

Vehicle

This nonprovisional application is based on Japanese Patent Application No. 2017-209355 filed on October 30, 2017 with the Japan Patent Office, the entire contents of which are hereby incorporated by reference.

BACKGROUND

Field

The present disclosure relates to a vehicle.

Description of the Background Art

A van-type vehicle described in Japanese Patent Laying-Open No. 2002-206838 includes a driver's seat, a general baggage loading compartment, and a vehicle-mounted refrigerator. The general baggage loading compartment is disposed on the rear side of the driver's seat.

SUMMARY

The inventors of the present application have discussed a delivery system configured to deliver a delivery item to a cooling box mounted on a vehicle.

As for the vehicle used in the above-described delivery system, it is necessary to prevent another person from freely opening the cooling box and to allow a prescribed deliverer to open the cooling box. In this case, it is necessary to take into consideration the convenience when the deliverer puts the delivery item into the cooling box.

The present disclosure seeks to provide a vehicle including a cooling box that can accommodate a delivery item, with improved convenience of a deliverer.

A delivery system according to the present disclosure includes a vehicle, a deliverer terminal, and a user terminal. The vehicle includes: a vehicle main body having a passenger compartment and a rear compartment located more rearward than the passenger compartment; a rear hatch provided on the vehicle main body and configured to open and close the rear compartment; a cooling box disposed in the rear compartment; a first communication device configured to communicate with an

external server; a second communication device having a communication distance shorter than that of the first communication device; a locking device configured to lock the rear hatch; and a processor. The deliverer terminal includes a display and a third communication device. The deliverer terminal receives registered vehicle information and an opening signal from the server. The registered vehicle information includes information about a type and a color of the vehicle. The third communication unit is capable to transmit the opening signal to the second communication unit. The processor is configured to receive information about the opening signal from the server through the first communication device, and to open the rear hatch when the processor receives the opening signal through the second communication device.

According to the above-described vehicle, a deliverer or the like can transmit the opening signal near the vehicle, thereby opening the rear hatch. When the vehicle is parked forward, the deliverer or the like can easily put a delivery item into the cooling box.

The cooling box is disposed closer to the rear hatch than the passenger compartment. According to the above-described vehicle, the deliverer, the user or the like can easily put the object into the cooling box.

The vehicle further includes a front-row seat and a rear-row seat disposed more rearward than the front-row seat. The front-row seat and the rear-row seat are disposed in the passenger compartment. The passenger compartment and the rear compartment are separated by the rear-row seat. By deforming at least a part of the rear-row seat, an object contained in the cooling box can be taken out from the passenger compartment.

According to the above-described vehicle, by deforming the rear-row seat, an object contained in the cooling box can be taken out from the passenger compartment.

The vehicle further includes: a first side surface and a second side surface arranged in a width direction; a first rear wheel disposed more rearward than a center in a front-back direction of the vehicle main body and on the first side surface side; and a second rear wheel disposed more rearward than the center and on the second side surface side. The cooling box is disposed between the first rear wheel and the second rear wheel. According to the above-described vehicle, even when the vehicle receives side collision, the cooling box can be protected.

The cooling box is disposed at a center in the width direction of the vehicle

WHAT IS CLAIMED IS:

1. A delivery system comprising a vehicle, a deliverer terminal, and a user terminal, wherein:

the vehicle includes

a vehicle main body having a passenger compartment and a rear compartment located more rearward than the passenger compartment;

a rear hatch provided on the vehicle main body and configured to open and close the rear compartment;

a cooling box disposed in the rear compartment;

a first communication device configured to communicate with an external server;

a second communication device having a communication distance shorter than that of the first communication device;

a locking device configured to lock the rear hatch; and

a processor,

the deliverer terminal includes a display and a third communication device,

the deliverer terminal receives registered vehicle information and an opening signal from the server,

the registered vehicle information includes information about a type and a color of the vehicle,

the third communication unit is capable to transmit the opening signal to the second communication unit, and

the processor is configured to receive information about the opening signal from the server through the first communication device, and to open the rear hatch when the processor receives the opening signal through the second communication device.

2. The delivery system according to claim 1, wherein

the cooling box is disposed closer to the rear hatch than the passenger compartment.

3. The delivery system according to claim 1, further comprising

a front-row seat and a rear-row seat disposed more rearward than the front-row seat, wherein

the front-row seat and the rear-row seat are disposed in the passenger compartment,

the passenger compartment and the rear compartment are separated by the rear-row seat,

and

by deforming at least a part of the rear-row seat, an object contained in the cooling box can be taken out from the passenger compartment.

4. The delivery system according to any one of claims 1 to 3, further comprising:
a first side surface and a second side surface arranged in a width direction;
a first rear wheel disposed more rearward than a center in a front-back direction of the vehicle main body and on the first side surface side; and
a second rear wheel disposed more rearward than the center and on the second side surface side, wherein
the cooling box is disposed between the first rear wheel and the second rear wheel.

5. The delivery system according to any one of claims 1 to 4, wherein
the cooling box is disposed at a center in a width direction of the vehicle main body.

6. The delivery system according to any one of claims 1 to 5, wherein
the cooling box is provided so as to be movable in a front-back direction of the vehicle main body within the rear compartment.