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(54) **Imaging apparatus and method adapted to control ink droplet volume and void formation**

(57) Imaging apparatus and method adapted to control ink droplet volume and void formation. The apparatus (10) includes an ink jet print head (45) having a nozzle (110) for ejecting an ink droplet (150) therefrom. A heater element (130) is in heat transfer communication with the ink droplet for variably supplying heat energy to the ink droplet, so that the volume of the ink droplet is controlled as the heat energy is variably supplied to the ink droplet. A controller (40) is connected to the heater element for variably controlling the heat energy supplied to the ink droplet. The controller varia-

bly controls the heat energy by variably controlling a plurality of voltage pulses sequentially supplied to the heater element. Moreover, in order to reduce the potential for void formation in the ink droplet, the pulses are spaced-apart by a predetermined delay interval. Suitable control of ink droplet volume and delay interval between pulses results in uniform print density and "gray-scaling" of each dot or pixel in the output image and also precludes void formation.

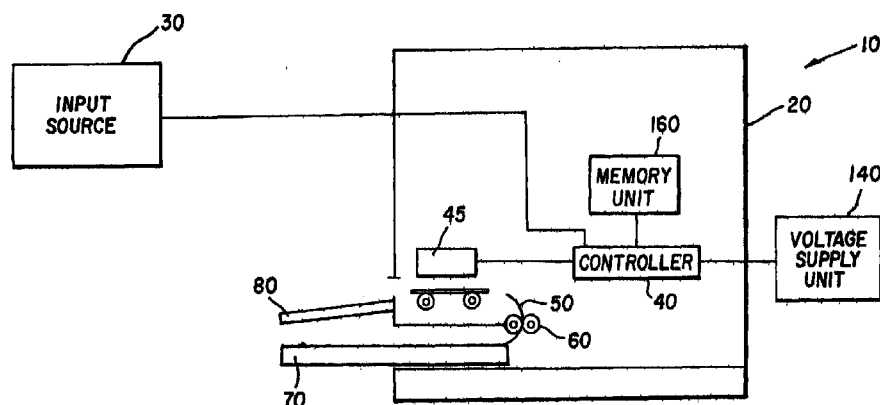


FIG. 1

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EUROPEAN SEARCH REPORT

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 June 1999	Examiner Didenot, B
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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