

WRITTEN ARGUMENTS IN RESPONSE TO EXAMINER'S OPINION

The invention at issue provides for a replaceable self-contained cartridge which contains the main valve member assembly, including the diaphragm. The Examiner is correct insofar as he states that pilot valve members, main valve closure means, etc. are known in prior art valves. However, until the instant invention, it was not known to be able to replace the main valve member and diaphragm, when the diaphragm is worn, by merely dropping in a cartridge which requires no critical alignment or fitting. This is achieved by incorporating the alignment and fitting functions into the cartridge itself.

As recited in independent claim 1, there are "main seat means removably mounted on said housing and having a main seat opening in communication with the inlet port and outlet port." and a "guide means ... fixedly mounted on said main seat means." The main valve member has a portion "disposed between said main seat means and said guide means and being freely moveable therebetween." The guide means and main seat means respectively form the upper and lower covers for the cartridge. The guide means has an opening and the main valve member as a first portion moveable mounted in the opening of the guide means.

Axial movement is ensured by the cooperation between the first portion of the main valve member and the guide means opening. The first portion of the main valve member also includes the pilot seat means which is replaceable with the cartridge. The replaceable valve sealing cartridge is explicitly recited in independent claim 13.

The prior art valves which are the subjects of the references cited by the Examiner do not provide for replacement of the valve member and diaphragm through the expedient of a simple drop-in cartridge. In each of the prior art patents the main valve member is guided solely within the valve housing. There is no removably mounted main valve seat means and, hence, no guide means fixedly mounted on a main valve seat means. The invention, as claimed, is an unobvious improvement over the art.