upper arm (1) connected to a base plate (2) by a stand (3), a movable needle and sewn article clamp(s) (9b) movable in the y-direction. A buttonhole cutting device (13), located behind the clamp (as seen in the y-direction from the needle), includes: a cutting unit (14) with a knife (45); an upper cutting block (15) having an anvil (64) with a counter-surface for the knife; a cutting drive (16), for moving the block downward in the vertical z-direction against the knife; and a drive for displacing the anvil in the y-direction relative to the knife. The novel feature is that the cutter unit has two parallel knives (45, 46) and a drive for displacing the knives in the x-direction (transverse to the y- and z-directions) between two end mountings, at each of which only one of the knives is contacted with the counter-surface of the anvil.

IPC 8 full level
D05B 3/06 (2006.01); **D05B 3/08** (2006.01); **D05B 37/02** (2006.01); **D05B 37/04** (2006.01)

CPC (source: EP KR)
D05B 3/06 (2013.01 - EP KR); **D05B 3/08** (2013.01 - EP); **D05B 37/02** (2013.01 - EP); **D05B 37/04** (2013.01 - EP)

Citation (applicant)
• DE 10304821 B3 20040226 - DUERKOPP ADLER AG [DE]
• US 2247305 A 19410624 - WILLIAM MORGAN FREDERICK
• DE 10085290 B4 20060518 - JUKI KK [JP]
• DE 10225511 C1 20030618 - DUERKOPP ADLER AG [DE]
• DE 10225512 C1 20030717 - DUERKOPP ADLER AG [DE]
• DE 19807771 C1 19990415 - DUERKOPP ADLER AG [DE]
• US 6095066 A 20000801 - NOELTGE THOMAS [DE], et al
• DE 10216808 C2 20031113 - DUERKOPP ADLER AG [DE]
• US 6722299 B2 20040420 - NOELTGE THOMAS [DE], et al

Citation (search report)
• [A] WO 0142550 A1 20010614 - JUKI KK [JP]
• [A] US 2003226485 A1 20031211 - FILGES KARSTEN [DE], et al
• [A] US 6047654 A 20000411 - KAUFHOLD TOBIAS [DE]
• [A] GB 191410038 A 19150121 - FAIRWEATHER WALLACE [GB]
• [A] US 2247305 A 19410624 - WILLIAM MORGAN FREDERICK
• [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04 31 August 2000 (2000-08-31)

Cited by
DE102012205049A1; DE102011005936A1; EP2503041A1; EP2644764A1; EP2905367A1; DE102011005936A8; US8992104B2; US9440812B2; US8847185B2; US9296583B2; EP2837720B1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1722021 A1 20061115; EP 1722021 B1 20071114; AT E378448 T1 20071115; CN 1861873 A 20061115; CN 1861873 B 20120208; DE 102005021768 A1 20061116; DE 502006000178 D1 20071227; JP 2006314794 A 20061124; KR 101268224 B1 20130531; KR 20060116703 A 20061115

DOCDB simple family (application)
EP 06007650 A 20060412; AT 06007650 T 20060412; CN 200610080204 A 20060511; DE 102005021768 A 20050511; DE 502006000178 T 20060412; JP 2006131507 A 20060510; KR 20060039373 A 20060502