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<選択問題解答>

【問 1】

PRESSURE REGULATOR

What is claimed is:

1. A pressure regulator comprising:

an outer casing having a dividing wall for dividing an interior of said outer casing into two chambers, said dividing wall having a fluid passage for communicating said two chambers with each other;

a diaphragm provided within one of said two chambers of said outer casing and having a lower surface for receiving fluid pressure to be regulated;

a valve member actuated by said diaphragm;

a valve seat defining a valve portion in cooperation with said valve member;

a spring located within the other of the said two chambers of said outer casing and on an upper surface side of said diaphragm for applying a force to said valve portion in a direction in which said valve portion opens;

a further valve portion provided within the other of said two chambers of the outer casing and adapted to close said fluid passage provided to said dividing wall in response to a movement of said diaphragm.

2. A pressure regulator as defined in claim 1, wherein

said outer casing has a threaded bore into which an adjusting screw is threadedly engaged to compress said spring.

【問 2】

BACKGROUND OF THE INVENTION

It is common to store an outboard motor, when not in use, in a tilted-up orientation about the tilt shaft of the bracket device. With small outboard motors, the tilting has usually been performed manually. However, even a small outboard motor weighs considerably and it is sometimes difficult to tilt it up manually. To this end, outboard motors equipped with assisting devices such as a gas-assist cylinder have been suggested to provide assistance to manual tilting. While the tilting operation is facilitated by the provision of these assisting devices, it leads to an increase in the total weight of the outboard motor and its cost.

The present invention was made in light of the state of the art described above. The purpose of the invention is to provide an outboard motor that allows easy manual tilting of the outboard motor without any assisting devices.

【問 3】

DETAILED DESCRIPTION OF THE INVENTION

Fig. 1 shows a linear rolling guide 1 in accordance with the first embodiment of the present invention. The linear rolling guide 1 has a guide rail 4 that functions as a path-defining member, and a movable block 2 that functions as a movable member. The movable block 2 is supported to the guide rail 4 through a number of balls 3. As shown in Fig. 2, the movable block 2 includes a movable block body 6, and end plates 7, 8 provided at the opposite ends of the movable block body 6. The movable block body 6 has a cross-sectional shape that is recessed downwardly, and has a horizontal portion 6a facing the upper surface of the guide rail 4, and a pair of leg portions 6b that depend downwardly from either side edge of the horizontal portion 6a and that faces the respective one of the right and left side surfaces 4a of the guide rail 4. A pair of loaded ball rolling grooves is formed on the inward surfaces of the leg portions 6b with each groove 9 corresponding to the respective one of the ball rolling grooves 5 provided to the right and left side surfaces 4a of the guide rail 4. Further, a straight guide portion 10 is defined along each of the loaded ball rolling groove 9 of the movable block body 6.