

CLAIMS

[Claim 1]

A medicine packaging apparatus for packaging a medicine and making a print by using a medicine packaging sheet roll which includes an ink ribbon roll and a core tube, the apparatus comprising:

a gap making section for making a first state in which a printing head and a backup section opposed thereto are spaced from each other, and a second state in which they are further spaced than in the first state; and

a controller for controlling a winding of the ink ribbon to remove a slack in an ink ribbon in the ink ribbon roll in the second state.

[Claim 2]

The medicine packaging apparatus according to Claim 1, wherein the controller winds the ink ribbon in the second state upon determination that there is a possibility for the medicine packaging sheet roll to be replaced.

[Claim 3]

The medicine packaging apparatus according to Claim 1 or Claim 2, comprising a printing and packaging unit including a printing section which makes a print by using the ink ribbon roll and the medicine packaging sheet roll, and a packaging section which performs a medicine packaging operation; the printing and packaging unit being movable out of a main body of the apparatus toward a front side; wherein the controller performs a control of the winding of the ink ribbon upon detection that the printing and packaging unit is moved from within the apparatus main body toward the front side and determination that there is a possibility for the medicine packaging sheet roll to be replaced.

[Claim 4]

The medicine packaging apparatus according to Claim 3, wherein a storage medium is disposed in the core tube of the medicine packaging sheet roll and the

medicine packaging sheet roll is attached, and wherein the controller determines that there is a possibility for the medicine packaging sheet roll to be replaced if it becomes unable to read information from the storage medium through an information reading section which reads information from the storage medium.

[Claim 5]

The medicine packaging apparatus according to Claim 3 or Claim 4, further comprising a detection section for detection on whether or not the core tube is removed from a rotating shaft portion serving as a rotation shaft for the core tube, wherein the controller determines that there is a possibility for the medicine packaging sheet roll to be replaced upon detection via the detection section that the core tube is removed from the rotating shaft portion.

[Claim 6]

The medicine packaging apparatus according to one of Claim 3 through Claim 5, further comprising a detection section for detection of an end of the medicine packaging sheet roll, wherein the controller determines that there is a possibility for the medicine packaging sheet roll to be replaced upon detection of the end of the medicine packaging sheet roll via the detection section.

[Claim 7]

The medicine packaging apparatus according to one of Claim 3 through Claim 6, further comprising a detection section for detection of an end of the ink ribbon roll, wherein the controller determines that there is a possibility for the ink ribbon roll to be replaced upon detection of the end of the ribbon roll via the detection section.

[Claim 8]

The medicine packaging apparatus according to one of Claim 1 through Claim 7, wherein a supply core of the ink ribbon roll receives a braking operation when the controlled winding is performed to the ink ribbon whereas the braking operation is

ceased when changing from the second state to the first state.