【CLAIMS】

【Claim 1】

A canister type thruster mounted in a trunk of a ship, comprising

at least one guide module configured to guide upward/downward movement of a canister,

wherein the guide module includes:

a lower guide unit that is mounted at a lower portion of the trunk facing a rack installed on an outer surface of the canister in parallel with a lifting direction and guides the rack in a downward direction of the trunk when the canister moves down;

an upper guide unit that is mounted at an upper portion of the trunk facing the rack and guides the rack in an upward direction of the trunk when the canister moves up; and

a lift unit that is located opposite to the rack between the lower and upper guide units and moves the rack in the upward or downward direction.

~~【Claim 2】~~

~~The canister type thruster according to claim 1,~~ wherein each of the lower and upper guide units includes:

a guide bracket that is mounted on the trunk;

a lateral guide pad that is provided for the guide bracket to face a lateral portion of the rack; and

toothed-part guide pads that are provided for the guide bracket in pair so as to face toothed parts of the rack.

【Claim 3~~2~~】

The canister type thruster according to claim 1, wherein the lift unit includes:

a lift guide pad that is located opposite to a lateral portion of the rack; and

pinions that are located opposite to toothed parts of the rack and are engaged with the toothed parts of the rack.

【Claim 43】

The canister type thruster according to claim 1, wherein the rack is guided by the lower and upper guide units when the canister moves down, and is guided by the upper and lower guide units when the canister moves up.

【Claim 54】

The canister type thruster according to claim 1, wherein a maximum distance (A) between the upper guide unit and the lower guide unit is at least shorter than a maximum length (B) of the rack.

【Claim 65】

The canister type thruster according to claim 1, further comprising an intermediate guide unit that is disposed on the same line between the lift unit and the lower guide unit.

【Claim 76】

The canister type thruster according to claim 21, wherein the guide bracket includes:

support frames that are fixed to an inner surface of the trunk;

a front frame which is mounted on the support frames to face the lateral portion of the rack and to which the lateral guide pad is attached; and

lateral frames which vertically protrude from opposite sides of the support frames so as to face the toothed parts of the rack in pair and to which the toothed-part guide pads are attached.

【Claim 87】

The canister type thruster according to claim 21, wherein upper and lower portions of the lateral guide pad and the toothed-part guide pads include tapered surfaces that guide initial entry of the rack.

【Claim 98】

The canister type thruster according to claim 76, wherein a leveling pad for adjusting a minute tolerance is selectively interposed between the lateral guide pad and the front frame or

between each of the toothed-part guide pads and each of the lateral frames.

【Claim ~~09~~】

The canister type thruster according to claim ~~8~~7, wherein each of the tapered surfaces includes a first tapered surface that is obliquely formed at an entry which the rack enters, and a second tapered surface that is obliquely formed to extend from the first tapered surface so as to have a smaller gradient than the first tapered surface.

【Claim ~~11~~10】

A canister type thruster mounted in a trunk of a ship, comprising

at least one guide module configured to guide upward/downward movement of a canister,

wherein the guide module includes:

a guide unit that is installed on an inner surface of the trunk to support a rack installed on an outer surface of the canister in parallel with a lifting direction and to guide upward/downward movement of the canister;

sliding pads that relieve an impact or a friction applied to the guide unit; and

support steps that are provided between the guide unit and the sliding pad to support the sliding pads.

【Claim ~~12~~11】

The canister type thruster according to claim ~~11~~10, wherein the guide unit includes:

a guide bracket that is fixed to the inner surface of the trunk;

toothed-part guides that are provided for the guide bracket and come into contact with toothed parts of the rack to guide upward/downward movement of the rack; and

a lateral guide that is provided for the guide bracket and comes into contact with a lateral portion of the rack to guide the upward/downward movement of the rack.

【Claim ~~13~~12】

The canister type thruster according to claim ~~12~~11, wherein:

the rack has the toothed parts symmetrically formed at opposite sides thereof in a width direction thereof; and

the toothed-part guides are symmetrically formed at opposite sides of the support bracket so as to guide the toothed parts of the rack.

【Claim ~~14~~13】

The canister type thruster according to claim ~~12~~11 or ~~13~~12, wherein the sliding pads are provided at portions at which the toothed-part guides and the lateral guide come into contact with the rack to guide the upward/downward movement of the rack so as to be able to be decoupled and coupled.

【Claim ~~15~~14】

The canister type thruster according to claim ~~14~~13, wherein the support steps are provided in the front of each of the toothed-part guides or the lateral guide so as to protrude from each of the toothed-part guides or the lateral guide to support the sliding pad.