CLAIMS

1. A product having dual layer identification codes, the dual layer identification codes comprising a first identification code attached to the product and a second identification code separated from the product;

wherein the second identification code is provided to a user when the product is sold to the user; and the first identification code corresponds to a plurality of second identification codes.

2. The product according to claim 1, wherein the first identification code of the dual layer identification codes matches a plurality of second identification codes.

3. The product according to claim 1, wherein the first identification code and the second identification code match a same type of product.

4. The product according to claim 1, wherein there is no matching relationship between the first identification code and the second identification code of the dual layer identification codes.

5. The product according to claim 1, wherein the second identification code is not associated with a product or a product category.

6. The product according to claim 1, wherein the dual layer identification codes are any combination of a two-dimensional code, a bar code, a near field communication (NFC) code, and a non-contact radio frequency identification (RFID) code.

7. A product traceability and anti-counterfeiting authentication method, applied to the product according to claim 1, comprising:

receiving a query request sent from a user by scanning the first identification code on the product;

providing basic information, a delivery status, and user scanning information of the product matching the first identification code to the user, wherein the first identification code is attached to the product;

receiving an anti-counterfeiting authentication request sent from ~~a~~ the user by scanning the second

identification code, wherein the second identification code is separated from the product;
determining whether a time interval between the receiving the query request and the receiving the anti-counterfeiting authentication request satisfies a preset threshold value; and
providing an anti-counterfeiting authentication result of the product matching the second identification code to the user if the time interval between the receiving the query request and the receiving the anti-counterfeiting authentication request satisfies the preset threshold value;
wherein the first identification code corresponds to a plurality of second identification codes.

8. The method according to claim 7, further comprising pre-generating dual layer identification codes matching a specific product, wherein the pre-generating dual layer identification codes matching the specific product specifically comprises:
generating the first identification code and the second identification code respectively according to a standard method;
matching the first identification code with a plurality of second identification codes to obtain a plurality of dual layer identification codes; and
uniquely matching the plurality of dual layer identification codes with the specific product.

9. The method according to claim 7, further comprising: uniquely matching the first identification code with the specific product;
wherein the uniquely matching the first identification code with the specific product comprises:
uniquely matching the first identification code with basic information of the specific product;
receiving delivery status information of the specific product set by scanning the first identification code, and matching the delivery status information with the first identification code; and
matching the second identification code with authenticity information of the specific product.

10. The method according to claim 7, further comprising:
after the receiving the query request sent from the user by scanning the first identification code,
recording a number, time and a location of scanning of the first identification code, and user information of the user scanning the first identification code, collectively referred to as first identification code user scanning information, and matching the first identification code user

scanning information with the first identification code.

11. The method according to claim 7, further comprising:
after the receiving the anti-counterfeiting authentication request sent from the user by scanning the second identification code,
recording a number, time, a location of scanning of the second identification code, and user information of the user scanning the second identification code, collectively referred to as second identification code user scanning information, and matching the second identification code user scanning information with the product.

12. The method according to claim 7, wherein the providing the anti-counterfeiting authentication result of the product to the user comprises:
if the second identification code is scanned for a first time and the second identification code is a pre-generated second identification code corresponding to the first identification code, providing an anti-counterfeiting authentication result indicating that the product is a genuine product to the user who scans the second identification code for the first time, and set the delivery status of the product to a sold or consumed status;
if the second identification code is scanned for a second time and a user who scans the second identification code for the second time is not specially authorized, providing an anti-counterfeiting authentication result indicating that the product is suspicious to the user who scans the second identification code for the second time; and
if the second identification code is not a pre-generated second identification code corresponding to the first identification code, providing an anti-counterfeiting authentication result indicating that the second identification code is not provided by a manufacturer or a designated authorized distributor of the product or that the product is suspicious to a user who scans the second identification code.

13. A product traceability and anti-counterfeiting authentication method, applied to the product according to claim 1, comprising:
receiving a query request and/or an anti-counterfeiting authentication request sent from a user by scanning the first identification code on the product;

providing basic information, a delivery status, and user scanning information and/or an anti-counterfeiting authentication result of the product matching the first identification code to the user, wherein the first identification code is attached to the product;

receiving a status update request sent from a user by scanning the second identification code, wherein the second identification code is separated from the product; and

setting the delivery status of the product to a sold or consumed status;

wherein the first identification code corresponds to a plurality of second identification codes.

14. The method according to claim 13, further comprising uniquely matching the first identification code with a specific product, wherein the uniquely matching the first identification code to with the specific product specifically comprises:

uniquely matching the first identification code with basic information of the specific product;

receiving delivery status information of the specific product set by scanning the first identification code, and matching the delivery status information with the first identification code; and

matching the first identification code with authenticity information of the specific product.

15. The method according to claim 13, further comprising:

after the receiving the query request sent from the user by scanning the first identification code,

recording a number, time, a location of scanning of the first identification code, and user information of the user scanning the first identification code, collectively referred to as first identification code user scanning information, and matching the first identification code user scanning information with the first identification code.

16. The method according to claim 13, further comprising: updating a status of the product to be a sold status;

wherein the updating the status of the product to be the sold status comprises:

if the second identification code is scanned for a first time and the second identification code is pre-generated, setting the delivery status of the product to a sold or consumed status; and

if the second identification code is scanned for a second time, providing a result indicating that the second identification code is unavailable to a user who scans the second identification code for the

second time.

17. The method according to claim 7 or 13, wherein the dual layer identification codes are any combination of a two-dimensional code, a bar code, a near field communication (NFC) code, and a non-contact radio frequency identification (RFID) code.

18. A product traceability and anti-counterfeiting authentication apparatus, applied to the product according to claim 1, comprising:
a query request receiving unit, configured to receive a query request sent from a user by scanning the first identification code;
a matching information providing unit, configured to provide basic information, a delivery status, and user scanning information of the product matching the first identification code to the user;
an anti-counterfeiting authentication request receiving unit, configured to receive an anti-counterfeiting authentication request sent from ~~a~~ the user by scanning the second identification code separated from the product;
a determination unit, configured to determine whether a time interval between the receiving the query request and the receiving the anti-counterfeiting authentication request satisfies a preset threshold value; and
an anti-counterfeiting authentication result providing unit, configured to provide an anti-counterfeiting authentication result of the product matching the second identification code to the user if the time interval between the receiving the query request and the receiving the anti-counterfeiting authentication request satisfies the preset threshold value;
wherein the first identification code corresponds to a plurality of second identification codes.

19. The apparatus according to claim 18, further comprising a dual layer identification codes generating unit, configured to pre-generate the dual layer identification codes matching a specific product, wherein the dual layer identification codes generating unit specifically comprises:
a first and second identification codes generating unit, configured to respectively generate the first identification code and the second identification code according to a standard method;
a first and second identification codes matching unit, configured to match the first identification

code with the second identification code to obtain the dual layer identification codes; and
a product matching unit, configured to uniquely matching the dual layer identification codes with the specific product.

20. The apparatus according to claim 18, wherein the product matching unit is configured to:
uniquely match the first identification code with basic information of the specific product;
~~receiving~~ receive delivery status information of the specific product set by scanning the first identification code, and match~~ing~~ the delivery status information with the first identification code; and
match~~ing~~ the second identification code with authenticity information of the specific product.

21. The apparatus according to claim 18, further comprising:
a first identification code user scanning information recording unit configured to record a number, time, a location of scanning of the first identification code, and user information of the user scanning the first identification code, collectively referred to as first identification code user scanning information, after receiving the query request sent from the user by scanning the first identification code, and matching the first identification code user scanning information with the first identification code.

22. The apparatus according to claim 18, further comprising:
a second identification code user scanning information recording unit configured to record a number, time, a location of scanning of the second identification code, and user information of the user scanning the second identification code, collectively referred to as second identification code user scanning information, after receiving the anti-counterfeiting authentication request sent from the user by scanning the second identification code, and matching the second identification code user scanning information with the product.

23. The apparatus according to claim 18, wherein the anti-counterfeiting authentication result providing unit is configured to:
if the second identification code is scanned for a first time and the second identification code is a

pre-generated second identification code corresponding to the first identification code, provide an anti-counterfeiting authentication result indicating that the product is a genuine product to a user who scans the second identification code for the first time, and setting a delivery status of the product to a sold or consumed status;

if the second identification code is scanned for a second time and the user who scans the second identification code for the second time is not specially authorized, provide an anti-counterfeiting authentication result indicating that the product is suspicious to a user who scans the second identification code for the second time and is not specifically authorized; and

if the second identification code is not a pre-generated second identification code corresponding to the first identification code, provide an anti-counterfeiting authentication result indicating that the second identification code is not provided by a manufacturer or a designated authorized distributor of the product or that the product is suspicious to a user scans the second identification code.

24. A product traceability and anti-counterfeiting authentication apparatus, applied to the product according to claim 1, comprising:

a query request receiving unit, configured to receive a query request sent from a user by scanning the first identification code;

a matching information providing unit, configured to provide basic information, a delivery status, and user scanning information of the product matching the first identification code to the user;

an anti-counterfeiting authentication request receiving unit, configured to receive an anti-counterfeiting authentication request sent from a user by scanning the first identification code;

an anti-counterfeiting authentication result providing unit, configured to provide an anti-counterfeiting authentication result of the product matching the first identification code to the user;

a status update request receiving unit, configured to receive a status update request sent from a user by scanning the second identification code separated from the product; and

a product status update unit, configured to set a delivery status of the product to a sold or consumed status;

wherein the first identification code corresponds to a plurality of second identification codes.

25. The apparatus according to claim 24, further comprising a product matching unit configured to:
uniquely match the first identification code with basic information of a specific product;
receive delivery status information of the specific product set by scanning the first identification code, and match the delivery status information with the first identification code; and
match the first identification code with authenticity information of the specific product.

26. The apparatus according to claim 24, further comprising:
a first identification code user scanning information recording unit, configured to record a number, time, a location of scanning of the first identification code, and user information of the user scanning the first identification code, collectively referred to as the first identification code user scanning information, after receiving the query request sent from the user by scanning the first identification code, and match the first identification code user scanning information with the first identification code.

27. The apparatus according to claim 24, wherein the product status update unit is configured to:
if the second identification code is scanned for a first time and the second identification code is pre-generated, set the delivery status of the product to a sold or consumed status; and
if the second identification code is scanned for a second time, provide a result indicating that the second identification code is unavailable to a user who scans the second identification code for the second time.

28. The apparatus according to claim 18 or 24, wherein the dual layer identification codes are any combination of a two-dimensional code, a bar code, a near field communication (NFC) code, and a contactless radio frequency identification (RFID) code.

29. A product traceability and anti-counterfeiting authentication assist method, applied to the product according to claim 1, comprising:
acquiring the first identification code on the product by a user scan;
generating and sending a query request corresponding to the first identification code;
receiving the query request and displaying basic information, a delivery status, and user scanning

information of the product matching the first identification code in response to the query request;

acquiring a second identification code separated from the product by a user scan;

generating and sending an anti-counterfeiting authentication request corresponding to the second identification code; and

receiving the anti-counterfeiting authentication request and displaying an anti-counterfeiting authentication result of the product matching the second identification code in response to the anti-counterfeiting authentication request;

wherein the first identification code corresponds to a plurality of second identification codes.

30. A product traceability and anti-counterfeiting authentication assist method, comprising:

acquiring a first identification code on a product by a user scan;

generating and sending a query request and/or an anti-counterfeiting authentication request corresponding to the first identification code;

receiving the query request and displaying basic information, a delivery status, and user scanning information of the product matching the first identification code in response to the query request;

receiving the anti-counterfeiting authentication request and displaying an anti-counterfeiting authentication result of the product matching the first identification code in response to the anti-counterfeiting authentication request;

acquiring a second identification code separated from the product by a user scan, wherein the second identification code is provided to a user when the product is sold to the user;

generating and sending a status update request corresponding to the second identification code; and

receiving the status update request and updating a delivery status of the product to a sold or consumed status in response to the status update request;

wherein the first identification code corresponds to a plurality of second identification codes.

31. The method according to claim 29 or 30, further comprising:

after the receiving the query request and displaying the basic information, the delivery status, and the user scanning information of the product matching the first identification code in response to the query request,

prompting the user to scan the second identification code within a preset period.

32. The method according to claim 31, further comprising: adding the product into a list of purchased products of the user if the anti-counterfeiting authentication result indicates that the product is genuine.

33. The method according to claim 31, further comprising:
after the adding the product to the purchased list of the user,
displaying the list of purchased products of the user;
displaying first identification code user scanning information and second identification code user scanning information of a selected product in response to a user selection; and
providing an operating button and sending information of a corresponding product to a manufacturer in response to a returning/changing or maintenance service operation of a user.

34. The method according to claim 33, further comprising: displaying a store capable of dealing with the corresponding product and a distance from the user to the store in response to the returning/changing or maintenance service operation of the user.

35. A product traceability and anti-counterfeiting authentication assist apparatus, applied to the product according to claim 1, comprising:
a first identification code acquiring unit, configured to acquire the first identification code on the product by a user scan;
a query request generating and sending unit, configured to generate and send a query request corresponding to the first identification code;
a product information receiving and displaying unit, configured to receive the query request and display basic information, a delivery status, and user scanning information of the product matching the first identification code in response to the query request;
a second identification code acquiring unit, configured to acquire the second identification code separated from the product by a user scan;
an anti-counterfeiting authentication request generating and sending unit, configured to generate and send an anti-counterfeiting authentication request corresponding to the second identification code;

an anti-counterfeiting authentication result receiving and displaying unit, configured to receive the anti-counterfeiting authentication request and display an anti-counterfeiting authentication result of the product matching the second identification code in response to the anti-counterfeiting authentication request;

wherein the first identification code corresponds to a plurality of second identification codes.

36. A product traceability and anti-counterfeiting authentication assist apparatus, applied to the product according to claim 1, comprising:

a first identification code acquiring unit, configured to acquire the first identification code on the product by a user scan;

a query request generating and sending unit, configured to generate and send a query request corresponding to the first identification code;

a product information receiving and displaying unit, configured to receive the query request and display basic information, a delivery status, and user scanning information of the product matching the first identification code in response to the query request;

an anti-counterfeiting authentication request generating and sending unit, configured to generate and send an anti-counterfeiting authentication request corresponding to the first identification code;

an anti-counterfeiting authentication result receiving and displaying unit, configured to receive the anti-counterfeiting authentication request and display an anti-counterfeiting authentication result of the product matching the first identification code in response to the anti-counterfeiting authentication request;

a second identification code acquiring unit, configured to acquire the second identification code separated from the product by a user scan;

a status update request generating and sending unit, configured to generate and send a status update request corresponding to the second identification code; and

a status update request receiving and setting unit, configured to receive the status update request and update the delivery status of the product to a sold or consumed status in response to the status update request;

wherein the first identification code corresponds to a plurality of second identification codes.

37. The apparatus according to claim 35, further comprising a prompt unit configured to prompt the user to scan the second identification code within a preset period after receiving the query request and displaying the basic information, the delivery status, and the user scanning information of the product matching the first identification code in response to the query request.

38. The apparatus according to claim 35, further comprising a purchased product displaying unit configured to add the product to a list of purchased products of the user and displaying the list of purchased products.

39. The apparatus according to claim 38, further comprising a maintenance and displaying unit configured to:
display the list of purchased products of the user;
display first identification code user scanning information and second identification code user scanning information of a selected product in response to a user selection; and
provide an operating button and send information of a corresponding product to a manufacturer in response to a returning/changing or maintenance service operation of the user.

40. The apparatus according to claim 39, wherein the maintenance and displaying unit is further configured to display a store capable of dealing with the corresponding product and a distance from the user to the store in response to the returning/changing or maintenance service operation of the user.