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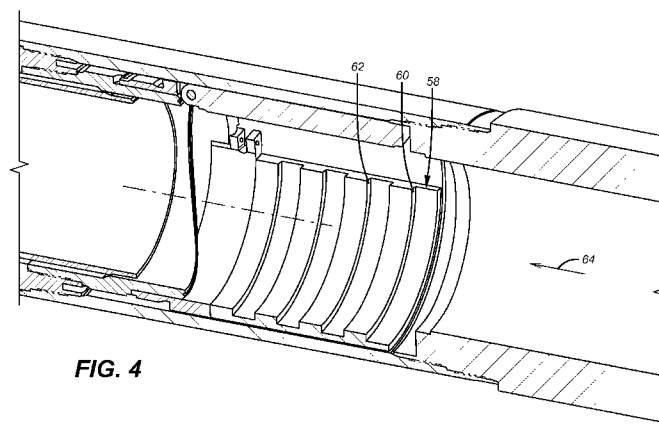


FIG. 4

(57) Abstract: The problem of flappers that will not close due to high velocity gas rushing past and creating a vortex that has zones of high pressure pressing the flapper against the force of the torsion spring is reduced or overcome with modifications in the passage through a subsurface safety valve so as to reduce the intensity of the vortex to allow the torsion spring to pivot the flapper to closed position. Various shapes are inserted adjacent the flapper base to create turbulence to minimize or prevent the vortex and the associated pressure increases that would otherwise prevent flapper closure with the flow tube retracted. Inserts that create turbulence are placed in a recess that in part holds the flapper when it is rotated to the open position.