CLAIMS

1. A conveyor apparatus comprising:

an endless conveyor belt wound around a plurality of outgoing path side guide pulleys and a plurality of returning path side guide pulleys in turn along a helical conveyance path extending in a vertical direction, in a bent state where the endless conveyor belt is folded in two in a width direction, in such a manner that an upper edge portion of the endless conveyor belt is supported by the plurality of outgoing path side guide pulleys and the plurality of returning path side guide pulleys, and, the endless conveyor belt being folded back at turning positions of an upper side and a lower side of the conveyance path and being in an expanded state where the endless conveyor belt is expanded in the width direction in a vicinity of each of the turning positions, and the endless conveyor belt circulating endlessly by driving the drive motor; and

a plurality of conveyor belt support mechanisms configured to support the upper edge portion of the endless conveyor belt in the bent state where the endless conveyor belt is folded in two in the width direction,

wherein, the upper edge portion of the endless conveyor belt in the bent state where the endless conveyor belt is folded in two in the width direction include: the one end of the endless conveyor belt disposed at an upper side; and the another end portion of the endless conveyor belt having an inclined lower surface, the another end portion being vertically arranged at a lower side with respect to the one end, and

each of the plurality of conveyor belt support mechanisms includes:

a roller support plate;

an outer side support roller attached to the roller support plate; and

an inner side support roller attached to a position at an inner side with respect to the outer side support roller of the roller support plate, and

the outer side support roller comes in contact with an outer surface of the one end of the endless conveyor belt and the inner side support roller comes in contact with the inclined lower surface of the another end of endless conveyor belt such that only the outer side support roller and the inner side support roller sandwich and support, from outside and inside, the upper edge portion of the endless conveyor belt in the bent state where the endless conveyor belt is folded in two in the width direction.