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(71) Applicant (for all designated States except MC): **INTERNATIONAL BUSINESS MACHINES CORPORATION** [US/US]; New Orchard Road, Armonk, NJ 10504 (US).

(71) Applicant (for MC only): **COMPAGNIE IBM FRANCE** [FR/FR]; Tour Descartes, 2, avenue Gambetta, F-92066 Paris La Défense Cedex (FR).

(72) Inventors: **AHLGREN, David, C.**; 112 Thornton Terrace, Wappingers Falls, New York, NY 12590 (US).

FREEMAN, Gregory, G.; 23 Sebastian Court, Hopewell Junction, New York, NY 12533 (US). **HUANG, Feng, Yi**; 1521 Cedarmon Drive, Hacienda Heights, CA 91745 (US). **TICKNOR, Adam, T.**; 751 Route 9D, Wappingers Falls, New York, NY 12590 (US).

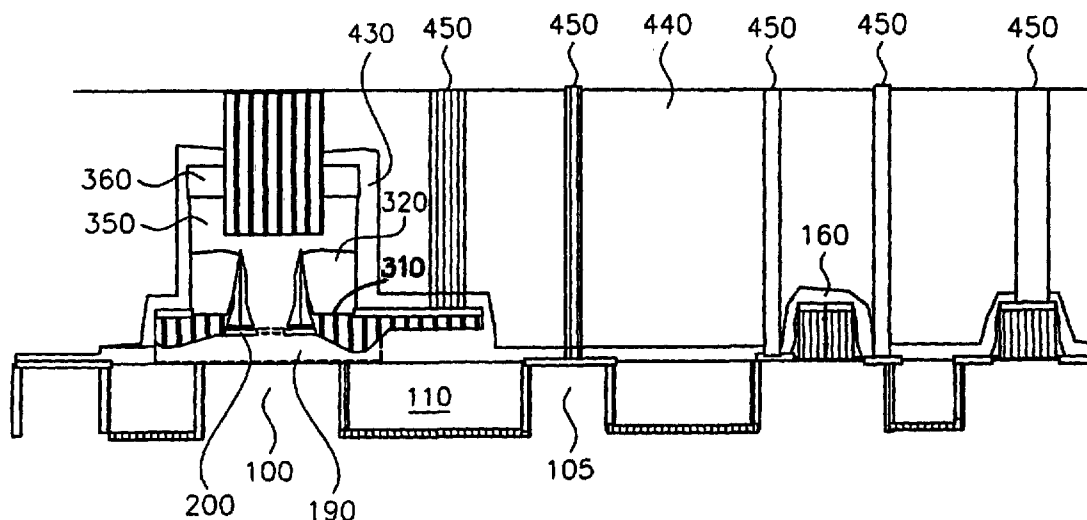
(74) Agent: **KLEIN, Daniel**; Compagnie IBM France, Direction de la Propriété Intellectuelle, F-06610 La Gaude (FR).

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(54) Title: BIPOLAR TRANSISTOR WITH RAISED EXTRINSIC BASE FABRICATED IN AN INTEGRATED BICMOS CIRCUIT



(57) Abstract: A process for forming a bipolar transistor with a raised extrinsic base (310) over the base (190), an emitter (350), and a buried collector (105) integrated with a CMOS transistor. An intermediate semiconductor structure is provided having CMOS and bipolar areas. An intrinsic base layer is provided in the bipolar area. A base oxide is formed across, and a sacrificial emitter stack silicon layer is deposited on, both the CMOS and bipolar areas. A photoresist is applied to protect the bipolar area and the structure is etched to remove the sacrificial layer from the CMOS area only such that the top surface of the sacrificial layer on the bipolar area is substantially flush with the top surface of the CMOS area. Finally, a polish stop layer is deposited having a substantially flat top surface across both the CMOS and bipolar areas suitable for subsequent chemical-mechanical polishing (CMP) to form the raised extrinsic base.



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