What is claimed is

1. An item sorting system, comprising:

a supply end, which is configured to provide at least one to-be-sorted item, wherein the supply end forms a first area;

at least one moving transport apparatus, which is configured to receive the to-be-sorted item and deliver the received to-be-sorted item, wherein the moving transport apparatus transports the item within a second area; and

at least one item receiving apparatus, which is configured to receive in a third area the to-be-sorted item delivered by the moving transport apparatus, wherein the second area and the third area are arranged in order without overlapping with each other,

wherein a scheduling area is located between the second area and the third area, and the scheduling area partially or totally surrounds the third area, and

wherein the at least one moving transport apparatus is further configured to deliver the received to-be-sorted item to the item receiving apparatus successively through the scheduling area and then leave in turn.

2. The item sorting system according to claim 1, wherein a bottom of the supply end and a bottom of the moving transport apparatus are on a same plane.

3. The item sorting system according to claim 1, wherein the second area is an annular area, and the first area is located in an inner annular area of the second area.

4. The item sorting system according to claim 3, wherein, the third area is an annular area, and the second area is located in an inner annular area of the third area.

5. The item sorting system according to claim 3, wherein the third area comprises a plurality of independent areas, and the plurality of independent areas are arranged in order and dispersedly at an edge of an outer annular area of the second area.

6. The item sorting system according to claim 1, further comprising:

a delivery information acquisition apparatus, which is configured to acquire item information provided by the supply end.

7. The item sorting system according to claim 6, further comprising:

a control system, which respectively communicates with the delivery information acquisition apparatus and the moving transport apparatus, and which is configured to transmit the item information acquired by the delivery information acquisition apparatus to the moving transport apparatus.

8. The item sorting system according to claim 7, wherein,

when the delivery information acquisition apparatus is incapable of reading the item information normally, the control system controls the moving transport apparatus to deliver an item corresponding to the item information failing to be read normally to a specified position.

9. The item sorting system according to claim 7, wherein,

when the delivery information acquisition apparatus is incapable of reading the item information normally, the control system controls the supply end to retrieve an item corresponding to the item information failing to be read normally.

10. The item sorting system according to claim 7, wherein,

when the delivery information acquisition apparatus is incapable of reading the item information normally, the control system controls the delivery information acquisition apparatus or the moving transport apparatus to prompt information.

11. The item sorting system according to claim 7, wherein,

the control system acquires an operating state of the moving transport apparatus,

when the moving transport apparatus has an operational fault, the control system controls the moving transport apparatus to move to a fourth area.

12. The item sorting system according to claim 7, wherein,

the control system acquires a number of the at least one to-be-sorted item on the supply end, and determines a number of the at least one moving transport apparatus required by the supply end based on the number of the at least one to-be-sorted item.

13. The item sorting system according to claim 7, wherein,

the control system acquires an operating state of each moving transport apparatus in operation, when the number of the moving transport apparatus having an operational fault exceeds a preset threshold, the control system controls the item sorting system to enter an emergency stop state.

14. The item sorting system according to claim 7, wherein,

the control system acquires power usage information of the moving transport apparatus,

when remaining power of the moving transport apparatus meets a preset condition, the control system controls the moving transport apparatus to move to a fifth area for charging.

15. The item sorting system according to claim 7, wherein,

the control system acquires a number of the to-be-sorted item on the supply end, and controls

rearrangement of the item receiving apparatus in the third area based on the number of the to-be-sorted item.

16. The item sorting system according to claim 1, wherein,

the moving transport apparatus is capable of identifying automatically delivery information of the to-be-sorted item, and delivering an item allocated to the moving transport apparatus to the corresponding item receiving apparatus based on the delivery information.

17. The item sorting system according to claim 1, wherein,

the moving transport apparatus is capable of acquiring an operating state of the moving transport apparatus, and moving to a sixth area when the moving transport apparatus is in a fault state.

18. The item sorting system according to claim 1, wherein,

the moving transport apparatus monitors a power usage state of the moving transport monitor,

when remaining power of the moving transport apparatus meets a preset condition, the moving transport apparatus moves to a seventh area for charging.

19. An item sorting method, comprising:

distributing, by a supply end located in a first area, at least one to-be-sorted item;

receiving, by a moving transport apparatus, the to-be-sorted item from the supply end, delivering the received to-be-sorted item through a specific transport path, wherein the moving transport apparatus transports the item within a second area; and

receiving, by an item receiving apparatus, in a third area the to-be-sorted item delivered by the moving transport apparatus, wherein a bottom of the item receiving apparatus and a bottom of the moving transport apparatus are on a same plane, the first area, the second area and the third area are arranged in order without overlapping with each other,

wherein a scheduling area is located between the second area and the third area, and the scheduling area partially or totally surrounds the third area, and

wherein the moving transport apparatus is further configured to deliver the received to-be-sorted item to the item receiving apparatus successively through the scheduling area and then leave in turn.