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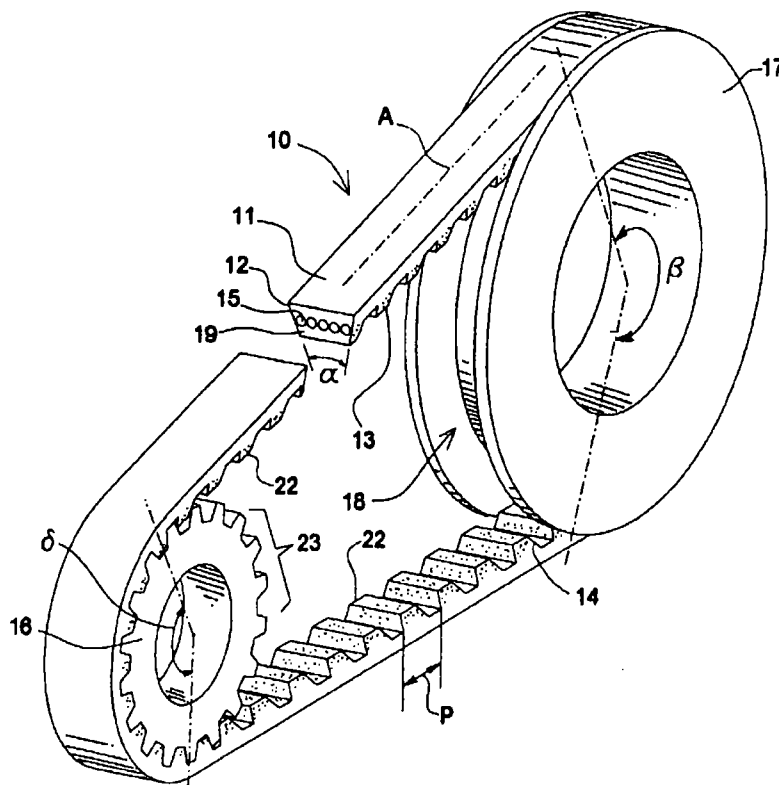
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(54) Title: V-BELT SYSTEM



(57) Abstract: The invention comprises a synchronous v-belt. The belt (10) has a pulley engaging surface (13) having a toothed or cogged profile for engaging a synchronous pulley (16). The pulley engaging surface (13) further comprises a cover layer to increase belt life and reduce noise. The belt (10) also has opposing sides cut, ground or molded to describe an included angle (α) for engaging a v-belt or single groove pulley (17). The belt (10) is preferably used in conjunction with one synchronous pulley (16) and one v-belt pulley (17). The belt meshes with the teeth (23) of the synchronous pulley (16) and simultaneously runs in the groove (18) of the v-belt pulley (17). On start up, the v-belt (10) may slip slightly in the v-groove pulley (17), thereby reducing the initial start up shock to the system. Therefore, the limit for power transmission is now the size and angle (β) of wrap of the larger v-belt pulley (17). In addition, the synchronous drive pulley (16) provides a positive mechanical belt drive interface which, in conjunction

with the larger v-belt pulley (17), allows up to 30% more torque to be transmitted by the inventive belt while reducing operating noise, depending upon the system design parameters.

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