

Title (en)  
Bobbin holder support structure

Title (de)  
Spulenhalter

Title (fr)  
Support de bobine

Publication  
**EP 1024102 B1 20030903 (EN)**

Application  
**EP 99125429 A 19991220**

Priority  
JP 2174999 A 19990129

Abstract (en)  
[origin: EP1024102A2] The present invention provides a bobbin holder support structure that allows the natural frequency of a bobbin holder to be greatly varied in order to prevent resonance over a wide range of available rotations. The present invention enables a bobbin holder 5 to be rotatably supported at two root-side positions using support members 11, 12 so that the bobbin holder 5 can be supported like a cantilever, while enabling the tip side of the bobbin holder to be rotatably supported using a detachable support member, and provides an offset absorption member 14 in a support structure comprising one 12 of the root-side support members. Consequently, with the tip of the bobbin holder 5 supported, the bobbin holder 5 is arrested and supported substantially at the two positions in a radial direction using the other root-side support member 11 and the tip-side support member 13. Interposing vibration absorption members 23, 23 are provided for a support structure comprising the other root-side support member 11. Interposing vibration absorption members 24, 24 are provided for a support structure comprising the tip-side support member 13 (Fig. 2A). <IMAGE> <IMAGE>

IPC 1-7  
**B65H 54/553**; **B65H 67/048**

IPC 8 full level  
**B65H 54/547** (2006.01); **B65H 54/553** (2006.01); **B65H 67/048** (2006.01)

CPC (source: EP)  
**B65H 54/553** (2013.01); **B65H 67/048** (2013.01); **B65H 2601/524** (2013.01); **B65H 2701/31** (2013.01)

Cited by  
CN110697499A; CN100347361C; CN102341331A; CN110592991A; WO2016146465A1; EP1260475A1; WO2010102924A1; WO2016146464A1

Designated contracting state (EPC)  
DE IT

DOCDB simple family (publication)  
**EP 1024102 A2 20000802**; **EP 1024102 A3 20010131**; **EP 1024102 B1 20030903**; DE 69910966 D1 20031009; DE 69910966 T2 20040722; JP 2000219430 A 20000808; JP 3682570 B2 20050810

DOCDB simple family (application)  
**EP 99125429 A 19991220**; DE 69910966 T 19991220; JP 2174999 A 19990129