[0015]

It is also demanded that when loading the label 3 into the portable labeling machine 1, the operator can freely select the opening state or the opening position of the platen 18 irrespective of the opening position of the bottom cover 23, to facilitate the loading operation.

[0016]

A similar problem on loading of the label 3 still remains in a portable labeling machine configured such that when attaching the label 3 having sales promotion information or advertisement information printed in advance thereon, the label 3 (label piece 13) can be peeled off and attached by only the operation of the operation lever 5 without being provided with the print unit 7.

PRIOR ART DOCUMENT

Patent Document

[0017]

Patent Literature 1: Japanese Unexamined Patent Publication, First Publication No. H10-24915

SUMMARY OF THE INVENTION

Technical Problem

[0018]

Embodiments of t~~T~~he present invention ~~was conceived in view of the above problems and it is therefore an object to~~ provide a platen opening mechanism in a portable labeling machine capable of opening a

platen at the same time by only a single operation of opening a bottom cover.

[0019]

Embodiments~~An object~~ of the present invention ~~is to~~ provide a platen opening mechanism in a portable labeling machine allowing an operator unfamiliar with use of the portable labeling machine to simply form a label insertion passage.

[0020]

Embodiments~~An object~~ of the present invention ~~is to~~ provide a platen opening mechanism in a portable labeling machine enabling the platen to be opened in response to the opening of the bottom cover to facilitate a further platen opening operation.

[0021]

Embodiments~~An object~~ of the present invention ~~is to~~ provide a platen opening mechanism in a portable labeling machine enabling the platen to be opened in response to the opening of the bottom cover so that the platen opening operation is facilitated without forcibly catching the extremity of the platen in closed state by the fingertip.

[0022]

Embodiments~~An object~~ of the present invention ~~is to~~ provide a platen opening mechanism in a portable labeling machine enabling the platen to be opened in response to the opening of the bottom cover so that the label handling and the loading operation are facilitated by optionally selecting the platen opening position irrespective of the state of the bottom cover.

Means for Solving the Problems

Solution to Problem

[0023]

In a first aspect, there is provided a platen opening mechanism in a labeling machine, comprising:

the labeling machine including a side plate, a bottom cover disposed in a pivotally openable and closable manner relative to the side plate;

a retaining portion located and configured for retaining at the side plate a label strip wound into a roll

a platen located and configured for enabling the label strip drawn out in a strip form from the retaining portion to be transferred onto a top surface of the platen;

the platen being pivotable to a closed position, and pivotable to an open position relative to the side plate that is sufficient to allow the label strip to be loaded past the platen and into the portable labeling machine, wherein

the platen and the bottom cover are located and configured for the platen to be pivoted to the open position relative to the side plate and to be pivoted open in accompaniment with opening of the bottom cover from the side plate;

a flange protruding from the platen; and

the bottom cover having a platen-opening engagement/disengagement portion that is engageable with and disengageable from the flange portion.

In a second aspect, there is provided a platen opening mechanism in a labeling machine, comprising:

the labeling machine including a side plate, a bottom cover disposed in a pivotally openable and closable manner relative to the side plate;

a retaining portion located and configured for retaining at the side plate a label strip wound into a roll

a platen located and configured for enabling the label strip drawn out in a strip form from the retaining portion to be transferred onto a top surface of the platen;

the platen being pivotable to a closed position, and pivotable to an open position relative to the side plate that is sufficient to allow the label strip to be loaded past the platen and into the portable labeling machine, wherein

the platen and the bottom cover are located and configured for the platen to be pivoted to the open position relative to the side plate and to be pivoted open in accompaniment with opening of the bottom cover from the side plate;

wherein the platen is openable and closable by being movable between a first and a second stopper on the side plate.

In a third aspect, there is provided a platen opening mechanism in a labeling machine, comprising:

the labeling machine including a side plate, a bottom cover disposed in a pivotally openable and closable manner relative to the side plate;

a retaining portion located and configured for retaining at the side plate a label strip wound into a roll

a platen located and configured for enabling the label strip drawn out in a strip form from the retaining portion to be transferred onto a top surface of the platen;

the platen being pivotable to a closed position, and pivotable to an open position relative to the side plate that is sufficient to allow the label strip to be loaded past the platen and into the portable labeling machine, wherein

the platen and the bottom cover are located and configured for the platen to be pivoted to the open position relative to the side plate and to be pivoted open in accompaniment with opening of the bottom cover from the side plate;

a guide groove formed in the side plate engaged by the platen and along which the platen is pivotable.

Embodiments of t~~T~~he present invention focus~~es~~ on that the platen is opened from the side plates in interlock with the operation of opening the bottom cover from the side plates~~, and a first invention~~. Disclosed herein is a platen opening mechanism in a portable labeling machine, comprising a side plate having a bottom cover disposed in a pivotally openable manner; a retaining portion retaining a strip form label wound into a roll at the side plate; and a platen enabling the label drawn out as a strip form from the retaining portion to be transferred onto a top surface thereof; the label being attachable to a member to be attached with, the platen being pivotable to a closed position and an open position relative to the side plate to allow the label to be loaded into the portable labeling machine, wherein the platen is put in an open state relative to the side plate in accompaniment with an operation of opening the bottom cover from the side plate.

[0024]

An embodiment of the~~A second~~ invention has a configuration in which a printing portion is disposed in the portable labeling machine of the first invention. Disclosed herein~~That is, the second invention~~ is a platen opening mechanism in a portable labeling machine, comprising a side plate having a bottom cover disposed in a pivotally openable manner; a retaining portion retaining a strip form label wound into a roll at the side plate; and a printing portion including a print unit printing the label drawn out as a strip form from the retaining portion and a platen confronting the print unit for

position arrived at by an operation of further opening the platen itself from the first open position.

[0034]

The platen and the bottom cover may be opened and closed in opposite directions to each other.

[0035]

Any internal configuration may be employed for forming the insertion passage in accompaniment with the opening of the platen.

Advantageous Effect of Invention

[0036]

The platen opening mechanism in a portable labeling machine according to an embodiment of the present invention is configured such that the platen is brought into its open state (the first open position) in interlock with the operation of opening the bottom cover relative to the side plate, so that a sufficient space is secured between the extremity of the platen and the attachment roller of the attachment portion, whereupon it is possible without dirtying the fingertip with ink to easily perform the operation of further opening the platen and to easily form the insertion passage for loading the label into the portable labeling machine.

[0037]

According to the platen opening mechanism in a portable labeling machine of an embodiment of the~~the first~~ invention in particular, the operation of loading the label into the portable labeling machine can be facilitated irrespective of the presence or absence of

the label printing operation.

[0038]

According to the platen opening mechanism in a portable labeling machine of an embodiment of the ~~second~~ invention in particular, the operation of loading the label into the portable labeling machine for the execution of the label printing can be facilitated.

BRIEF DESCRIPTION OF DRAWINGS

[0039]

[Fig. 1] Fig. 1 is a partially cut-away side view of a principal part of a portable labeling machine 30 having a platen opening mechanism 33 according to an embodiment of the present invention, with a bottom cover 23 being in an open state and a platen 18 being in an open state (a first open position).

[Fig. 2] Fig. 2 is a perspective view of the platen 18.

[Fig. 3] Fig. 3 is a sectional view taken along line X-X of Fig. 2.

[Fig. 4] Fig. 4 is a perspective view of the bottom cover 23.

[Fig. 5] Fig. 5 is a sectional view taken along line Y-Ŷ of Fig. 4.

[Fig. 6] Fig. 6 is a side view of the side plate 31 on one hand depicting an inner wall surface thereof.

[Fig. 7] Fig. 7 is a side view of a principal part depicting the closed states of the bottom cover 23 and the platen 18.

[Fig. 8] Fig. 8 is a sectional view taken along line Z-Z of Fig. 7.

[Fig. 9] Fig. 9 is a side view of a principal part depicting