

Title (en)  
PRIMER APPARATUS FOR THERMAL INK-JET CARTRIDGE

Publication  
**EP 0569155 A3 19940817 (EN)**

Application  
**EP 93303001 A 19930419**

Priority  
US 87895992 A 19920504

Abstract (en)  
[origin: EP0569155A2] Ink jet printhead primer apparatus includes an elongated bellows assembly (50) compressible along its length and having upper and lower end caps (101, 103). The upper cap includes an opening at which negative pressure is produced when the upper and lower end caps are relatively displaced away from each other. A capper (119) having an opening is supported by the upper end cap of the bellows assembly for selectively engagement with the nozzle array (58) of the cartridge (570) being primed to form a seal therewith so that the negative pressure produced in the opening of the upper end cap is communicated to the nozzles of the nozzle array. Displacement of the lower end cap is controlled by cam surfaces (95) formed on the inner opposing surfaces of parallel plate-like gear sectors (65) of a rotatable cam assembly (60) having gear teeth (75) that drive a flywheel (83). The gear sectors of the cam assembly further include cam edges (74a, 74b) for moving a sliding cam member (70) that moves the upper end cap between a retracted position and an extended position, wherein movement of the upper end cap from the retracted position to the extended position is away from the lower end cap. Pursuant to rotation of the cam assembly in one direction and then in the opposite direction, negative pressure is produced at the capper opening as it is engaged with the nozzle plate of the cartridge to be primed, ink suctioning negative pressure is then produced, and the capper is disengaged from the nozzle plate of the cartridge while negative pressure continues to be maintained at the opening of the capper. In this manner, negative pressure is provided at the capper opening at all times that the capper is engaged against the nozzle plate.

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CPC (source: EP)  
**B41J 2/16526** (2013.01); **B41J 2/16532** (2013.01); **B41J 2/17** (2013.01)

Citation (search report)  
• [A] US 4600931 A 19860715 - TERASAWA KOJI [JP]  
• [A] US 4999643 A 19910312 - TERASAWA KOJI [JP]  
• [A] EP 0002591 A1 19790627 - GOULD INC [US]  
• [PA] PATENT ABSTRACTS OF JAPAN vol. 16, no. 456 (M - 1314) 22 September 1992 (1992-09-22)

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