

MOVABLE SHELF DEVICE

ABSTRACT

5 Provided is a movable shelf device that includes a plurality of shelves
that are movable relative to each other, and appropriately detects an obstacle
that is present in an inter-shelf passage formed between a shelf and a shelf on
a steady basis. A movable shelf device (10) includes a first shelf and a second
shelf that are opposed to each other in a first direction (M) parallel to a
10 horizontal surface, and has a configuration in which the first shelf and the
second shelf are provided so as to be movable relative to each other in the first
direction (M), and an inter-shelf passage (E) is formed between the first shelf
and the second shelf in a state in which the first shelf and the second shelf are
spaced away from each other. The movable shelf device (10) includes an
15 obstacle sensor configured to detect, when the inter-shelf passage (E) is formed,
an obstacle (B) that is present in the inter-shelf passage (E), and a range sensor
configured to detect an inter-shelf distance (D), which is the distance between
the first shelf and the second shelf that are opposed to each other in the first
direction M. The obstacle sensor and the range sensor are constituted by a
20 single active sensor (5) configured to detect a subject by transmitting light and
receiving reflected light from the subject, and a detection range (S) of the
obstacle sensor is dynamically and variably set in accordance with the inter-
shelf distance (D).

25 [Figure 4]