SELECTIVE TORQUE OPERATOR FOR A VALVE

ABSTRACT

A low torque operator for selectively engaging a gear unit in an actuating drive stem of a valve having a collar with an axial bore and a slot through its side. The slot includes a projection directed towards an upper end of the collar and has an edge oriented oblique to the collar axis. A drive shaft inserts in the bore, and a pin mounted in the drive shaft engages the slot during low torque conditions. The operator also includes an idler gear and a bullgear. A driven shaft with two drive pins inserts into the bore on a lower side of the collar. The upper of the two pins remains in contact with a shoulder formed on a lower end of the collar during low torque conditions. The lower of the two pins engages a shoulder formed on a lower side of the bullgear during high torque conditions.

Figure 1