CLAIMS

What is claimed is:

1. A mopping apparatus, comprising a first turntable, a second turntable, and a mopping member; wherein:

a side edge of the first turntable and a side edge of the second turntable are configured to be spaced apart;

the mopping member comprises a first mop and a second mop;

the first mop is provided with a first rotating center, and the second mop is provided with a second rotating center; a distance between the first rotating center and the second rotating center is a rotating center distance;

the first mop comprises a first long-diameter edge and a first short-diameter edge; a point where the first long-diameter edge and the first short-diameter edge are connected is a first endpoint; a distance from any point on the first long-diameter edge to the first rotating center is greater than half of the rotating center distance, and a distance from any point on the first short-diameter edge to the first rotating center is less than half of the rotating center distance; a distance from the first endpoint to the first rotating center is equal to half of the rotating center distance;

the second mop comprises a second long-diameter edge and a second short-diameter edge; a point where the second long-diameter edge and the second short-diameter edge are connected is a second endpoint; a distance from any point on the second long-diameter edge to the second rotating center is greater than half of the rotating center distance, and a distance from any point on the second short-diameter edge to the second rotating center is less than half of the rotating center distance; a distance from the second endpoint to the second rotating center is equal to half of the rotating center distance;

in a case that the first mop and the second mop are rotated, on a connection line between the first rotating center and the second rotating center, a gap between the first mop and the second mop is formed between the first long-diameter edge and the

second short-diameter edge, or formed between the second long-diameter edge and the first short-diameter edge;

the first mop is fixedly connected to a bottom of the first turntable, and is configured to rotate with the first turntable; the second mop is fixedly connected to a bottom of the second turntable, and is configured to rotate with the second turntable; a rotation axis of the first turntable is configured to pass through the first rotating center, and a rotation axis of the second turntable is configured to pass through the second rotating center;

a side contour of the first turntable is configured to fall within a side contour of the first mop, and the side contour of the first turntable and the side contour of the first mop are of the same shape;

a side contour of the second turntable is configured to fall within a side contour of the second mop, and the side contour of the second turntable and the side contour of the second mop are of the same shape; and

along different rays radiating outward from the first rotating center, a distance between the side contour of the first turntable and the side contour of the first mop is equal, and along different rays radiating from the second rotating center, a distance between the side contour of the second turntable and the side contour of the second mop is equal.

2. The mopping apparatus according to claim 1, wherein:

a side contour of the first mop and a side contour of the second mop are of a same shape;

the first long-diameter edge is one of a plurality of same first long-diameter edges of the first mop, and the first short-diameter edge is one of a plurality of same first short-diameter edges of the first mop; the plurality of first long-diameter edges and the plurality of first short-diameter edges are alternately connected; a distance from a point on the first long-diameter edge to the first rotating center gradually increases as the point moves from either of two endpoints to a midpoint of the first long-diameter edge, and a distance from a point on the first short-diameter edge to the

first rotating center gradually decreases as the point moves from either of the two endpoints to a midpoint of the first short-diameter edge; and

the second long-diameter edge is one of a plurality of same second long-diameter edges of the second mop, and the second short-diameter edge is one of a plurality of same second short-diameter edges of the second mop; the plurality of second long-diameter edges and the plurality of second short-diameter edges are alternately connected; a distance from a point on the second long-diameter edge to the second rotating center gradually increases as the point moves from either of two endpoints to a midpoint of the second long-diameter edge, and a distance from a point on the second short-diameter edge to the second rotating center gradually decreases as the point moves from either of the two endpoints to a midpoint of the second short-diameter edge.

3. The mopping apparatus according to claim 1 or 2, wherein:

the first long-diameter edge is an arc-shaped edge convex about the first rotating center, and the first short-diameter edge is a straight edge or an arc-shaped edge convex about the first rotating center;

the second long-diameter edge is an arc-shaped edge convex about the second rotating center, and the second short-diameter edge is a straight edge or an arc-shaped edge convex about the second rotating center.

4. A cleaning robot, comprising a mopping drive mechanism and the mopping apparatus according to claim 1..

5. The cleaning robot according to claim 4, wherein:

the mopping drive mechanism comprises a first output shaft and a second output shaft;

a lower end of the first output shaft is connected to a position where is a rotating center of the first turntable, and a lower end of the second output shaft is connected to a position where is a rotating center position of the second turntable;

an axis of the first output shaft is configured to coincide with the rotation axis of the first turntable, and an axis of the second output shaft is configured to coincide with the rotation axis of the second turntable.

6. The cleaning robot according to claim 5, wherein:

the first turntable is provided with a first shaft sleeve adapted for the first output shaft; the first output shaft is detachably inserted in the first shaft sleeve; an outer peripheral surface of the first output shaft and an inner wall surface of the first shaft sleeve are configured to limit each other, to limit a relative rotation of the first output shaft and the first shaft sleeve; and

the second turntable is provided with a second shaft sleeve adapted for the second output shaft; the second output shaft is detachably inserted in the second shaft sleeve; an outer peripheral surface of the second output shaft and an inner wall surface of the second shaft sleeve are configured to limit each other, to limit a relative rotation of the second output shaft and the second shaft sleeve.

7. The cleaning robot according to claim 6, wherein:

there are a plurality of first inserting positions for the first output shaft and the first shaft sleeve, to allow the first turntable and the first mop to have a plurality of first installation positions with respect to the chassis of the cleaning robot, and there are a plurality of second inserting positions for the second output shaft and the second shaft sleeve, to allow the second turntable and the second mop to have a plurality of second installation positions with respect to the chassis of the cleaning robot, in a case that the first output shaft is inserted into the first shaft sleeve at any one of the plurality of inserting positions, and the second output shaft is inserted into the second shaft sleeve at any one of the plurality of inserting positions, the first mop and the second mop is allowed to be at a target relative installation position;

in a case that the first mop and the second mop are at the target relative installation position, on the connection line between the first rotating center and the second rotating center, the gap between the first mop and the second mop is formed

between the first long-diameter edge and the second short-diameter edge, or formed between the second long-diameter edge and the first short-diameter edge.

8. The cleaning robot according to claim 7, wherein:

the first mop after a rotation is configured to coincide in shape with itself before the rotation in a case that the first mop rotates through a preset angle;

the second mop after a rotation is configured to coincide in shape with itself before the rotation in a case that the second mop rotates through a preset angle;

there are a plurality of first inserting positions for the first output shaft and the first shaft sleeve, and a rotation angle between adjacent first inserting positions is N times the preset angle; and

there are a plurality of second inserting positions for the second output shaft and the second shaft sleeve, and a rotation angle between adjacent second inserting positions is N times the preset angle;

wherein N is a positive integer.

9. A control method for a cleaning robot, applied to the cleaning robot according to claim 4, comprising:

driving, by the mopping drive mechanism, the first turntable and the first mop to rotate with respect to the chassis of the cleaning robot around the rotation axis of the first turntable, and driving the second turntable and the second mop to rotate with respect to the chassis of the cleaning robot around the rotation axis of the second turntable;

wherein, in a case that the mopping drive mechanism drives the first turntable and the second turntable to rotate, the first turntable and the second turntable are controlled to rotate at opposite rotating directions and at a same rotating speed, and during the rotation, the gap between the first mop and the second mop is always formed between a long-diameter edge and a short-diameter edge;

the mopping drive mechanism comprises a first output shaft and a second output shaft;

the first turntable is provided with a first shaft sleeve adapted for the first output shaft; the first output shaft is detachably inserted in the first shaft sleeve, an outer peripheral surface of the first output shaft and an inner wall surface of the first shaft sleeve are configured to limit each other, to limit a relative rotation of the first output shaft and the first shaft sleeve;

the second turntable is provided with a second shaft sleeve adapted for the second output shaft; the second output shaft is detachably inserted in the second shaft sleeve, an outer peripheral surface of the second output shaft and an inner wall surface of the second shaft sleeve are configured to limit each other, to limit a relative rotation of the second output shaft and the second shaft sleeve; and

before the operation of in a case that the mopping drive mechanism drives the first turntable and the second turntable to rotate, the control method further comprises:

there being a plurality of first inserting positions for the first output shaft and the first shaft sleeve, and there being a plurality of second inserting positions for the second output shaft and the second shaft sleeve;

installing the first mop at any one of the plurality of first inserting positions, and installing the second mop at any one of the plurality of second inserting positions, so that on the connection line between the first rotating center and the second rotating center, the gap between the first mop and the second mop is formed between the first long-diameter edge and the second short-diameter edge, or formed between the second long-diameter edge and the first short-diameter edge.