CLAIMS

1. A method for generating a blockchain warehouse receipt, comprising:

obtaining item registration information provided by a first user;

generating, by invoking a first smart contract, a blockchain warehouse receipt comprising basic type fields according to the item registration information, the basic type fields comprising a warehouse receipt type field, a warehouse receipt ID field, a generation time field, a state field, a category field, a property owner field, a quantity field, and a weight field;

storing the blockchain warehouse receipt in a blockchain network;

obtaining a transfer application for the blockchain warehouse receipt; and

invoking a second smart contract according to the transfer application to perform:

determining a transfer warehouse receipt ID, information of the first user, and information of a second user;

querying the blockchain network for property owner information corresponding to the transfer warehouse receipt ID;

electronically sending the transfer application to the second user when the property owner information is consistent with the information of the first user;

changing property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user after confirmation information from the second user is received; and

storing an updated blockchain warehouse receipt in the blockchain network,

obtaining warehouse transfer operation information submitted by a warehousing party for the blockchain warehouse receipt;

determining updated warehouse site information of an item corresponding to the blockchain warehouse receipt based on the warehouse transfer operation information by invoking a fourth smart contract;

updating a corresponding field on the blockchain warehouse receipt to the warehouse site information;

obtaining video information corresponding to encrypted warehouse transfer operation information by invoking a fifth smart contract;

obtaining a digital signature of the video information;

verifying whether the digital signature is a digital signature of a designated video surveillance device, the designated video surveillance device being installed at a warehouse site corresponding to the warehouse transfer operation information; and

storing the video information in the blockchain network after verification succeeds.

2. The method according to claim 1, wherein the basic type fields further comprise at least one of an inventory party field and a warehousing party field.

3. The method according to claim 1, wherein the blockchain warehouse receipt further comprises at least one of a logistics type field, a contract type field, a warehouse location field, and a warehouse replenishment field.

4. The method according to claim 3, wherein the contract type field comprises at least one of a purchase contract field, a purchase invoice field, and a commodity inspection report field.

5. The method according to claim 3, wherein the logistics type field comprises at least one of a transport mode field, a vehicle and vessel number field, a driver name field, a driver ID field, an ID number field, and an arrival time field.

6. The method according to claim 1, wherein the item registration information comprises warehouse receipt type information, a warehouse receipt ID, state information, category information, property owner information, quantity information, and weight information.

7. The method according to claim 1, wherein before the generating the blockchain warehouse receipt according to the item registration information, the method further comprises:

performing authenticity verification on the item registration information; and

the generating the blockchain warehouse receipt according to the item registration information comprises:

generating the blockchain warehouse receipt according to the item registration information after the authenticity verification succeeds.

8. The method according to claim 7, wherein the performing authenticity verification on the item registration information comprises:

obtaining inventory proof information uploaded by the first user;

determining inventory party information according to the inventory proof information;

determining basic inventory information according to the inventory proof information; and

determining whether the basic inventory information is consistent with basic item information, and whether the inventory party information is consistent with the property owner information, the basic item information comprising category information, weight information, and quantity information, and the basic inventory information comprising inventory category information, inventory weight information, and inventory quantity information.

9. The method according to claim 8, wherein the determining basic inventory information according to the inventory proof information comprises:

identifying inventory location information comprised in the inventory proof information;

determining a video surveillance device corresponding to the inventory location information;

retrieving video information acquired by the video surveillance device; and

determining the basic inventory information according to the video information.

10. The method according to claim 1, wherein the blockchain warehouse receipt further comprises traceability information for recording use process information of the blockchain warehouse receipt, and the use process information comprises at least one of generation, cancellation, pledge, and transfer.

11. The method according to claim 10, further comprising displaying the traceability information in a barcode.

12. The method according to claim 1, wherein before the sending the transfer application to the second user, the method further comprises:

querying the blockchain network for warehousing party information corresponding to the transfer warehouse receipt ID; and

sending the transfer application to a warehousing party corresponding to the warehousing party information; and

the changing property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user comprises:

changing the property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user after confirmation information from the warehousing party is received, the confirmation information being confirmation information of a storage location of an item corresponding to the transfer

warehouse receipt ID.

13. The method according to claim 1, wherein before the changing property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user, the method further comprises:

querying the blockchain network for state information corresponding to the transfer warehouse receipt ID; and

determining whether the state information is indicative of a tradable state, to obtain a first determination result; and

the changing property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user comprises:

changing the property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user when the first determination result indicates that the state information is indicative of the tradable state.

14. The method according to claim 1, wherein after the changing property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user, the method further comprises:

adding property owner update information to the blockchain warehouse receipt, the property owner update information comprising an update time, the property owner information before updating, and the property owner information after the updating.

15. The method according to claim 1, wherein after receiving the confirmation information from the second user, the method further comprises:

obtaining an updated contract attachment for the blockchain warehouse receipt by using a link address corresponding to a contract field in the blockchain warehouse receipt;

identifying a contract number of the contract attachment from the contract attachment by invoking a third smart contract; and

adding the contract number to the blockchain warehouse receipt.

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

identifying subject matter information and contract party information from the contract attachment; and

uploading the contract number, the subject matter information, and the contract party

information to the blockchain network for consensus processing and storage.

17. The method according to claim 1, wherein the warehousing party is an off-chain node; and the obtaining warehouse transfer operation information for the blockchain warehouse receipt comprises:

obtaining, by using an oracle mechanism, the warehouse transfer operation information for the blockchain warehouse receipt, the warehouse transfer operation information being encrypted by using the fourth smart contract or a public key of the warehousing party.

18. The method according to claim 1, further comprising:

generating risk prompt information for the video information if the verification on the digital signature of the video information fails, the risk prompt information being configured to prompt security checking on the designated video surveillance device.

19. A device, comprising:

a processor; and

a memory storing instructions executable by the processor,

wherein the processor is configured to:

obtain item registration information provided by a first user;

generate, by invoking a first smart contract, a blockchain warehouse receipt comprising basic type fields according to the item registration information, the basic type fields comprising a warehouse receipt type field, a warehouse receipt ID field, a generation time field, a state field, a category field, a property owner field, a quantity field, and a weight field;

store the blockchain warehouse receipt in a blockchain network;

obtain a transfer application for the blockchain warehouse receipt; and

invoke a second smart contract according to the transfer application to perform:

determining a transfer warehouse receipt ID, information of the first user, and information of a second user;

querying the blockchain network for property owner information corresponding to the transfer warehouse receipt ID;

electronically sending the transfer application to the second user when the property owner information is consistent with the information of the first user;

changing property owner information corresponding to the property owner field on the blockchain warehouse receipt to the information of the second user after confirmation

information from the second user is received; and

storing an updated blockchain warehouse receipt in the blockchain network,

obtain warehouse transfer operation information submitted by a warehousing party for the blockchain warehouse receipt;

determine updated warehouse site information of an item corresponding to the blockchain warehouse receipt based on the warehouse transfer operation information by invoking a fourth smart contract;

update a corresponding field on the blockchain warehouse receipt to the warehouse site information;

obtain video information corresponding to encrypted warehouse transfer operation information by invoking a fifth smart contract;

obtain a digital signature of the video information;

verify whether the digital signature is a digital signature of a designated video surveillance device, the designated video surveillance device being installed at a warehouse site corresponding to the warehouse transfer operation information; and

store the video information in the blockchain network after verification succeeds.