liquid agent to the water tub. The liquid supply device has a second cylindrical portion that is connected to the first cylindrical portion while the tank is mounted in the storage portion. The tank storage portion is configured to have a discharge port formed in a bottom portion and configured to discharge water inside the storage portion and an inclined surface formed on a side wall, the discharge port being a port through which water is discharged from the storage portion, the inclined surface being inclined downward toward the first cylindrical portion and the second cylindrical portion, wherein the tank storage portion has a first water injection port formed in a wall surface, communicating with the water channel above the inclined surface, and configured to supply the water from the first water injection port toward the inclined surface, the water flowing along the inclined surface flows toward the first cylindrical portion and the second cylindrical portion as coupling portions between the tank storage portion and the tank.

According to this configuration, tap water flowing through the water channel when water supply is performed in a washing or rinsing step flows along the inclined surface of the tank storage portion. At this time, the flowing tap water cleans the first cylindrical portion and the second cylindrical portion as coupling portions between the tank and the liquid supply device. This makes it unnecessary to periodically maintain portions around the coupling portions between the tank and the liquid supply device. In addition, this can prevent fixed substances of detergent liquid and the like from intruding a detergent supply water channel of the liquid supply device. Furthermore, this can maintain water tightness of the coupling portions between the tank and the liquid supply device. Accordingly, it is possible to stably discharge a desired amount of detergent liquid or softener liquid.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is an external perspective view of a washing machine according to an exemplary embodiment of the present invention.

FIG. 2 is a longitudinal sectional view of the washing machine according to the same exemplary embodiment.

CLAIMS

1. A washing machine comprising:

a housing;

a water tub supported inside the housing;

a tank storage portion disposed above the water tub and having a storage portion;

a tank detachably mounted in the storage portion and internally storing a liquid agent;

a liquid supply device configured to supply the liquid agent inside the tank into the water tub;

a water supply port provided in an upper portion of the housing and configured to supply water;

a water channel communicating with the water supply port and configured to inject water into the storage portion of the tank storage portion; and

a water supply valve provided in the housing and configured to openably control the water channel,

wherein the tank has a first cylindrical portion configured to discharge the liquid agent,

the liquid supply device includes a second cylindrical portion that is connected to the first cylindrical portion while the tank is mounted in the storage portion, and

the tank storage portion has a discharge port formed in a bottom portion and configured to discharge water inside the storage portion and an inclined surface formed on a side wall so as to be inclined downward toward the first cylindrical portion and the second cylindrical portion, wherein

the tank storage portion has a first water injection port formed in a wall surface, communicating with the water channel above the inclined surface, and configured to supply the water from the first water injection port toward the inclined surface,

the water flowing along the inclined surface flows toward the first cylindrical portion and the second cylindrical portion as coupling portions between the tank storage portion and the tank.

2. The washing machine according to claim 1, further comprising:

a bathwater pump configured to suck bathwater;

an auxiliary water channel causing the water supply port to communicate with the bathwater pump; and

a discharge water channel causing the bathwater pump to communicate with the first water injection port,

wherein the bathwater is caused to flow into the storage portion through the first water injection port by operating the bathwater pump when water supply is performed in a washing step or rinsing step.

3. The washing machine according to claim 2, wherein the bathwater pump is disposed at a position facing the first water injection port.

4. The washing machine according to claim 1, further comprising:

a water injection case provided in an upper portion of the tank storage portion;

a water injection channel formed in the water injection case and communicating with the water supply port; and a second water injection port formed in the water injection case and communicating the water injection channel,

wherein the water flowing through the water injection channel is injected from the second water injection port to the inclined surface of the tank storage portion.