proximate to and distal from the supply and receiving device, respectively. The transfer device has a transfer mechanism which is operatively movable between a pick-up position that is adjacent to the pick-up part and the working position and which is configured to pick up the adhering components at the pick-up position and to transfer the adhering components to the working position so as to adhere the adhering components on the base component at the working position.

According to the disclosure, a conveying method of a component adhering apparatus includes providing a base component, and carrying the base component by a conveying device in a reciprocating movement between a transporting position and a working position; providing a plurality of adhering components, and feeding the adhering components by a plurality of feeding devices to a pick-up part of each of the feeding devices; and picking up the adhering component from the pick-up part by a transfer mechanism of a transfer device, transferring the adhering component to the working position, and adhering the adhering component on the base component at the working position.

According to the disclosure, a conveying method of a component adhering apparatus includes a step of loading a base component pressed from a supply and receiving device on a switching rail of a displaceable bracket; a step of carrying the base component by a carrier unit at a

against the rollers 4121 by means of the biasing action of the biasing members 415. The supply of negative-pressure air is stopped to permit release of the disk carrier (A) with the adhering components (L) adhered thereon from the worktable 413. The disk carrier (A) is received in the corresponding cartridge 21.

In other words, a conveying method of a component adhering apparatus according to the disclosure includes:

providing a base component (A3), and carrying the base component (A3) by the conveying device 5 in a reciprocating movement between a transporting position and a working position;

providing a plurality of adhering components (L), and feeding the adhering components (L) by two feeding devices 6 to the pick-up part 61 of each of the feeding devices 6; and

picking up the adhering component (L) from the pick-up part 61 by the transfer mechanism 72 of the transfer device 7, transferring the adhering component (L) to the working position, and adhering the adhering component (L) on the base component (A3) at the working position.

As illustrated, the base component (A3) is retained in the disk carrier (A) which is transported by the carrier unit 41 of the conveying device 4, and the adhering components (L) are peelably attached to a corresponding carrier tape assembly (L1) which is fed by the feeding device 6 to the corresponding pick-up part 61. The transfer

CLAIMS:

1. A component adhering apparatus for reeling a carrier tape assembly, the carrier tape assembly having a carrier tape on which a plurality of adhering components are peelably attached and arranged in a lengthwise direction, said apparatus being disposed for adhering the adhering components on at least one base component, comprising:

a machine base;

a supply and receiving device disposed on said machine base for accommodating the at least one base component;

at least one conveying device disposed on said machine base and having a carrier unit for carrying the at least one base component, said carrier unit being operative to perform a reciprocating movement;

at least one feeding device disposed on said machine base and having at least one pick-up part for providing the adhering components, said at least one feeding device having at least one feeding module which is disposed for feeding the carrier tape assembly on which the adhering components are attached to said pick-up part and moving and receiving the carrier tape assembly from which the adhering components are peeled away from said pick-up part; and

a transfer device disposed on said machine base

and having a transfer mechanism which is operatively movable and which is configured to pick up the adhering components and to transfer the adhering components so as to adhere the adhering components on the at least one base component.

2. The component adhering apparatus as claimed in Claim 1, wherein said apparatus comprises two of said conveying devices which are disposed parallel to each other, each of said conveying devices having a slide rail which extends to define a conveying path and on which said carrier unit is slidable to perform the reciprocating movement.

3. The component adhering apparatus as claimed in Claim 2, further comprising a switching device disposed on said machine base, and having a displaceable bracket which is operatively displaceable, and which is formed with a switching rail that extends to be selectively displaced to align with said conveying path of a selected one of said conveying devices.

4. The component adhering apparatus as claimed in Claim 1, wherein said apparatus comprises two of said feeding devices which are respectively disposed at two opposite sides of a path of the reciprocating movement of said at least one conveying device.

5. The component adhering apparatus as claimed in Claim 1, wherein said at least one feeding device has a

feeding rail that is disposed on said machine base, and a reel support that is slidable on said feeding rail, said feeding module being mounted on said reel support.

6. The component adhering apparatus as claimed in Claim 1, wherein said feeding module includes:

a reel mechanism including a rolling shaft;

a guiding mechanism including a guiding seat which defines a transporting channel for passage of the carrier tape, a carrying seat which is spaced apart from said guiding seat to define a gap therebetween, and which is operatively movable relative to said guiding seat; and

a pinching mechanism including a plurality of pinch members each operative for gripping and releasing the carrier tape.

7. The component adhering apparatus as claimed in Claim 1, wherein said pick-up part is in form of a gap for passage of the adhering components.

8. The component adhering apparatus as claimed in Claim 1, wherein said apparatus is disposed for reeling two carrier tape assemblies on which the adhering components are peelably attached and arranged in a lengthwise direction, said at least one feeding device having two feeding modules, each of which defines a feeding route that terminates at said pick-up part for passage of the respective carrier

tape assembly.

9. The component adhering apparatus as claimed in Claim 8, wherein said transfer mechanism includes two transfer modules, said apparatus comprising two of said feeding devices which are disposed outboard of said transfer modules, one of said transfer modules being movable to pick up the adhering components at said pick-up parts of one of said feeding modules, to transfer the adhering components to said carrier unit so as to attach the adhering components on the base component on said carrier unit, the other one of said transfer modules being movable to pick up the adhering components at said pick-up parts of the other one of said feeding modules, and to transfer the adhering components to said carrier unit so as to adhere the adhering components on the base component on said carrier unit.

10. The component adhering apparatus as claimed in Claim 9, wherein each of said transfer modules has a transfer slider and two pick-up heads mounted on said transfer slider and spaced apart from each other for picking up the adhering components from said respective pick-up part.

11. The component adhering apparatus as claimed in Claim 1, further comprising a first inspection device disposed on said machine base and above a path of the reciprocating movement of said at least one

conveying device, said first inspection device including a first inspection unit which is operatively displaceable to be registered with said carrier unit for inspecting the base component carried by said carrier unit, and a second inspection unit which is operatively displaceable to be registered with said carrier unit for inspecting the base component carried by said carrier unit and having the adhering components adhered thereon.

12. The component adhering apparatus as claimed in Claim 1, further comprising a second inspection device disposed on said machine base and below a path of the movement of said transfer mechanism, said second inspection device being disposed for inspecting the adhering components picked up by said transfer mechanism from said pick-up part.

13. The component adhering apparatus as claimed in Claim 12, wherein said apparatus comprises two of said feeding devices which are respectively disposed at two opposite sides of a path of the reciprocating movement of said at least one conveying device, said second inspection device including a third inspection unit which is disposed between one side of the path of the reciprocating movement and one of said feeding devices, and a fourth inspection unit which is disposed between the other side of

the path of the reciprocating movement and the other one of said feeding devices.

14. A conveying method of a component adhering apparatus, wherein said component adhering apparatus is disposed for reeling a carrier tape assembly, the carrier tape assembly having a carrier tape on which a plurality of adhering components are peelably attached and arranged in a lengthwise direction, said apparatus being disposed for adhering the adhering components on at least one base component, the conveying method comprising:

providing a base component, and carrying the base component by a conveying device in a reciprocating movement;

providing a plurality of adhering components, and feeding the adhering components by a plurality of feeding devices to at least one pick-up part of each of the feeding devices, wherein each of the feeding devices has at least one feeding module which is disposed for feeding the carrier tape assembly on which the adhering components are attached to said pick-up part and moving and receiving the carrier tape assembly from which the adhering components are peeled away from said pick-up part; and

picking up the adhering component from the pick-up part by a transfer mechanism of a transfer device, transferring the adhering component, and adhering

the adhering component on the base component.

15. A conveying method of a component adhering apparatus, comprising:

a step of loading a base component pressed from a supply and receiving device on a switching rail of a displaceable bracket;

a step of carrying the base component by at least one carrier unit;

a step of transferring the base component by the carrier unit,

of providing an adhering component by a feeding device and feeding the adhering component to a pick-up part of the feeding device, of picking up the adhering component from the pick-up part by a transfer mechanism of a transfer device and transferring the adhering component, and of adhering the adhering component on the base component on the carrier unit so as to form a product assembly;

a step of returning the product assembly by the carrier unit;

a step of switching the product assembly from the carrier unit to the switching rail of the displaceable bracket; and

a step of moving and receiving the product assembly in the supply and receiving device.

16. The conveying method as claimed in Claim 15, wherein the step of carrying the base component is conducted

by a plurality of the carrier units, and the conveying method further comprises a first route changing step between the step of loading and the step of carrying, where the displaceable bracket is selectively and operatively displaced to align with a corresponding one of the carrier units.

17. The conveying method as claimed in Claim 15, further comprising a step of base component inspection between the step of carrying and the step of transferring, where the base component is carried by said carrier unit and through an underside of a first inspection unit of a first inspection device, and is inspected by the first inspection unit.

18. The conveying method as claimed in Claim 15, further comprising a step of product assembly inspection between the step of transferring and the step of returning, where the product assembly of the base component and the adhering component is carried by said carrier unit and through a second inspection unit, and is inspected by the second inspection unit.

19. The conveying method as claimed in Claim 15, further comprising a second route changing step between the step of returning and the step of switching, where the displaceable bracket is operatively displaced to a position above the product assembly on the carrier unit so as to permit switching of the product assembly to the switching rail of the

displaceable bracket.

20. The conveying method as claimed in Claim 15, wherein the feeding device is disposed to provide a feeding route of a carrier tape assembly, on which a plurality of the adhering components are peelably attached, that terminates at the pick-up part.

21. A component adhering apparatus comprising devices that perform a conveying method of a component adhering apparatus as claimed in any one of Claims 14 to 20.