found that there is still room for improvement regarding effective utilization of steam. Especially, there is a possibility that excess steam is discharged to outside through an inlet side and outlet side for the group of noodle strings in the conventional steaming machinees, and therefore, the steam is wasted.

[0007] Embodiments of the present invention provide a steaming machine that improves efficiency of a steam-boiling step and therefore realizes energy saving.

Solution to Problem

[0008] The present inventors have diligently studied, and as a result, have found that the effective utilization of the steam is realized by a multistage steaming machine configured such that: a steam chamber main body portion in which the steam is supplied to the group of noodle strings is provided with a tunnel-shaped noodle introducing portion extending in an obliquely downward direction from the steam chamber main body portion and a tunnel-shaped noodle discharging portion extending similarly; and a vertical position of an inlet side of the noodle introducing portion and a vertical position of an outlet side of the noodle discharging portion are located lower than a lower end portion of the steam chamber main body portion.

[0009] According to an aspect of the present invention, there is provided a multistage steaming machine including: 1) a steam chamber main body portion including two side portions facing each other in a first direction, one of the two side portions being a side portion of an inlet side through which a group of noodle strings is introduced, the other of the two side portions being a side portion of an outlet side through which the group of noodle strings is discharged; 2) a tunnel-type noodle introducing portion connected to an upper portion of the inlet side of the steam chamber main body portion and provided such that the group of noodle strings is carried in to the steam chamber main body portion in an obliquely upward direction; 3) a tunnel-type noodle discharging portion connected to the outlet side of the steam chamber main body portion and provided such that the group of steam-boiled noodle strings is carried out from the steam chamber main body portion in an obliquely downward direction; 4) one or a plurality of conveyors provided at multiple stages such that the group of noodle strings which has been introduced from the noodle introducing portion through the upper portion of the steam chamber main body portion into the steam chamber main body portion goes and returns plural times along the first direction in the steam chamber main body portion to be conveyed to a lower side of the steam chamber main body portion and is then discharged through the noodle discharging portion; and 5) one or a plurality of steam pipes configured to supply steam to the steam chamber main

body portion, wherein an inlet end of the noodle introducing portion and an outlet end of the noodle discharging portion are located lower than a lower end surface of the steam chamber main body portion.

[0010] Further, the present inventors have found that in the above multistage steaming machine, it is effective to provide the steam pipes at an upper portion side of the steam chamber main body portion, that is, at the conveyor of an upper stage.

[0011] In the above embodiment, the one or a plurality of steam pipes are provided at an upper portion side in the steam chamber main body portion.

Advantageous Effects of Invention

[0012] According to embodiments of the multistage steaming machine of the present invention, since the inlet end of the noodle introducing portion and the outlet end of the noodle discharging portion are located lower than the lower end surface of the steam chamber main body portion, the leakage of the steam from the steam chamber main body portion to the outside can be suppressed.

Therefore, the steam can be efficiently utilized without waste by using the multistage steaming machine according to embodiments of the present invention. On this account, the multistage steaming machine according to embodiments of the present invention can be suitably used while satisfying a request of energy saving in recent years.

Brief Description of Drawings

[0013] Fig. 1 is a cross-sectional view showing an entire configuration of a multistage steaming machine of Embodiment 1.

Fig. 2 is a cross-sectional view showing major components of the multistage steaming machine of Embodiment 1.

Fig. 3 is a cross-sectional view showing the major components of the multistage steaming machine of Embodiment 1.

Fig. 4 is a cross-sectional view showing the major components of the multistage steaming machine of Embodiment 2.

Fig. 5 is a cross-sectional view showing the major components of the multistage steaming machine of Embodiment 1.

Description of Embodiments