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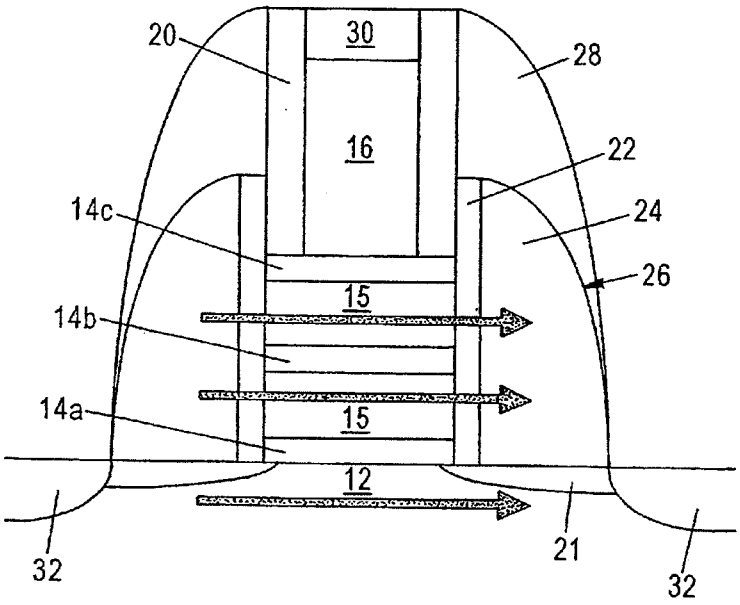
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(54) Title: LOW-POWER MULTIPLE-CHANNEL FULLY DEPLETED QUANTUM WELL CMOSFETS



(57) Abstract: A multiple-channel semiconductor device has fully or partially depleted quantum wells and is especially useful in ultra large scale integration devices, such as CMOSFETs. Multiple channel regions (15) are provided on a substrate (12) with a gate electrode (16) formed on the uppermost channel region (15), separated by a gate oxide (14c), for example. The vertical stacking of multiple channels (15) and the gate electrode (16) permit increased drive current in a semiconductor device without increasing the silicon area occupied by the device.

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