

Title (en)
Method for binding paper sheets.

Title (de)
Verfahren zum Verbinden von Papierlagen.

Title (fr)
Procédé de reliure de feuilles de papier.

Publication
EP 0390733 B1 19940810 (DE)

Application
EP 90810180 A 19900308

Priority
CH 115689 A 19890330

Abstract (en)
[origin: EP0390733A2] The method for stapling layers of paper is based on a bond under ultrasonic action. The sheets of paper are pretreated by means of a bonding agent by printing on, spraying on or impregnation with droplets before, during or after the printing. The ultrasonic action is performed by means of a [lacuna] comprising an ultrasonic vibrator 20 and a control device. The vibrator has a conical or blade-shaped stapling tool, the sonotrode 24. The latter is pressed during the ultrasonic action against the layers of sheets 26 which, in turn, rest against a plate-shaped or ridge-shaped counterbearing 27. <IMAGE>

IPC 1-7
B42C 9/00

IPC 8 full level
B42B 5/00 (2006.01); **B31F 5/00** (2006.01); **B42C 3/00** (2006.01); **B42C 9/00** (2006.01)

CPC (source: EP)
B31F 5/008 (2013.01); **B42C 9/0093** (2013.01); **B65H 2301/436** (2013.01)

Cited by
US5564685A; DE102013225737A1; US5716182A; EP0888907A1; US6042318A; US5634758A; CN113543963A; US10723096B2; US11541623B2; WO9925547A1; WO03057461A1; EP1588971A1; US8342317B2; EP3079895B1; EP3188915B1

Designated contracting state (EPC)
CH DE GB LI SE

DOCDB simple family (publication)
EP 0390733 A2 19901003; **EP 0390733 A3 19910508**; **EP 0390733 B1 19940810**; DE 59006734 D1 19940915; JP 2934276 B2 19990816; JP H03108590 A 19910508

DOCDB simple family (application)
EP 90810180 A 19900308; DE 59006734 T 19900308; JP 8478590 A 19900329