Citation List

Patent Literature

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SUMMARY

According to an aspect of the present disclosure, an autonomous cleaner comprising an auxiliary brush that is attached to a body constituting the autonomous cleaner so as to be capable of collecting dust to a suction port provided in a bottom surface of the body, the auxiliary brush comprising:

a short bristle bundle that is a bundle of short bristles; and a long bristle bundle that is a bundle of bristles longer than the short bristle bundle, the autonomous cleaner comprising:

a body;

an obstacle detection sensor that detects a forward distance that is a distance between a front face of the body and an object; and

a distance measuring sensor that detects a sideway distance that is a distance between a side face of the body and an object,

wherein the autonomous cleaner rotates at a first position where the forward distance detected by the obstacle detection sensor is a first distance and the sideway distance detected by the distance measuring sensor is a second distance and then retreats from the first position to a second position where the forward distance is a third distance longer than the first distance and the sideway distance is a fourth distance longer than the second distance in order to move from the first position to the second position after the rotation.

An auxiliary brush of an autonomous cleaner according to an exemplary embodiment of the present disclosure is attached to a body constituting the autonomous cleaner so as to be capable of collecting dust to a suction port

provided in a bottom surface of the body. The auxiliary brush includes a short bristle bundle that is a bundle of short bristles and a long bristle bundle that is a bundle of bristles longer than the short bristle bundle.

This makes it possible to provide an autonomous cleaner including an auxiliary brush that can efficiently collect dust around a body.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a plan view of an autonomous cleaner according to the present exemplary embodiment.

FIG. 2 is a bottom view of the autonomous cleaner of FIG. 1.

FIG. 3 is a perspective view of a cleaner system including the autonomous cleaner of FIG. 1.

FIG. 4 is a bottom view of a specific example of the autonomous cleaner of FIG. 1.

FIG. 5 is a cross-sectional view taken along line 5-5 of FIG. 3.

FIG. 6 is a perspective view of a specific example of a trash can unit of FIG. 1.

FIG. 7 is a perspective view of the trash can unit of FIG. 6 whose lid is closed.

CLAIMS

1. An autonomous cleaner comprising an auxiliary brush that is attached to a body constituting the autonomous cleaner so as to be capable of collecting dust to a suction port provided in a bottom surface of the body, the auxiliary brush comprising:

a short bristle bundle that is a bundle of short bristles; and

a long bristle bundle that is a bundle of bristles longer than the short bristle bundle, the autonomous cleaner comprising:

a body;

an obstacle detection sensor that detects a forward distance that is a distance between a front face of the body and an object; and

a distance measuring sensor that detects a sideway distance that is a distance between a side face of the body and an object,

wherein the autonomous cleaner rotates at a first position where the forward distance detected by the obstacle detection sensor is a first distance and the sideway distance detected by the distance measuring sensor is a second distance and then retreats from the first position to a second position where the forward distance is a third distance longer than the first distance and the sideway distance is a fourth distance longer than the second distance in order to move from the first position to the second position after the rotation.

2. The autonomous cleaner according to claim 1, further comprising a dust sensor that detects an amount of dust flowing from a suction port,

wherein the autonomous cleaner travels so as to draw a circle in a case where a determined amount of dust is equal to or larger than a predetermined amount based on a detection signal obtained from the dust sensor.

3. The autonomous cleaner according to claim 1 or 2, further comprising:

a drive wheel for travelling of the body; and

a first rotation speed sensor that detects a rotation speed of the drive wheel,

wherein a method for controlling the drive wheel is changed so as to overcome a travelling inhibiting factor that inhibits travelling of the autonomous cleaner upon detection of the travelling inhibiting factor.