

What is claimed is:

1. A powder container, comprising:

a nozzle receiving opening at one side of the powder container in a longitudinal direction of the powder container;

a container body to contain powder;

a nozzle receiver, attached to the container body at the one side of the powder container, the nozzle receiver including the nozzle receiving opening;

a gear, at the one side, to rotate around a rotational axis extending in the longitudinal direction;

two scoops, at the one side and integrated with the container body, to scoop up the powder when the scoops are rotated, due to rotation of the gear, about the rotational axis from a lower position within the powder container and to drop the powder from a higher position within the powder container which is higher than the lower position;

a shutter, at the one side, to open and close the nozzle receiving opening;

a spring to bias the shutter to close the nozzle receiving opening;

two protrusions, at the one side and integrated with the nozzle receiver, which protrude away from the nozzle receiving opening toward another side which is opposite to the one side in the longitudinal direction; and

a region, at the one side, which is closer to the rotational axis than the protrusions, the region including at least a portion of the spring when the shutter is at a closed position,

wherein:

the scoops extend in the longitudinal direction along a first length, the protrusions extend in the longitudinal direction along a second length, and a position of the first length and a position of the second length at least partly overlap along the longitudinal direction,

the powder dropped from the higher position enters the region by passing between the protrusions when the scoops are rotated about the rotational axis, and

the protrusions are rotated, due to the rotation of the gear, around the region when the scoops are rotated about the rotational axis.

2. The powder container according to claim 1, wherein:

a total number of the scoops of the powder container is equal to a total number of the protrusions integrated with the nozzle receiver.

3. The powder container according to claim 1, wherein:

the gear is integral with the container body.

4. A powder container, comprising:

a nozzle receiving opening at one side of the powder container in a longitudinal direction of the powder container;

a container body to contain powder;

a nozzle receiver, attached to the container body at the one side of the powder container, the nozzle receiver including the nozzle receiving opening;

a gear, at the one side, to rotate around a rotational axis extending in the longitudinal direction;

a scoop, at the one side and integrated with the container body, to scoop up the powder when the scoop is rotated, due to rotation of the gear, about the rotational axis from a lower position within the powder container and to drop the powder from a higher position within the powder container which is higher than the lower position;

a shutter, at the one side, to open and close the nozzle receiving opening;

a spring to bias the shutter to close the nozzle receiving opening;

a protrusion, at the one side and integrated with the nozzle receiver, which protrudes away from the nozzle receiving opening toward another side which is opposite to the one side in the longitudinal direction; and

a region, at the one side, which is closer to the rotational axis than the protrusion, the region including at least a portion of the spring when the shutter is at a closed position,

wherein:

the scoop extends in the longitudinal direction along a first length, the protrusion extends in the longitudinal direction along a second length, and a position of the first length and a position of the second length at least partly overlap along the longitudinal direction,

the powder dropped from the higher position enters the region when the scoop is rotated about the rotational axis, and

the protrusion is rotated, due to the rotation of the gear, around the region when the scoop is rotated about the rotational axis.

5. The powder container according to claim 4, wherein:

the powder container includes a plurality of scoops and a plurality of the protrusions, and

a total number of the scoops of the powder container is equal to a total number of the protrusions integrated with the nozzle receiver.

6. The powder container according to claim 4, wherein:

the gear is integral with the container body.

7. A powder container, comprising:

a nozzle receiving opening at one side of the powder container in a longitudinal direction of the powder container;

a container body to contain powder;

a nozzle receiver, attached to the container body at the one side of the powder container, the nozzle receiver including the nozzle receiving opening;

two protrusions, at the one side and integrated with the nozzle receiver, which protrude away from the nozzle receiving opening toward another side which is opposite to the one side in the longitudinal direction;

a gear, at the one side, to rotate around a rotational axis extending in the longitudinal direction;

two scoops, at the one side, each of the scoops integrated with a corresponding one of the protrusions, to scoop up the powder when the scoops are rotated, due to rotation of the gear, about the rotational axis from a lower position within the powder container and to drop the powder from a higher position within the powder container which is higher than the lower position;

a shutter, at the one side, to open and close the nozzle receiving opening;

a spring to bias the shutter to close the nozzle receiving opening; and

a region, at the one side, which is closer to the rotational axis than the protrusions, the region including at least a portion of the spring when the shutter is at a closed position,

wherein:

the scoops extend in the longitudinal direction along a first length, the container body extends in the longitudinal direction along a second length, and a position of the first length and a position of the second length at least partly overlap along the longitudinal direction,

the powder dropped from the higher position enters the region by passing between the protrusions when the scoops are rotated about the rotational axis, and

the protrusions are rotated, due to the rotation of the gear, around the region when the scoops are rotated about the rotational axis.

8. The powder container according to claim 7, wherein:
a total number of the scoops of the powder container is equal to a total number of the protrusions integrated with the nozzle receiver.
9. The powder container according to claim 7, wherein:
each of the protrusions includes a cylindrical surface around the rotational axis,
each of the cylindrical surfaces corresponds to one of the scoops, and
each of the scoops protrudes from an edge of a corresponding one of the cylindrical surfaces and protrudes towards an inner wall of the container body and away from the rotational axis.
10. The powder container according to claim 7, wherein:
the gear is integral with the container body.
11. A powder container, comprising:
a nozzle receiving opening at one side of the powder container in a longitudinal direction of the powder container;
a container body to contain powder;
a nozzle receiver, attached to the container body at the one side of the powder container, the nozzle receiver including the nozzle receiving opening;
a protrusion, at the one side and integrated with the nozzle receiver, which protrudes away from the nozzle receiving opening toward another side which is opposite to the one side in the longitudinal direction;
a gear, at the one side, to rotate around a rotational axis extending in the longitudinal direction;
a scoop, at the one side and integrated with the protrusion, to scoop up the powder, when the scoop is rotated, due to rotation of the gear, about the rotational axis, from a lower position within the powder container and to drop the powder from a higher position within the powder container which is higher than the lower position;
a shutter, at the one side, to open and close the nozzle receiving opening;
a spring to bias the shutter to close the nozzle receiving opening; and
a region, at the one side, which is closer to the rotational axis than the protrusion, the region including at least a portion of the spring when the shutter is at a closed position;

wherein:

the scoop extends in the longitudinal direction along a first length, the container body extends in the longitudinal direction along a second length, and a position of the first length and a position of the second length at least partly overlap along the longitudinal direction,

the powder dropped from the higher position enters the region when the scoop is rotated about the rotational axis, and

the protrusion is rotated, due to rotation of the gear, around the region when the scoop is rotated about the rotational axis.

12. The powder container according to claim 11, wherein:

a total number of the scoops of the powder container is equal to a total number of the protrusions integrated with the nozzle receiver.

13. The powder container according to claim 11, wherein:

the protrusion includes a cylindrical surface around the rotational axis,

the scoop protrudes from an edge of the cylindrical surface and protrudes towards an inner wall of the container body and away from the rotational axis.

14. The powder container according to claim 11, wherein:

the gear is integral with the container body.