

Title (en)
Sewing machine

Title (de)
Nähmaschine

Title (fr)
Machine à coudre

Publication
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Application
EP 03017537 A 20030806

Priority

- JP 2002232946 A 20020809
- JP 2002232947 A 20020809
- JP 2002232948 A 20020809
- JP 2002233723 A 20020809
- JP 2002232949 A 20020809
- JP 2003120480 A 20030424

Abstract (en)
A sewing machine includes a supporting plate portion and a needle. The supporting plate portion contacts sewing fabric that is moved in a predetermined direction during a sewing operation. The needle is vertically moved between a top dead center above the supporting plate portion and a bottom dead center below the supporting plate portion. The supporting plate portion has a needle hole through which the needle passes. The lower end opening of the needle hole is larger than the upper end opening.

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IPC 8 full level
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Cited by
EP2037031A1; ITM120130141A1; CH700852A1; EP2540893A1; CN108441991A; US8739714B2; US7481469B2; US11434592B2; WO2014118732A1; WO2019071097A1

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