

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A processing station for registering a piece of passenger's luggage for a trip, wherein the processing station comprises: an injector for receiving the piece of luggage associated with the passenger;
at least one sensor associated with the injector, the at least one sensor, in combination with at least the floor of the injector, creating a zone around the piece of luggage; and a controller associated with the sensor being adapted to: monitor, via the at least one sensor, intrusions through the zone to determine one or more of whether a predetermined limit on dimensions of the piece of luggage has been exceeded or whether a foreign object has intruded the zone from outside, and allow further processing of the piece of luggage only if no intrusion of the zone is detected;
and wherein the controller dynamically adjusts the volume of the zone to accommodate different sizes of luggage.
2. The luggage processing station according to claim 1, wherein the zone encompasses the piece of luggage at a distance of between 1mm to 1m from the outer perimeter of the piece of luggage.
3. The luggage processing station according to any one of claims 1 to 2, wherein at least one sensor includes a camera.
4. The luggage processing station according to any one of claims 1 to 3, wherein at least one sensor includes a stereotypic camera.
5. The luggage processing station according to any one of claims 1 to 4, wherein at least one sensor includes an infrared spectrum sensor.
6. The luggage processing station according to any one of claims 1 to 5, wherein the luggage processing station includes three or more sensors.

7. The luggage processing station according to any one of claims 1 to 6, wherein the luggage processing station includes at least one barcode reader.
8. The luggage processing station according to any one of claims 1 to 7, wherein the injector includes no physical walls other than the floor.
9. The luggage processing station according to any one of claims 1 to 7, wherein the injector includes at least a physical front wall, a physical side wall and a physical floor.
10. The luggage processing station according to any one of claims 1 to 9, wherein the zone includes convex or concave walls.
11. The luggage processing station according to any one of claims 1 to 10, wherein the zone includes at least one virtual wall that tapers towards the centre of the injector.
12. The luggage processing station according to claim 3, wherein the cameras are directed towards the centre of the injector wherein the luggage is received, when in use.
13. The luggage processing station according to any one of claims 1 to 12, wherein the zone includes a virtual top wall which is generally parallel to a floor of the injector when the height of the virtual top wall is below a minimum threshold.
14. A processing station for registering a passenger's luggage for a trip, wherein the processing station comprising:
 - a. a luggage transportation tub having a first shape, the tub being adapted to receive the piece of luggage associated with the passenger;
 - b. an injector for receiving the tub with the piece of luggage therein;

- c. at least one camera associated with the injector, wherein the camera is positioned so as to allow an image of tub with the luggage to be taken; and
 - d. a controller associated with the at least one camera, the controller being adapted to control the operation of the at least one camera and wherein the controller compares the image to a database of predefined tub shapes.
15. The luggage processing station of claim 14, wherein the controller confirms with the passenger the use of the tub.
16. The luggage processing station of any one of claims 13 or 14, wherein the injector includes a weighing sensor electrically connected to the controller.
17. The luggage processing station of claim 16, wherein the controller using the weighing sensor measures the combined weight of the luggage and tub and then subtracts the weight of the tub from combined weight and records the result against the passenger's flight information.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A luggage processing station for registering a piece of passenger's luggage for a trip, the processing station comprising:

an injector for receiving the piece of luggage associated with the passenger;

at least one sensor associated with the injector, the at least one sensor, in combination with at least the floor of the injector, creating a zone around the piece of luggage; and

a controller associated with the sensor being adapted: to monitor, via the at least one sensor, intrusions through the zone to determine one or more of whether a predetermined limit on dimensions of the piece of luggage has been exceeded or whether a foreign object has intruded the zone from outside, and allow further processing of the piece of luggage only if no intrusion of the zone is detected;

wherein the controller dynamically adjusts the volume of the zone to accommodate different sizes of luggage.

2. The luggage processing station according to claim 1, wherein the zone encompasses the piece of luggage at a distance of between 1mm to 1m from the outer perimeter of the piece of luggage.

3. The luggage processing station according to claim 1, wherein at least one sensor includes a camera.

4. The luggage processing station according to claim 1, wherein at least one sensor includes a stereotypic camera.

5. The luggage processing station according to claim 1, wherein at least one sensor includes an infrared spectrum sensor.

6. The luggage processing station according to claim 1, wherein the luggage processing station includes three or more sensors.

7. The luggage processing station according to claim 1, wherein the luggage processing station includes at least one barcode reader.

8. The luggage processing station according to claim 1, wherein the injector includes no physical walls other than the floor.

9. The luggage processing station according to claim 1, wherein the injector includes at least a physical front wall, a physical side wall and a physical floor.

10. The luggage processing station according to claim 1, wherein the zone includes convex or concave walls.

11. The luggage processing station according to claim 1, wherein the zone includes at least one virtual wall that tapers towards the centre of the injector.

12. The luggage processing station according to claim 3, wherein the camera is directed towards the centre of the injector wherein the luggage is received, when in use.

13. The luggage processing station according to claim 1, wherein the zone includes a virtual top wall which is generally parallel to a floor of the injector when the height of the virtual top wall is below a minimum threshold.

14. A luggage processing station for registering a passenger's luggage for a trip, wherein the processing station comprising:

a luggage transportation tub having a first shape, the tub being adapted to receive the piece of luggage associated with the passenger;

an injector for receiving the tub with the piece of luggage therein;

at least one camera associated with the injector, wherein the camera is positioned so as to allow an image of tub with the luggage to be taken; and

a controller associated with the at least one camera, the controller being adapted to control the operation of the at least one camera and wherein the controller compares the image to a database of predefined tub shapes.

15. The luggage processing station of claim 14, wherein the controller confirms with the passenger the use of the tub.

16. The luggage processing station of claim 14, wherein the injector includes a weighing sensor electrically connected to the controller.

17. The luggage processing station of claim 16, wherein the controller using the weighing sensor measures the combined weight of the luggage and tub and then subtracts the weight of the tub from combined weight and records the result against the passenger's flight information.