CLAIMS

1. A separation/collection device which is provided in a paper sheet conveyance device for generating an airstream in a conveyance duct and for conveying a paper sheet inserted into the conveyance duct by being pushed from behind by a conveyance subsidiary body moving in the conveyance duct by receiving the airstream, and which separates and collects the conveyance subsidiary body and the paper sheet at an ending portion of a conveyance path, the separation/collection device comprising:

a separation unit to pass the paper sheet pushed and conveyed by the conveyance subsidiary body, in a downstream direction, and to stop the conveyance subsidiary body by contacting the conveyance subsidiary body with the separation unit;

a tubular path part to receive the paper sheet output from the separation unit;

a rib which is provided on an inner wall of the path part, which faces to one surface of the paper sheet received from the separation unit, in a predetermined downstream area from a position near the separation unit, the rib projecting toward the surface of the paper sheet;

a circular conveyance belt provided on a downstream side of the rib and bridged in an extending direction of the path part along the inner wall of the path part, on which the rib is provided;

an actuating unit to rotatably actuate the conveyance belt so as to move a first half of the conveyance belt in the downstream direction, the first half facing to the surface of the paper sheet; and

a sucking port to be opened behind the first half of the conveyance belt and to be used for sucking an air in the path part from outside,

wherein the paper sheet received from the separation unit clings to the first half of the conveyance belt by sucking the air when the paper sheet passes through the predetermined downstream area in which the rib is provided, and the paper sheet is conveyed by the conveyance belt and is discharged from an ending portion of the path part.

2. The separation/collection device of claim 1, wherein in the rib, a mound is formed near an end portion of the rib on the separation unit side.

3. The separation/collection device of claim 1~~ or 2~~, wherein the conveyance belt comprises a plurality of conveyance belts which are provided so as to be apart from each other, and

the rib comprises ribs which are provided on positions corresponding to the plurality of conveyance belts, respectively.

4. The separation/collection device of ~~any one of~~ claim~~s~~ 1~~ to 3~~, wherein a second rib is provided on an inner wall of the path part, which is opposed to the inner wall on which the rib is provided, so as to oppose to the rib and to extend in the extending direction of the path part, and

the paper sheet received from the separation unit passes between the rib and the second rib.

5. The separation/collection device of any one of claims 1 to 4, further comprising a pair of discharge

rollers which sandwich the paper sheet conveyed by the conveyance belt at the ending portion of the path part, and which are rotatably actuated in a direction of sending the paper sheet,

wherein the pair of discharge rollers are supported so as to change an interval between shafts of the discharge rollers, and are pressed by an elastic member so as to closely contact with each other.

6. A paper sheet conveyance device for conveying a paper sheet by an airstream generated in a tubular conveyance path, the paper sheet conveyance device comprising:

a frame member to support the conveyance path and be provided along an installation route of the conveyance path;

pedestal units attached to the frame member so as to slide along a longitudinal direction of the frame member; and

a plurality of paper sheet capturing devices to send out the paper sheet to be conveyed into the conveyance path, and be provided in the conveyance path,

wherein each of the paper sheet capturing devices comprises a path part which forms a part of the conveyance path,

the conveyance path is formed by joining a plurality of conveyance ducts and the path parts of the paper sheet capturing devices, and

the pedestal unit is provided for each of the paper sheet capturing devices and holds each of the paper sheet capturing devices.

7. The paper sheet conveyance device of claim 6, wherein the paper sheet capturing device is used for conveying bills discharged from a plurality of play media lending devices provided in a game machine unit facility, by capturing the bills in the conveyance path extending in a longitudinal direction of the game machine unit facility,

the frame member is attached and fixed in the game machine unit facility along the longitudinal direction of the game machine unit facility,

the plurality of paper sheet capturing devices are provided on positions corresponding to the plurality of play media lending devices, and

the pedestal unit is slid to a position corresponding to the paper sheet capturing device to hold the paper sheet capturing device.

8. The paper sheet conveyance device of claim 6~~—or 7~~, wherein the conveyance path comprises a first half path; a turning portion which turns at an end edge portion of the first half path; and a second half path extending along the first half path above the first half path after the conveyance path is turned at the turning portion,

the first half path is formed by the conveyance duct,

the second half path is formed by joining the path parts of the paper sheet capturing devices and the conveyance ducts,

the frame member is provided between the first half path and the second half path,

the pedestal unit is provided on an upper surface of the frame member to hold the paper sheet capturing device from below, and

a hook member is hung from the frame member, and the first half path is held by the hook member under the frame member.

9. The paper sheet conveyance device of ~~any one of~~ claim~~s~~ 6~~ to 8~~, wherein in the paper sheet capturing device, a side surface portion is openable so as to remove the jammed paper sheet, and

the pedestal unit holds only a lower portion of the paper sheet capturing device so as not to prevent the side surface portion from being opened.

10. The paper sheet conveyance device of claim 7, wherein the frame member and the paper sheet capturing device are held by a holding member attached to a rear surface portion of the play media lending device so as to adjust a distance from the rear surface portion.

11. The paper sheet conveyance device of any one of claims 6 to 10, wherein the paper sheet is conveyed by pushing a rear edge of the paper sheet by a conveyance subsidiary body which moves in the conveyance path by receiving the airstream.

12. A paper sheet conveyance device for generating an airstream in a conveyance duct and for conveying a paper sheet inserted into the conveyance duct by being pushed from behind by a conveyance subsidiary body moving in the conveyance duct by receiving the airstream, the paper sheet conveyance device comprising:

an air volume adjustment unit to adjust a strength of the airstream according to a position of the conveyance subsidiary body moving in the conveyance path.

13. The paper sheet conveyance device of claim 12, wherein the air volume adjustment unit controls the airstream which flows when the conveyance subsidiary body moves alone since the conveyance subsidiary body is sent out in the conveyance duct until the conveyance subsidiary body reaches the paper sheet, so as to be weaker than the airstream which flows when the conveyance subsidiary body pushes and moves the paper sheet from behind.

14. The paper sheet conveyance device of claim 12~~or 13~~, further comprises a separation/collection device for separating and collecting the conveyance subsidiary body and the paper sheet at an ending portion of the conveyance duct, or the separation/collection device of any one of claims 1 to 5,

wherein after the conveyance subsidiary body arrives at an position before the separation/collection device by a predetermined distance, the air volume adjustment unit controls the airstream so as to be weaker than before.

15. The paper sheet conveyance device of claim 14, wherein the separation/collection device comprises:

a separation unit to pass the paper sheet pushed and conveyed by the conveyance subsidiary body, in a downstream direction, and to stop the conveyance subsidiary body by contacting the conveyance subsidiary body with the separation unit;

a tubular path part to receive the paper sheet output from the separation unit;

a circular conveyance belt bridged in an extending direction of the path part along an inner wall of the path

part, which faces to one surface of the paper sheet received from the separation unit;

an actuating unit to rotatably actuate the conveyance belt so as to move a first half of the conveyance belt in the downstream direction, the first half facing to the surface of the paper sheet; and

a sucking port to be opened behind the first half of the conveyance belt and to be used for sucking an air in the path part from outside,

wherein the paper sheet received from the separation unit is conveyed while the paper sheet clings to the conveyance belt by sucking the air, and is discharged from an ending portion of the path part,

an air blower for generating the airstream sucks the air which is fed into an upstream side of the conveyance duct, via the sucking port,

after the conveyance subsidiary body arrives at the separation unit, the air volume adjustment unit controls the airstream so as to be weaker than before, and

the separation/collection device actuates the conveyance belt after a predetermined time elapses since the conveyance subsidiary body arrives at the separation unit.

16. The paper sheet conveyance device of claim 15, further comprising: a conveyance subsidiary body insertion device to send out the conveyance subsidiary body which stands by in a standby unit, into the conveyance duct,

wherein the separation/collection device is arranged above the conveyance subsidiary body insertion device, and is configured to transfer the conveyance subsidiary body collected by the separation unit, to the standby unit of the conveyance subsidiary body insertion device by dropping

the conveyance subsidiary body downwardly after the conveyance subsidiary body is withdrawn toward a side of the conveyance duct, and

the separation/collection device carries out an operation for transferring the conveyance subsidiary body collected by the separation unit, to the standby unit after the air volume adjustment unit stops the airstream.