set value due to the erroneous operation of the operator or the change of the set value because the object or the hand hits may be avoided.

Brief Description of Drawings

[Fig. 1] Fig. 1 is a vertical cross-sectional view illustrating an embodiment of a fluid controller of the present invention.

[Fig. 2] Fig. 2 is an enlarged cross-sectional view of a periphery of setting means, which is a principal portion of Fig. 1.

Reference Signs List

(1): fluid controller

(2): body

(2a): fluid inflow passage

(2b): fluid outflow passage

(4): casing

(6): diaphragm

(7): diaphragm holder

(7a): first flange portion

(7b): second flange portion(8): stem

(9)(10): piston

(13): drive means

(14): setting means

(15): holder adapter

CLAIMS

[Claim 1]

A fluid controller comprising: a body provided with a fluid passage; a casing provided above the body; a diaphragm configured to open and close the fluid passage; a stem configured to move the diaphragm to an open or close direction by moving upward or downward; a diaphragm holder fixed to a lower end portion of the stem; a holder adapter disposed radially outside the diaphragm holder and fixed to the body, and configured to hold an outer peripheral edge portion of the diaphragm; a piston configured to move upward and downward integrally with the stem; and drive means configured to move the piston upward and downward,

the diaphragm holder has a first flange portion at an end portion on the diaphragm side, a second flange portion having a smaller diameter than the first flange portion on the stem side in continuation with the first flange portion, and an upper surface of the second flange portion is in contact with the lower end surface of the stem, wherein a gap between an upper surface of an outer peripheral edge portion of the diaphragm holder and a lower surface of an inner peripheral edge portion of the holder adapter is set as a first gap, and an upward movable amount of the diaphragm holder is set by the first gap,

wherein a second gap for setting a downward movable amount of the diaphragm holder is formed between a lower surface of a flange portion provided at the lower end portion of the stem and the upper surface of the holder adapter,

wherein the first gap and the second gap are set by adjusting the axial height of the first flange portion and the second flange portion of the diaphragm holder.

[Claim 2]

The fluid controller according to Claim 1, wherein the stem and the piston are integrally formed by being engaged with each other, so that the upward movable amount of the stem set by adjusting an amount of engagement between the stem and the piston may be set to be smaller than the upward movable amount of the stem set by the first gap.