Claims

1. A system, comprising:

a container including a protrusion and an opening; and

a receiver to receive the container, the receiver including:

a slide block that is movable relative to a body of the receiver, the slide block including two surfaces, a first surface, initially contacted by the protrusion of the container during insertion of the container into the receiver, having a first slope to resist movement of the container towards the receiver, and a second surface, subsequently contacted by the protrusion of the container during the insertion of the container into the receiver, having a second slope to interact with the protrusion of the container to assist movement of the container towards the receiver, the body including a protrusion,

wherein the opening of the container secures a position of the container by interaction with the protrusion of the body.

2. The system according to claim 1, further comprising:

an elastic body that urges the slide block of the receiver toward the protrusion of the container.

3. The system according to claim 2, wherein;

the elastic body is a torsion spring.

4. The system according to any of claims 1 to 3, wherein the protrusion of the container and the slide block are a first pair of contact parts, the system further comprising a second pair of contact parts which include a second protrusion on the container to interact with a second slide block of the receiver.

5. The system according to claim 4, wherein the first pair of contact parts and the second pair of contact parts are symmetrically disposed about a center of a cap of the container.

6. The system according to any of claims 1 to 5, wherein an angle of the first surface of the slide block relative to a length direction of the container is less than an angle of the second surface of the slide block relative to the length direction of the container.

7. The system according to any of claims 1 to 6, wherein the protrusion of the container comprises:

a first surface which interacts with the first surface of the slide block; and

a second surface which interacts with the second surface of the slide block.

8. The system according to claim 7, wherein:

interaction of the first surface of the protrusion of the container with the first surface of the slide block urges against insertion of the container into the receiver, and

interaction of the second surface of the protrusion of the container with the second surface of the slide block assists in the insertion of the container into the receiver.

9. The system according to any of claims 1 to 8, wherein: the container includes toner therein.

10. A toner container for use with an image forming system, comprising:

a body to hold toner;

an outlet;

protrusions disposed on the toner container, the protrusions to interact with corresponding slide blocks of a receiver of an image forming device, the slide blocks each including two surfaces, a first surface, initially contacted by the protrusions during insertion of the toner container into the receiver, having a first slope to resist movement of the toner container towards the receiver, and a second surface, subsequently contacted by the protrusions of the toner container during the insertion of the toner container into the receiver, having a second slope to interact with the protrusions to assist movement of the container towards the receiver; and

an opening to secure a position of the toner container by interaction with a protrusion of the receiver.

11. The toner container according to claim 10, wherein the protrusions of the container each comprise: a first surface which interacts with the first surface of the corresponding slide block; and a second surface which interacts with the second surface of the corresponding slide block.

12. The toner container according to claim 11, wherein: interaction of the first surface of the protrusion with the first surface of the slide block urges against insertion of the container into the receiver, and interaction of the second surface of the protrusion, with the second surface of the slide block assists in the insertion of the container into the receiver.

13. The toner container according to any of claims 10 to 12, wherein the body includes therein: the toner,

14. A system, comprising:

a container including a protrusion and an opening; and

a receiver to receive the container, the receiver including:

means for sliding, movable relative to a body of the receiver, the means for sliding interacting with the protrusion of the container, the means for sliding initially resisting insertion of the container into the receiver, and subsequently assisting insertion of the container into the receiver, the body including a protrusion,

wherein the opening of the container secures a position of the container by interaction with the protrusion of the body.

15. The system according to claim 14, wherein the receiver further comprises: means for urging the means for sliding towards the protrusion of the container.

16. The system according to claim 14 or 15, further comprising: a second protrusion, and a second means for sliding which interacts with the second protrusion, the second means for sliding initially resisting insertion of the container into the receiver, and subsequently assisting insertion of the container into the receiver,

17. The system according to any of claims 14 to 16, wherein the protrusion of the container comprises: a first surface which interacts with a first surface of the means for sliding; and a second surface which interacts with a second surface of the means for sliding,

18. The system according to claim 17, wherein: interaction of the first surface of the protrusion with the first surface of the means for sliding urges against insertion of the container into the receiver, and interaction of the second surface of the protrusion with the second surface of the means for sliding assists in the insertion of the container into the receiver.

19. The system according to any of claims 14 to 18, wherein: the container includes toner therein.

20. A toner container for use with an image forming system, comprising:

a body to hold toner;

an outlet; and

protrusions disposed on the toner container, the protrusions to interact with corresponding slide blocks of a receiver of an image forming device, the slide blocks each including two surfaces,

a first surface, contacted by the protrusions during insertion of the toner container into the receiver, having a first slope to resist movement of the toner container towards the receiver, and

a second surface having a second slope to interact with the protrusions to resist removal of the toner container from the receiver,

wherein the toner container further comprises an opening to secure a position of the toner container by interaction with a protrusion of the image forming system.

21. The toner container according to claim 20, wherein the protrusions of the toner container each comprises: a first contact portion which interacts with the first surface of the corresponding slide block; and a second contact portion which interacts with the second surface of the corresponding slide block.

22. The toner container according to claim 21, wherein the first contact portion has a lowering slope in a direction toward a head end of the toner container, and the second contact portion has a rising slope in the direction toward the head end of the toner container.

23. The toner container according to any of claims 20 to 22, wherein the protrusions of the toner container comprise two protrusions.

24. The toner container according to claim 21, wherein a tilt angle of the second contact portion relative to a longitudinal direction of the toner container is greater than that of the first contact portion.

25. The toner container according to any of claims 20 to 24, wherein the protrusions of the toner container are disposed at 180-degree opposed positions around a length direction of the body.

26. The toner container according to any of claims 20 to 25, wherein the body of the toner container includes the toner therein.

Claims

1. A system, comprising:

a container including a protrusion and an opening; and

a receiver to receive the container, the receiver including:

a slide block that is movable relative to a body of the receiver, the slide block including two surfaces, a first surface, initially contacted by the protrusion of the container during insertion of the container into the receiver, having a first slope to resist movement of the container towards the receiver, and a second surface, subsequently contacted by the protrusion of the container during the insertion of the container into the receiver, having a second slope to interact with the protrusion of the container to assist movement of the container towards the receiver, the body including a protrusion,

wherein the opening of the container secures a position of the container by interaction with the protrusion of the body.

2. The system according to claim 1, further comprising:

an elastic body that urges the slide block of the receiver toward the protrusion of the container.

3. The system according to claim 2, wherein:

the elastic body is a torsion spring.

4. The system according to claim 1, wherein the protrusion of the container and the slide block are a first pair of contact parts, the system further comprising a second pair of contact parts which include a second protrusion on the container to interact with a second slide block of the receiver.

5. The system according to claim 4, wherein the first pair of contact parts and the second pair of contact parts are symmetrically disposed about a center of a cap of the container.

6. The system according to claim 1, wherein an angle of the first surface of the slide block relative to a length direction of the container is less than an angle of the second surface of the slide block relative to the length direction of the container.

7. The system according to claim 1, wherein the protrusion of the container comprises:

a first surface which interacts with the first surface of the slide block; and a second surface which interacts with the second surface of the slide block.

8. The system according to claim 7, wherein:

interaction of the first surface of the protrusion of the container with the first surface of the slide block urges against insertion of the container into the receiver, and interaction of the second surface of the protrusion of the container with the second surface of the slide block assists in the insertion of the container into the receiver.

9. The system according to claim 1, wherein:

the container includes toner therein.

10. A toner container for use with an image forming system, comprising:

a body to hold toner;

an outlet;

protrusions disposed on the toner container, the protrusions to interact with corresponding slide blocks of a receiver of an image forming device, the slide blocks each including two surfaces, a first surface, initially contacted by the protrusions during insertion of the toner container into the receiver, having a first slope to resist movement of the toner container towards the receiver, and a second surface, subsequently contacted by the protrusions of the toner container during the insertion of the toner container into the receiver, having a second slope to interact with the protrusions to assist movement of the container towards the receiver; and

an opening to secure a position of the toner container by interaction with a

protrusion of the receiver.

11. The toner container according to claim 10, wherein the protrusions of the container each comprise:

a first surface which interacts with the first surface of the corresponding slide block; and

a second surface which interacts with the second surface of the corresponding slide block.

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

interaction of the first surface of the protrusion with the first surface of the slide block urges against insertion of the container into the receiver, and

interaction of the second surface of the protrusion with the second surface of the slide block assists in the insertion of the container into the receiver.

13. The toner container according to claim 10, wherein the body includes therein:

the toner.

14. A system, comprising:

a container including a protrusion and an opening; and

a receiver to receive the container, the receiver including:

means for sliding, movable relative to a body of the receiver, the means for sliding interacting with the protrusion of the container, the means for sliding initially resisting insertion of the container into the receiver, and subsequently assisting insertion of the container into the receiver, the body including a protrusion, wherein the opening of the container secures a position of the container by interaction with the protrusion of the body.

15. The system according to claim 14, wherein the receiver further comprises:

means for urging the means for sliding towards the protrusion of the container.

16. The system according to claim 14, further comprising:

a second protrusion, and a second means for sliding which interacts with the second protrusion, the second means for sliding initially resisting insertion of the container into the receiver, and subsequently assisting insertion of the container into the receiver.

17. The system according to claim 14, wherein the protrusion of the container comprises:

a first surface which interacts with a first surface of the means for sliding; and

a second surface which interacts with a second surface of the means for sliding.

18. The system according to claim 17, wherein:

interaction of the first surface of the protrusion with the first surface of the means for sliding urges against insertion of the container into the receiver, and interaction of the second surface of the protrusion with the second surface of the means for sliding assists in the insertion of the container into the receiver.

19. The system according to claim 14, wherein:

the container includes toner therein.

20. A toner container for use with an image forming system, comprising:

a body to hold toner;

an outlet; and

protrusions disposed on the toner container, the protrusions to interact with corresponding slide blocks of a receiver of an image forming device, the slide blocks each including two surfaces,

a first surface, contacted by the protrusions during insertion of the toner container into the receiver, having a first slope to resist movement of the toner

container towards the receiver, and

a second surface having a second slope to interact with the protrusions to resist removal of the toner container from the receiver,

wherein the toner container further comprises an opening to secure a position of the toner container by interaction with a protrusion of the image forming system.

21. The toner container according to claim 20, wherein the protrusions of the toner container each comprises:

a first contact portion which interacts with the first surface of the corresponding slide block; and

a second contact portion which interacts with the second surface of the corresponding slide block.

22. The toner container according to claim 21, wherein the first contact portion has a lowering slope in a direction toward a head end of the toner container, and the second contact portion has a rising slope in the direction toward the head end of the toner container.

23. The toner container according to claim 20, wherein the protrusions of the toner container comprise two protrusions.

24. The toner container according to claim 21, wherein a tilt angle of the second contact portion relative to a longitudinal direction of the toner container is greater than that of the first contact portion.

25. The toner container according to claim 20, wherein the protrusions of the toner container are disposed at 180-degree opposed positions around a length direction of the body.

26. The toner container according to claim 20, wherein the body of the toner container includes the toner therein.