Title (en)

NEEDLE PRINTING DEVICE

Publication

EP 0087716 B1 19850522 (DE)

Application

EP 83101646 A 19830221

Priority

DE 3207195 A 19820227

Abstract (en)

[origin: US4487516A] In needle printing apparatus with a plurality of parallel working printing needles which are each provided with a selectively controllable blocking device and a yielding stroke equalizing element, in order to arrive at an extraordinarily compact construction each printing needle and its stroke equalizing element is formed in one elongated piece of springy material. Preferably all of the printing needles and their stroke equalizing devices are made from one suitable spring plate, formed by etching, stamping, milling or the like, in the shape of a comb whereof each tooth comprises an actual printing needle, and the stroke equalizing element has a zigzag shape. The printing needle and the yielding equalizing element are thus no thicker than the thickness of the spring plate. Over this thin spring plate one can then arrange corresponding blocking elements, likewise formed in comb shape. Each individual tooth of this blocking element comb is formed as a piezoelectric bending transducer which can freely engage between the printing needles and on which there is an abutment that engages an abutment on the shaft of the respective printing needle to arrest the latter against forward motion.

IPC 1-7

B41J 3/12

IPC 8 full level

B41J 2/25 (2006.01); B41J 2/295 (2006.01)

CPC (source: EP US)

B41J 2/295 (2013.01 - EP US)

Cited by

EP0616894A3

Designated contracting state (EPC) DE FR GB

DOCDB simple family (publication)

EP 0087716 A1 19830907; EP 0087716 B1 19850522; DE 3207195 A1 19830915; DE 3360196 D1 19850627; JP S58158269 A 19830920; US 4487516 A 19841211

DOCDB simple family (application)

EP 83101646 A 19830221; DE 3207195 A 19820227; DE 3360196 T 19830221; JP 2956983 A 19830225; US 46915783 A 19830224