

Title (en)
Sewing machine for sewing two pieces of material while incorporating fullness

Title (de)
Nähmaschine zum Vernähen zweier Nähgutteile unter Einarbeitung von Mehrweite

Title (fr)
Machine à coudre destinée à coudre deux pièces avec incorporation de l'embus

Publication
EP 1897985 B1 20120229 (DE)

Application
EP 07013752 A 20070713

Priority
DE 102006042332 A 20060908

Abstract (en)
[origin: EP1897985A2] This sewing machine includes a lifter unit (26, 32) which is independent of the needle drive. It incorporates a lifter drive motor (26) fixed to the casing (2, 3, 4), working with a lift drive controller (30). The lifter drive is a linear motor (26). The controller supplies a sequence of currents to this motor, to cause raising and lowering. The currents supplied, are modulated in terms of their magnitudes and direction. The sequence is given in the detailed description. A first, forward acceleration current initiates raising of the upper material feeder (16). A reversed-direction braking current is then supplied. A reduced current is supplied in the forward direction, sufficient to hold the lifter. A second acceleration current is supplied in the reverse direction, to lower the upper material feeder. A lower current is then supplied in the reverse direction, for holding. During the cycle, following supply of the second acceleration current, an additional braking current may be supplied, in the forward direction. The lift drive motor works with a lifting rod carrying the upper feeder. The drive rod from the lift motor is connected to push and pull the lifting rod, with which it aligns. A carrier for the upper feeder is connected to a fixed support structure on the casing. This structure also has a separate feeder drive (24, 25) fixed to it. The arrangement allows the upper feeder to swing relative to the support structure (19) about an axis, between an upper lifted position and a lowered position. The drive controller is connected to the lift drive motor (26) and the needle drive. The needle rod position is detected from the needle drive. The lifter drive motor is controlled as a function of this position.

IPC 8 full level
D05B 27/24 (2006.01)

CPC (source: EP KR)
D05B 19/16 (2013.01 - KR); **D05B 27/12** (2013.01 - KR); **D05B 27/14** (2013.01 - KR); **D05B 27/24** (2013.01 - EP); **D05B 27/16** (2013.01 - EP); **D05B 73/08** (2013.01 - EP)

Cited by
EP2138620A1; DE102008030797A1

Designated contracting state (EPC)
CZ DE RO

DOCDB simple family (publication)
EP 1897985 A2 20080312; EP 1897985 A3 20101124; EP 1897985 B1 20120229; CN 101139782 A 20080312; DE 102006042332 A1 20080327; JP 2008062055 A 20080321; KR 20080023118 A 20080312

DOCDB simple family (application)
EP 07013752 A 20070713; CN 200710149234 A 20070907; DE 102006042332 A 20060908; JP 2007221328 A 20070828; KR 20070084904 A 20070823