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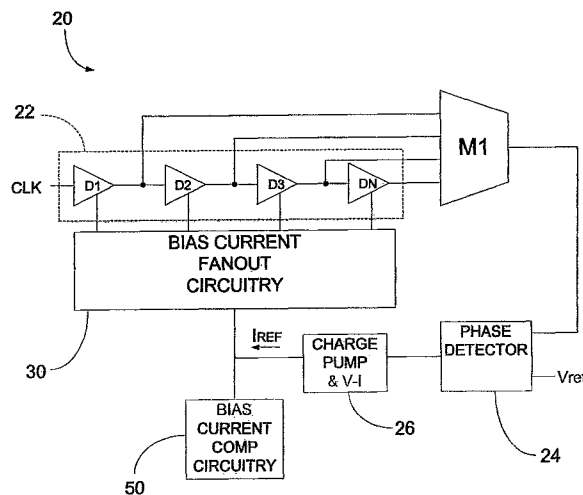
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(54) Title: **CURRENT MIRROR COMPENSATION USING CHANNEL LENGTH MODULATION**



(57) **Abstract:** A current compensation circuit for use with a current mirror circuit is disclosed. The current mirror circuit has a current path defined by a first programmable current mirror stage driving a first fanout current mirror stage. The first programmable current mirror stage includes at least one transistor with a channel length exhibiting a first channel length modulation factor λ_1 . The first fanout current mirror stage connects to a supply voltage source. The current compensation circuit comprises a supply voltage current mirror coupled to the supply voltage source and has a current output coupled to the current path. The compensation circuit further includes a second programmable current mirror coupled in series to the supply voltage current mirror and including at least one transistor with a channel length exhibiting a channel length modulation factor λ_2 . The second channel length modulation factor λ_2 is larger than the first channel length modulation factor λ_1 . As a result, the first programmable current mirror and the second programmable current mirror cooperate to maintain a bias current through the first fanout current mirror stage substantially independent of changes in the supply voltage.

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