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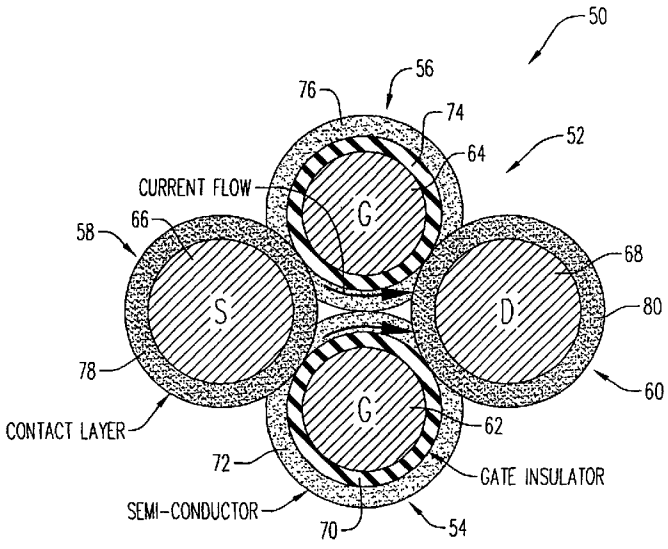
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(54) Title: ACTIVE DEVICES USING THREADS



(57) Abstract: Active devices that have either a thread or a ribbon geometry. The thread geometry includes single thread active devices and multiply thread devices. Single thread devices have a central core that may contain different materials depending upon whether the active device is responsive to electrical, light, mechanical, heat, or chemical energy. Single thread active devices include FETs, electro optical devices, stress transducers, and the like. The active devices include a semiconductor body that for the single thread device is a layer about the core of the thread. For the multiple thread devices, the semiconductor body is either a layer on one or more thread or an elongated body disposed between two of the threads. For example, a FET (50) is formed of three threads, of which carried a gate insulator layer (74) and a semiconductor layer (72) and the other two (58,60) of which are electrically conductive and serve as the source (58) and drain (60). The substrates or threads are preferably flexible and can be formed in a fabric.

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