CLAIMS

1. A product discharging device comprising:

a lower pedal that is swingably disposed in a base to move forward to and backward from a product storage passage storing input products in a vertical direction;

an upper pedal that is swingably disposed in a base to move forward to and backward from the product storage passage in an area above the lower pedal; and

a pedal link that links the lower pedal and the upper pedal,

wherein the upper pedal moves backward from the product storage passage by causing the pedal link to move downward and the lower pedal moves forward to the product storage passage to regulate downward movement of the product in a standby state, and the upper pedal moves forward to the product storage passage to come in contact with a second lowest product and the lower pedal moves backward from the product storage passage to discharge a lowest product downward by causing the pedal link to move upward, in an activated state, and

the product discharging device further comprises

an output gear that is disposed in the base to be rotatable on its axis, is linked to a drive source via a worm gear, and rotates by a driving force of the drive source transmitted via the worm gear, and

a link lever that is disposed in the base to be rotatable on its own axis, is maintained in an upward-rotated state to hold the pedal link in an upward-moved state when the link lever comes in sliding contact with a cam portion formed in the output gear, and allows the pedal link to move downward when the sliding contact with the cam portion is released.

2. The product discharging device according to claim 1, wherein a surface of the link lever including a part in sliding contact with the cam portion when the link lever comes in sliding contact with the cam portion is substantially perpendicular to a plane including its own axis and an axis of the output gear.

3. The product discharging device according to claim 1, wherein the drive source is a DC motor.

4. The product discharging device according to claim 1, wherein a posture of the link lever when the sliding contact with the cam portion is released by bringing an elastically-deformable locking portion formed therein into contact with a predetermined portion is determined.

5. The product discharging device according to claim 4, wherein the locking portion is disposed at a base end separated from the axis of the link lever, and

a concave portion is formed in the predetermined portion with which the locking portion comes in contact.

6. The product discharging device according to claim 1, wherein a posture of the link lever when the sliding contact with the cam portion is released by a biasing unit is determined.

7. The product discharging device according to claim 1, further comprising a lever member that is disposed in the base such that a tip thereof moves forward to and backward from the product storage passage in an area above the upper pedal, is biased by a biasing unit such that the tip thereof moves forward to the product storage passage in a

normal state, and moves backward from the product storage passage against a biasing force of the biasing unit when the lever member comes in contact with a product passing through the product storage passage.

8. The product discharging device according to claim 1, wherein an axial portion protruding in a front-rear direction is formed at a center of the output gear, and the output gear is disposed to be rotatable about a central axis of the axial portion in a storage space between a unit base and a unit cover by inserting the axial portion into concave portions of the unit base and the unit cover.

9. The product discharging device according to claim 1, wherein the pedal link is normally biased downward by a link spring locked to the pedal link, and

~~T~~the link ~~lever:~~ lever allows the pedal link to move downward by the link spring to cause the lower pedal to move forward to the product storage passage while causing the upper pedal to move backward from the product storage passage in a normal state; holds the pedal link in an upward-moved state against a biasing force of the link spring, and causes the lower pedal to move backward from the product storage passage while causing the upper pedal to move forward to the product storage passage when the link lever comes in sliding contact with a cam portion formed in the rotating output gear; and allows the pedal link to move downward by the link spring when the sliding contact with the cam portion is released.