

Title (en)
FLAT BED THERMAL PRINTER

Publication
EP 0293089 A3 19900418 (EN)

Application
EP 88303859 A 19880428

Priority
• GB 8710059 A 19870428
• GB 8721460 A 19870911

Abstract (en)
[origin: EP0293089A2] Flat bed thermal printing apparatus adapted to print information on to an elongate substrate (5), or on to products (24) disposed upon the substrate (5), at a printing area within the apparatus, the said substrate (5) being movable through the apparatus in a step by step movement, with a stop for printing between each step, along a path which causes the substrate to be disposed in a substantially flat position as the substrate is stopped at the printing area after each step wherein the apparatus comprises a printing head (3) provided with a multiplicity of individually energisable dot type thermal elements (23), means (9) to move the printing head (3) relative to the substrate (5) while the substrate (5) is stationary at the printing area between its stepwise movements through the apparatus with the substrate in its substantially flat disposition, means selectively to energise the said printing elements (23) during movement of the printing head (3) to effect printing and means (13, 14) positively to hold the substrate in position at the printing area during printing.

IPC 1-7
B41J 3/28; B41J 3/20

IPC 8 full level
B41J 15/04 (2006.01); **B41J 2/325** (2006.01); **B41J 3/28** (2006.01); **B41J 11/02** (2006.01)

CPC (source: EP)
B41J 2/325 (2013.01); **B41J 3/28** (2013.01)

Citation (search report)
• [Y] GB 1292249 A 19721011 - NCR CO [US]
• [Y] US 4277186 A 19810707 - TAKAHASHI HIROMICHI
• [A] DE 3108367 A1 19820128 - CANON KK [JP]
• [A] GB 2102740 A 19830209 - TOKYO SHIBAURA ELECTRIC CO [JP]

Cited by
DE4230164A1; EP0530555A3; CN111070909A; USD973765S; GB2283706A; GB2283706B; WO9946129A2; WO9426526A1; US10953667B2

Designated contracting state (EPC)
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
EP 0293089 A2 19881130; EP 0293089 A3 19900418; AU 1519288 A 19881103; AU 598363 B2 19900621; CA 1306638 C 19920825; CN 88102463 A 19881116; DK 225688 A 19881029; DK 225688 D0 19880426; IN 169571 B 19911116; JP S6426480 A 19890127; NO 881842 D0 19880427; NO 881842 L 19881031; NZ 224392 A 19900828

DOCDB simple family (application)
EP 88303859 A 19880428; AU 1519288 A 19880427; CA 564331 A 19880415; CN 88102463 A 19880428; DK 225688 A 19880426; IN 336CA1988 A 19880426; JP 10285588 A 19880427; NO 881842 A 19880427; NZ 22439288 A 19880427