

SPECIFICATION

TITLE OF THE INVENTION LOGISTICS AND PAYMENT AGENCY MANAGEMENT SYSTEM

TECHNICAL FIELD

[0001]

The present invention relates to a logistics and payment agency management technique for acting as a broker between a product manufacturer and a plurality of parts supplying vendors which supply component parts to the product manufacturer and providing an agency service for payment of the component parts from the product manufacturer to the parts supplying vendors.

BACKGROUND ART

[0002]

Product manufacturers procure parts for use in making up products from a plurality of parts supplying vendors. A product manufacturer performs an order operation for parts to parts supplying vendors and a payment operation for parts procured (purchased) from the parts supplying vendors. As the number of parts supplying vendors increases, the burden of these operations and the costs such as labor costs increase.

[0003]

If the delivery time of ordered parts is delayed, the product manufacturer cannot manufacture products, for example. It is thus important to manage part orders to each parts supplying vendor, that is, to manage the inventory of parts. The management of the inventory of component parts, however, requires the product manufacturer to perform inspection of ordered component parts for each of a plurality of parts supplying vendors, which is a complicated and burdensome task.

PRIOR ART DOCUMENT

PATENT DOCUMENT

[0004]

[Patent Document 1] Japanese Patent Laid-Open No. 2012-238301

DISCLOSURE OF THE INVENTION

PROBLEMS TO BE SOLVED BY THE INVENTION

[0005]

It is an object of the present invention to provide a logistics and payment agency management system for managing receiving and shipping of component parts at a logistics warehouse at which component parts shipped from each of a plurality of parts supplying vendors are received and from which the component parts are shipped to a delivery destination in a product manufacturer and for providing an agency service for billing and payment associated with the product manufacturer and the parts supplying vendors.

MEANS FOR SOLVING THE PROBLEMS

[0006]

(1) According to an aspect, the present invention provides a logistics and payment agency management system in which a product manufacturer ordering component parts of a product, a plurality of parts supplying vendors each supplying the ordered component parts to the product manufacturer, and a logistics operator managing receiving and shipping at a logistics warehouse cooperate to perform processing of payment for the ordered component parts to the parts supplying vendor from the product manufacturer, the component parts shipped from the parts supplying vendor being received at the logistics warehouse and being shipped out of the logistics warehouse to a delivery destination

in the product manufacturer.

[0007]

The logistics and payment agency management system includes a P/O receipt section configured to receive P/O information about the component parts issued by the product manufacturer to each of the parts supplying vendors, the P/O information being received from a manufacturer side apparatus of the product manufacturer upon issuance to the parts supplying vendor; a storage unit configured to store the received P/O information as receiving schedule information about the component parts to be received at the logistics warehouse from each of the parts supplying vendors; a receiving and shipping management section configured to register a receiving and inspection quantity as a receiving record in the receiving schedule information, the receiving and inspection quantity being input through a warehouse side apparatus operated by an operator inspecting the component parts received at the logistics warehouse and being the number of the component parts inspected by the operator based on the P/O information; and a payment agency control section configured to perform deposit processing of calculating an amount of money for inspected parts for each P/O information based on the receiving and inspection quantity and previously acquired unit price information about the component parts and transmitting to the manufacture side apparatus a deposit request in which the amounts of money for inspected parts to be paid to the plurality of parts supplying vendors are integrated and requested to be deposited to the logistics operator serving as an interface, and perform, for each of the plurality of parts supplying vendors, transfer processing of transferring the amount of money for inspected parts to

the parts supplying vendor from the logistics operator.

[0008]

The receiving and shipping management section is configured to determine whether or not the receiving and inspection quantity is smaller than an order quantity in the P/O information, and when it is determined that the receiving and inspection quantity is smaller than the order quantity, register the receiving and inspection quantity as a partial receiving and inspection quantity for the P/O information, calculate a number of yet-to-be-received parts from a difference between the order quantity and the partial receiving and inspection quantity, and create P/O information for partial delivery linked to the P/O information having the partial receiving and inspection quantity registered therein, the P/O information for partial delivery having the calculated number of yet-to-be-received parts as the order quantity.

[0009]

In the present invention, the logistics operator manages the receiving and shipping of component parts at the logistics warehouse at which the component parts shipped from each of the plurality of parts supplying vendors are received and from which the component parts are shipped to the delivery destination in the product manufacturer and provides an agency service for billing and payment based on the P/O information associated with the product manufacturer and the parts supplying vendor.

[0010]

Specifically, the system according to the present invention receives, from the product manufacturer, the P/O information issued

by the product manufacturer to the parts supplying vendor, and manages the receiving schedule information about receiving at the logistics warehouse from the parts supplying vendor. The system counts the number of the actual component parts received at the logistics warehouse from the parts supplying vendor and reflects the result in the receiving schedule information (P/O information) as the receiving record. Thus, at the time of the receiving record registration, that is, when the component parts are received at the logistics warehouse, the inventories of component parts supplied from the plurality of parts supplying vendors are integrated (concentrated) at the logistics operator serving as the interface, and the component parts supplied from the plurality of parts supplying vendors can be inspected collectively by the logistics operator based on the receiving record at the logistics warehouse.

[0011]

In a conventional system, the product manufacturer issues P/Os (Purchase Order), then performs inspection of component parts shipped from a parts supplying vendor for each P/O at a delivery destination, determines an amount of payment to the parts supplying vendor based on the determined inventory of the component parts after delivery, and then pays the determined amount of payment (amount of money for inspected parts) to the parts supplying vendor. In other words, the product manufacturer needs to determine the payment amount for each of the issued pieces of P/O information each time inspection is performed at the delivery destination and to make each payment to the parts supplying vendor. When the number of parts supplying vendors serving as trading partners of the product manufacturer increases to

as high as several tens or several hundreds of companies, the payment processing for the P/O required for each of the numerous parts supplying vendors involves much time and effort and increases the costs such as labor costs.

[0012]

In the present invention, however, the component parts inspected at the logistics warehouse serve as inventory for the P/O information which is determined to be delivered to the product manufacturer from the logistics warehouse, and the receiving schedule information having the receiving record reflected therein serves as inventory information for the product manufacturer. Thus, at the time of the receiving of the component parts at the logistics warehouse, the logistics operator can substitute for the product manufacturer to determine the payment amount (amount of money for inspected parts) for the P/O information to be given by the product manufacturer to the parts supplying vendor.

[0013]

As described above, the logistics operator substitutes for the product manufacturer to determine the payment amount (amount of money for inspected parts) for the P/O information to be given by the product manufacturer to the parts supplying vendor at the time of receiving at the logistics warehouse (receiving record registration), makes the deposit request in which the amounts of money for inspected parts to be paid to the plurality of parts supplying vendors for the pieces of P/O information are integrated and requested to be deposited to the logistics operator serving as the interface, and performs the transfer processing for making transfer from the logistics operator to each of the plurality of parts supplying vendors. As a result, the billing

and payment management for the P/O information can be managed collectively at the logistics operator to reduce the costs such as labor costs.

[0014]

The parts supplying vendor supplies an order quantity of component parts to the product manufacturer based on the P/O information. For example, by reason of production management of component parts, partial delivery may be performed in which the component parts ordered in the P/O are shipped over a plurality of times instead of at one time. The partial delivery allows the product manufacturer to early ensure the inventory of a certain number of component parts suppliable by the parts supplying vendor although the number does not reach the order quantity, which enables flexible manufacturing management of products. However, even when those component parts are delivered early in the partial delivery, the overall P/O information cannot be inspected until the order quantity in the P/O is reached. The inspection for the P/O, that is, the payment of the amount of money for inspected parts to the parts supplying vendor is not made until the delivery of the remainder is completed.

[0015]

To address this, in the present invention, it is determined whether the receiving and inspection quantity is smaller than the order quantity in the P/O information, and when it is determined that the receiving and inspection quantity is smaller than the order quantity, a partial receiving record is registered with the receiving and inspection quantity set as partial inspection, and the deposit processing and the transfer processing are performed for the amount

of money for partially inspected parts in the P/O information after the partial inspection. This configuration allows payment of the amount of money for partially inspected parts to be made to the parts supplying vendor each time partial delivery is performed.

[0016]

The number of yet-to-be-received parts is calculated from the difference between the order quantity and the partial receiving and inspection quantity, and the P/O information for partial delivery linked to the P/O information having the partial receiving and inspection quantity registered therein is created, the P/O information for partial delivery having the calculated number of yet-to-be-received parts as the order quantity. Thus, the P/O information is managed as receiving schedule information until the order quantity of the overall P/O information is reached, and when additional component parts are received within the number of yet-to-be-received parts, the parts are associated with the P/O information for which partial inspection was performed, and the receiving and inspection is performed and the amount of money for inspected parts is determined independently to achieve the deposit processing and transfer processing.

[0017]

(2) In the logistics and payment agency management system according to (1), the receiving and shipping management section can be configured to set the order quantity in the P/O information as a remaining order quantity representing scheduled receiving to the logistics warehouse and determine whether or not the receiving and inspection quantity is smaller than the remaining order quantity, and when it is determined that the receiving and inspection quantity is

smaller than the remaining order quantity, register the receiving and inspection quantity as a partial receiving and inspection quantity for the P/O information, calculate a number of yet-to-be-received parts by subtracting the partial receiving and inspection quantity from the remaining order quantity, and create the P/O information for partial delivery linked to the P/O information having the partial receiving and inspection quantity registered therein, the P/O information for partial delivery having the calculated number of yet-to-be-received parts as a new remaining order quantity, and register a receiving and inspection quantity input for the same P/O information after the registration of the partial receiving and inspection quantity as a receiving record in the P/O information for partial delivery. The payment agency control section can be configured to perform the deposit processing and the transfer processing separately on each amount of money for partially inspected parts in the P/O information having the partial receiving and inspection quantity registered therein and the P/O information for partial delivery.

[0018]

(3) In the logistics and payment agency management system according to (1) or (2), the payment agency control section can be configured to calculate the total of the amounts of money for inspected parts ordered in pieces of the P/O information for the plurality of parts supplying vendors, create the deposit request for the total amounts provided by adding up the amounts of money for inspected parts to be paid to the parts supplying vendors, and transmit the deposit request to the manufacturer side apparatus.

[0019]

(4) In the logistics and payment agency management system according to (3), the storage unit can be configured to store parts supplying vendor information in which a payment period for the amount of money for inspected parts is set for each of the parts supplying vendors. The payment agency control section can be configured to receive from the manufacturer side apparatus a delivery destination inspection date on which the component parts shipped from the logistics warehouse are inspected at the delivery destination in the product manufacturer, calculate a period of transfer to each of the plurality of parts supplying vendors in the transfer processing based on a month of appropriation to which the delivery destination inspection date belongs and the payment period, extract the P/O information having the same transfer period, and calculate the total amount to perform the deposit processing, and perform the transfer processing for each of the parts supplying vendors associated with extracted the P/O information on the transfer date.

[0020]

(5) The logistics and payment agency management system according to (4) can further include a delivery schedule information provision section configured to create delivery schedule information based on the receiving schedule information having the receiving record registered therein and provide the delivery schedule information for the manufacturer side apparatus. The payment agency control section can be configured to receive from the manufacturer side apparatus the delivery schedule information in which the inspection and delivery date is input for each P/O information.

[0021]

(6) The logistics and payment agency management system according to any one of (1) to (5), can further include an article master management section configured to receive article master information including a delivery destination of each type of the component parts from the manufacturer side apparatus and store the article master information in the storage unit. The article master management section can be configured to transmit to the warehouse side apparatus the article master information in which the component parts are associated with bond management information about the component parts, the bond management information being provided by the product manufacturer or the delivery destination beforehand. The warehouse side apparatus can include: a shipment management section configured to create packing details information for performing delivery to the delivery destination in groups of the pieces of P/O information about the component parts having the same delivery destination extracted from all the component parts received at the logistics warehouse, the packing details information corresponding to a packing details list including the bond management information about the component parts within each of the groups, and create shipment label information attached to the component parts included in the packing details list and provided for identifying the component parts belonging to each of the groups; and a printing control section configured to output the packing details list and the shipment label information through a predetermined printing apparatus.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022]

[Fig. 1] A schematic diagram for describing a logistics and payment agency management system according to Embodiment 1.

[Fig. 2] A schematic diagram for describing logistics management and payment agency management performed between a product manufacturer and a plurality of parts supplying vendors through a logistics operator in the logistics and payment agency management system according to Embodiment 1.

[Fig. 3] A block diagram showing the network configuration and each apparatus in the logistics and payment agency management system according to Embodiment 1.

[Fig. 4] A diagram (4a) showing an example of P/O data, a diagram (4b) showing an example of article master information, and a diagram (4c) showing an example of article information including bond management information in Embodiment 1.

[Fig. 5] A diagram showing a processing flow for the article master information and the bond management information in the logistics and payment agency management system according to Embodiment 1.

[Fig. 6] A diagram showing a processing flow for receiving and shipping management based on the P/O data in the logistics and payment agency management system according to Embodiment 1.

[Fig. 7] A diagram (7a) showing an example of receiving schedule information, a diagram (7b) showing an example of receiving and shipping registration information, a diagram (7c) showing an example of payment details information for parts supplying vendor, and a diagram (7d) showing an example of billing details information for product manufacturer in Embodiment 1.

[Fig. 8] A diagram showing an example of a packing list of a plurality of component parts to be delivered to the same delivery destination and of shipment label information in Embodiment 1.

[Fig. 9] A diagram showing a processing flow for describing detailed processing and partial delivery processing of receiving record registration processing shown in Fig. 6.

[Fig. 10] A diagram showing a payment agency processing flow in the logistics and payment agency management system according to Embodiment 1.

[Fig. 11] A diagram showing an example of parts supplying vendor information in Embodiment 1.

[Fig. 12] A diagram for describing payment agency processing based on each payment period for each parts supplying vendor in Embodiment 1.

MODE FOR CARRYING OUT THE INVENTION

[0023]

A preferred embodiment of the present invention will hereinafter be described with reference to the accompanying drawings.

[0024]

EMBODIMENT 1

Figures 1 to 12 are diagrams illustrating embodiment 1. Figure 1 is a schematic diagram for describing a logistics and payment agency management system according to embodiment 1.

[0025]

A product manufacturer issues a purchase order (p/o) to a plurality of parts supplying vendors. Each of the parts supplying vendors supplies the product manufacturer with articles based on the order in the p/o (order for purchase), for example, component parts for use in making up products manufactured and sold by the product manufacturer.

[0026]

The business process between the product manufacturer and the plurality of parts supplying vendors includes logistics of actual component parts from the parts supplying vendors to a delivery destination in the product manufacturer, and billing and payment for the component parts delivered to the product manufacturer. As shown in fig. 1, in the logistics and payment agency management system according to embodiment 1, a logistics operator manages receiving and shipping of component parts at a logistics warehouse at which component parts shipped from each parts supplying vendor are received and from which the component parts are shipped to a delivery destination in the product manufacturer. The logistics operator acts as a broker between the product manufacturer and each parts supplying vendor to provide an agency service for billing and payment based on the p/o.

[0027]

First, the overall flow in the logistics and payment agency management system of embodiment 1 is described with reference to fig. 1. The logistics operator receives the p/o issued by the product manufacturer to the parts supplying vendor beforehand upon issuance to the parts supplying vendor. The received p/o is registered as receiving schedule information about receiving at the logistics warehouse of the logistics operator from the parts supplying vendor.

[0028]

The parts supplying vendor ships a particular number of component parts based on the p/o to the logistics operator (logistics warehouse) from a shipment base of the vendor. since the p/o of component parts to be received at the logistics warehouse from the parts supplying

vendor has been registered as the receiving schedule information in the logistics operator, an operator in the logistics warehouse matches the p/o with the component parts actually received at the logistics warehouse from the parts supplying vendor, counts the number of the received component parts, and registers the result as a receiving record in the receiving schedule information (p/o data).

[0029]

The logistics operator ships the received component parts out to a delivery destination in the product manufacturer, and at the time of the receiving record registration, that is, when the component parts are received at the logistics warehouse, substitutes for the product manufacturer to determine a payment amount (amount of money for inspected parts) for the p/o data to be given by the product manufacturer to the parts supplying vendor. The logistics operator confirms the determined payment amount with the parts supplying vendor in place of the product manufacturer.

[0030]

The logistics operator also performs, as a transporter, the logistics operation of shipping the component parts for the p/o out of the logistics warehouse and sending them to the delivery destination in the product manufacturer. The product manufacturer performs inspection of the component parts for the p/o at the delivery destination. After the inspection at the delivery destination, the logistics operator substitutes for the parts supplying vendor to confirm, with the product manufacturer, the payment amount already confirmed with the parts supplying vendor and requests a deposit. The product manufacturer deposits the payment amount to be given to the

parts supplying vendor into an account of the logistics operator. The logistics operator transfers the payment amount for the p/o into an account of the parts supplying vendor.

[0031]

In a conventional system, the product manufacturer issues p/os, then performs inspection of component parts shipped from a parts supplying vendor for each p/o at a delivery destination, determines a payment amount to the parts supplying vendor, and then pays the determined payment amount (amount of money for inspected parts) to the parts supplying vendor. In other words, the product manufacturer needs to determine the payment amount for each of the issued p/os each time inspection is performed at the delivery destination and to make each payment to the parts supplying vendor. When the number of parts supplying vendors serving as trading partners of the product manufacturer increases to as high as several tens or several hundreds of companies, the payment processing for the p/o required for each of the numerous parts supplying vendors involves much time and effort and increases the costs such as labor costs.

[0032]

In embodiment 1, however, the component parts inspected at the logistics warehouse serve as inventory for the p/o which is determined to be delivered to the product manufacturer from the logistics warehouse, and the receiving schedule information having the receiving record reflected therein serves as inventory information for the product manufacturer. Specifically, the logistics operator receives, from the product manufacturer, the p/o issued by the product manufacturer to the parts supplying vendor, manages the receiving schedule information

about receiving at the logistics warehouse from the parts supplying vendor, and reflects the data about the component parts actually received at the logistics warehouse from the parts supplying vendor as the receiving record in the receiving schedule information (p/o). Thus, at the time of the receiving record registration, that is, the receiving at the logistics warehouse, the inventories of component parts supplied from the plurality of parts supplying vendors are integrated (concentrated) at the logistics operator serving as an interface, and the component parts supplied from the plurality of parts supplying vendors can be inspected collectively by the logistics operator based on the receiving record at the logistics warehouse.

[0033]

At the time when the component parts are received at the logistics warehouse, the logistics operator can determine, in place of the product manufacturer, the payment amount (amount of money for inspected parts) for the p/o to be given by the product manufacturer to each parts supplying vendor.

[0034]

As shown in fig. 2, in the logistics and payment agency management system of embodiment 1, component parts shipped from each of the plurality of parts supplying vendors are received at the logistics warehouse, and at the time of the receiving, the inventories of the component parts supplied from the plurality of parts supplying vendors are concentrated at the logistics operator serving as the interface. The logistics operator then collectively performs inspection of the component parts supplied from the plurality of parts supplying vendors based on receiving records at the logistics warehouse and substitutes

for the product manufacturer to determine payment amounts for p/os to be given by the product manufacturer to the respective parts supplying vendors.

[0035]

From the viewpoint of the product manufacturer, the amounts of money for inspected parts to be paid to the respective parts supplying vendors for the p/os are concentrated at the logistics operator serving as the interface. The logistics operator substitutes for the respective parts supplying vendors to request the product manufacturer to deposit the total amount of money for inspected parts and transfers the amount deposited by the product manufacturer to the respective parts supplying vendors based on the p/os.

[0036]

As described above, the logistics operator can register the receiving record in the receiving schedule of component parts based on the p/o received from the product manufacturer, collectively manage the component parts supplied from the plurality of parts supplying vendors as the inventory which is determined to be delivered to the product manufacturer, and collectively manage billing and payment for the p/os associated with the product manufacturer and the plurality of parts supplying vendors based on the logistics between the respective parts supplying vendors and the product manufacturer concentrated at the logistics operator. Even when the product manufacturer has numerous parts supplying vendors as trading partners, the costs such as labor costs can be reduced since the logistics operator substitutes for (acts as a broker of) the product manufacturer to collectively manage the inventories and the billing and payment for ordered parts

based on p/os.

[0037]

Next, description is made of the network configuration and the function of each apparatus in the logistics and payment agency management system of embodiment 1 with reference to fig. 3. The logistics and payment agency management system is configured to include a logistics operator side management apparatus (corresponding to a logistics and payment agency management apparatus) 300 for managing receiving and shipping of component parts at a logistics warehouse, and a warehouse side management apparatus (corresponding to a warehouse side apparatus) 400 connected to the logistics operator side management apparatus over a network and operated at the logistics warehouse by an operator who performs inspection of component parts received from a parts supplying vendor.

[0038]

The logistics and payment agency management system can be connected to a product manufacturer side management apparatus (corresponding to a manufacturer side apparatus) 100 and a plurality of vendor side apparatuses (corresponding to vendor side apparatuses) 200 over a network.

[0039]

The product manufacturer side management apparatus 100 is configured to include a communication unit 110, a control unit 120, and a storage unit 130. The communication unit 110 controls communications between the apparatuses over the network. The control unit 120 includes a p/o control section 121, an article master management section 122, and a deposit processing section 123.

[0040]

The p/o control section 121 performs p/o issuance processing of creating p/o data to be issued to a parts supplying vendor and transmitting the p/o data to both of the vendor side management apparatus 200 and the logistics operator side management apparatus 300. Figure 4(a) is a diagram showing an example of the p/o data. the p/o data includes category (new order/change/cancel), supplier id serving as information for identifying a parts supplying vendor, vendor name, person in charge of purchase, delivery time, item id and item name of ordered component parts (including item 1 in Japanese and item 2 in English), p/o number, order quantity, unit of quantity (unit quantity of order), unit price, and currency. The product manufacturer issues p/o data as appropriate for a product manufacture plan and procures component parts from parts supplying vendors.

[0041]

The article master management section 122 manages master information about component parts included in the p/o data. Fig. 4(b) shows an example of article master information which includes, for each item id, item name (including item names 1 and 2), supplier id, supplier name, unit of quantity, unit price, unit weight (weight per predetermined unit (weight, area, length, volume, quantity)), currency, and destination site. The destination site is a delivery destination (location of delivery) to which component parts supplied from a parts supplying vendor are delivered. The product manufacturer has made a contract with a parts supplying vendor to purchase parts, and can manage master information about each item ordered from the parts supplying vendor and can register the destination site serving as the delivery

destination beforehand for each item.

[0042]

The deposit processing section 123 receives a request for depositing a payment amount for p/o data to be given to a plurality of parts supplying vendors from the logistics operator side management apparatus 300 and performs processing for deposit into an account of the logistics operator.

[0043]

The vendor side management apparatus 200 is configured to include a communication unit 210, a control unit 220, and a storage unit 230. The communication unit 210 controls communications between the apparatuses over the network. The control unit 220 includes a p/o receipt section 221, a dispatch management section 222, and a billing processing section 223.

[0044]

The p/o receipt section 221 receives the p/o data transmitted from the product manufacturer side management apparatus 100. The parts supplying vendor performs shipment management of shipping ordered component parts to the logistics warehouse of the logistics operator based on the p/o data received from the product manufacturer. The parts supplying vendor ships a particular number of component parts ordered in the p/o data from a shipment base or a shipment warehouse to the logistics warehouse together with a shipping invoice. The dispatch management section 222 controls a predetermined printing apparatus to print the shipping invoice listing the p/o number, the number of shipped parts (number of ordered parts), and the supplier id (the parts supplying vendor corresponding to the shipper) of component parts to

be shipped to the logistics warehouse based on the p/o data.

[0045]

The billing processing section 223 performs payment amount confirmation processing and bill issuance processing for p/o data with the logistics operator side management apparatus 200. The billing processing section 223 also performs transfer confirmation processing of confirming transfer into an account of the parts supplying vendor from the logistics operator in response to an issued bill.

[0046]

The logistics operator side management apparatus 300 is configured to include a communication unit 310, a control unit 320, and a storage unit 330. The communication unit 310 controls communications between the apparatuses over the network. The control unit 320 includes a p/o receipt section 321, an article master management section 322, a receiving and shipping information control section 323, and a payment agency control section 324.

[0047]

The p/o data passed between the product manufacturer side management apparatus 100 and the vendor side management apparatus 200 is also transmitted to the logistics operator side management apparatus 300 over the network. The p/o receipt section 321 receives each p/o data issued by the product manufacturer to each parts supplying vendor from the product manufacturer side management apparatus 100 upon issuance to the parts supplying vendor. The storage unit 330 stores the received p/o data. The p/o data received from the product manufacturer is stored and managed in the storage unit 330 as receiving schedule information about component parts to be received at the

logistics warehouse from each parts supplying vendor.

[0048]

The article master management section 322 receives the article master information provided by the product manufacturer side management apparatus 100 and shown in fig. 4(b) and stores the information in the storage unit 330. The article master management section 322 acquires bond management information for each item corresponding to each component part and registers the information in the article master information.

[0049]

By way of example, for delivery of component parts received at the logistics warehouse to an oversea destination site from Japan, a cargo to be exported by ship or plane is once carried into a bonded area, and only after import declaration to the customs is completed, the inward cargo can be transported to a location of delivery outside the bonded area. In other words, unless the import declaration is made for each bonded area and required permission is obtained, the cargo cannot be transported and delivered to the delivery destination in the product manufacturer from the bonded area. When the import declaration is made to obtain the required permission (import license) beforehand, the delivery to the product manufacturer via the bonded area can be smoothly achieved.

[0050]

The product manufacturer can make the import declaration of each item for each bonded area associated with the delivery destination beforehand to acquire the bond management information as the import license. With the import license acquired beforehand for each item,

the logistics operator prepares import clearance documents of each item including the acquired import license for delivery to an overseas destination site, and transports the component parts for p/o data together with the prepared import clearance documents to the destination site, thereby making it possible to obtain customs pass permission smoothly in the bonded area to reduce the lead time before the delivery. Since the customs pass permission in the bonded area is obtained smoothly, the lead time before inspection at the delivery destination can be reduced to prevent delayed payment for the p/o based on the inspection at the delivery destination. The payment to the parts supplying vendor can be made on time, for example.

[0051]

Figure 5 is a diagram showing a processing flow for the article master information and the bond management information in the logistics and payment agency management system. As shown in fig. 5, the article master management section 122 of the product manufacturer side management apparatus 100 transmits the article master information to the logistics operator side management apparatus 300 (s101). The product manufacturer side management apparatus 100 can perform the transmission to the logistics operator side management apparatus 300 as appropriate, for example, periodically or at the time of new registration, update, or deletion of an item in the article master information. The system can also be configured such that the logistics operator side management apparatus 300 transmits a request for acquiring the article master information to the product manufacturer side management apparatus 100, and in response to the acquirement request, the apparatus 100 provides the article master information for

the logistics operator side management apparatus 300.

[0052]

Upon receipt of the article master information from the product manufacturer side management apparatus 100, the article master management section 322 of the logistics operator side management apparatus 300 performs processing of updating and registering article master information (s301). The article master information management section 322 searches the article master information stored in the storage unit 330, for example by using the item id of the received article master information as a key. When no hit is found in the search, the article master management section 322 determines that the article corresponding to that item id is a new article (yes at s302) and newly registers (adds) the article in the article master information within the storage unit 330 (s303).

[0053]

The article master management section 322 requests a terminal at the delivery destination in the product manufacturer to perform bond management information check in order to acquire bond management information about the component parts of the newly registered item id (s304). The terminal at the delivery destination is a computer device operated at the delivery destination to which the component parts for the p/o data are to be transported from the bonded area in the destination site. The terminal at the delivery destination transmits the bond management information associated with the item id requested to be checked to the logistics operator side management apparatus 300 (s3041). As shown in fig. 4(c), the article master management section 322 registers the bond management information received from the terminal

at the delivery destination in the article master information in association with that item id (s305). The article master management section 322 can provide the article master information shown in fig. 4(c) for the warehouse side management apparatus 400.

[0054]

The bond management information may be provided by the product manufacturer side management apparatus 100 for the logistics operator side management apparatus 300 since the bond management information acquired by the product manufacturer beforehand can be shared between the product manufacturer side management apparatus 100 and the terminal at the delivery destination. When the delivery destination to which the component parts are to be delivered from the bonded area manages the import license for the p/o data, the check and registration of the bond management information may be performed with the terminal at the delivery destination as described above.

[0055]

For delivery of component parts for p/o data from the parts supplying vendor in Japan to a destination site in Japan, the bond management information is not required. In this case, the processing from steps s304 to s305 is omitted. For example, the article master management section 322 can determine whether the destination site included in the article master information is in Japan or not, and perform control such that the processing from steps s304 to s305 is performed if it is not in Japan or the processing from steps s304 to s305 is omitted if it is in Japan.

[0056]

The receiving and shipping information control section 323

transmits the p/o data provided by the product manufacturer to the warehouse side management apparatus 400 as the receiving schedule information, receives receiving and shipping information for the p/o data from the warehouse side management apparatus 400, and controls receiving and shipping of the component parts received at the logistics warehouse from the parts supplying vendor.

[0057]

Figure 6 is a diagram showing a processing flow for the receiving and shipping management based on the p/o data according to embodiment 1. As shown in fig. 6, the product manufacturer side management apparatus 100 first performs p/o issuance processing (s110) and transmits the same p/o data to both of the parts supplying vendor and the logistics operator. The vendor side management apparatus 200 (p/o receipt section 221) receives the p/o data transmitted from the product manufacturer side management apparatus 100 (s210) and performs shipment processing of shipping ordered component parts to the logistics warehouse of the logistics operator based on the received p/o data (s211).

[0058]

The logistics operator side management apparatus 300 (p/o receipt section 321) receives the p/o data from the product manufacturer side management apparatus 100 (s310). Since the p/o data includes the category, it is determined whether the category is "delete" or not (s311). When the category of the received p/o data is "delete" (yes at s311), the logistics operator side management apparatus 300 searches the p/o data stored already in the storage unit 330 as the receiving schedule information by using the p/o number as a key, and deletes the

target p/o data (s313). When it is determined that the category of the received p/o data is not "delete" (no at s311), the logistics operator side management apparatus 300 newly registers the data as receiving schedule information or updates the p/o data having the same p/o number already registered as receiving schedule information by overwriting (s312).

[0059]

Next, the component parts are received at the logistics warehouse together with a shipping invoice from the parts supplying vendor. An operator in the logistics warehouse matches the number of the actual component parts received with the number of shipped parts written on the shipping invoice to perform receiving inspection.

[0060]

The warehouse side management apparatus 400 includes a receiving and shipping management section 421, a shipment management section 422, and a printing control section 423. The receiving and shipping management section 421 receives the receiving schedule information from the logistics operator side management apparatus 300 and stores the information in the storage unit 430 (s314). The receiving and shipping information control section 323 of the logistics operator side management apparatus 300 can transmit the receiving schedule information to the warehouse side management apparatus 400 at a predetermined time, or in response to a predetermined operation for receiving record registration, or the receiving and shipping management section 421 can make a request for acquiring receiving schedule information from the logistics operator side management apparatus 300 and can acquire the receiving schedule information from the logistics

operator side management apparatus 300.

[0061]

The receiving and shipping management section 421 displays an input screen stored in the storage unit 430 on a display apparatus. The operator inputs the results of the receiving inspection, that is, the receiving record for each p/o data in the receiving schedule information to the warehouse side management apparatus 400. The input screen can be provided with an input field for inputting the supplier id or the p/o number. The operator inputs the supplier id or the p/o number on the shipping invoice issued by the parts supplying vendor.

[0062]

For example, display control is performed such that, when the supplier id is input on the input screen, the p/o data associated with the input supplier id is extracted from the storage unit 430 and displayed on the input screen, or when the p/o number is input, the p/o data associated with that p/o number is displayed on the input screen. Figure 7(a) is a diagram showing an example of the receiving schedule information and illustrating an aspect including each p/o data issued to each of a plurality of parts supplying vendors. When the p/o data associated with the input supplier id or p/o number is not found in the storage unit 430, error processing (notification of impossible registration) can be performed, for example.

[0063]

The input screen on which the p/o data is displayed includes an input field for inputting the number of received parts for which inspection is completed (the receiving and inspection quantity). The operator inputs the inspection date and the receiving and inspection

quantity for each p/o data associated with the p/o number for which inspection is completed. The input inspection date and the receiving and inspection quantity are stored in the storage unit 430 as the receiving record linked to the receiving schedule information (s410).

[0064]

Figure 7(b) is a diagram showing an example of receiving registration information in which receiving record information is registered in the receiving schedule information. The receiving record information includes the registered receiving and inspection quantity, and the inspection date and the amount of money for inspected parts. Upon registration of the receiving and inspection quantity, the receiving and shipping management section 421 uses the previously acquired unit price of the component parts (the unit price of component parts included in the p/o data or the unit price stored in the article master information) to calculate the amount of money for inspected parts for the p/o data, and stores the result as the amount of money for inspected parts based on the receiving record in association with the receiving schedule information in the storage unit 430. The inspection date can be provided automatically or by the operator through input of the date of the receiving record information registration.

[0065]

Next, the operator performs shipping processing of shipping the component parts received and inspected at the logistics warehouse out to the delivery destination (s411). After the completion of the receiving record registration, the shipment management section 422 first extracts a plurality of pieces of p/o data of yet-to-be-shipped parts and groups the extracted pieces of p/o data by destination site

(delivery destination). Specifically, the shipment management section 422 acquires the article master information including the bond management information shown in fig. 4(c) from the logistics operator side management apparatus 300. The acquirement may be performed at the time of the shipment processing or at an arbitrary time before the shipment processing.

[0066]

The shipment management section 422 groups the plurality of component parts received at the logistics warehouse by delivery destination based on the article master information to classify the pieces of p/o data having the same delivery destination into groups. For example, when the operator inputs a shipment processing button on the warehouse side management apparatus 400, the shipment management section 422 extracts p/o data of yet-to-be-shipped parts, that is, p/o data with its shipping dates undetermined (not input), and displays those pieces of data on a shipment processing screen.

[0067]

On the shipment processing screen showing the pieces of p/o data of yet-to-be-shipped parts, the shipment management section 422 performs control to allow selection of the delivery destination based on the article master information, and the operator selects one delivery destination. The shipment management section 422 extracts the pieces of p/o data of yet-to-be-shipped parts linked to the selected delivery destination, and creates and displays a shipment list of component parts having the same delivery destination. The operator inputs a shipping date and a scheduled delivery date on the screen showing the shipment list and performs shipping registration. The shipment management

section 422 stores the input shipping date and scheduled delivery date in association with the receiving schedule information including the registered receiving record for each p/o data.

[0068]

The shipment management section 422 creates shipment label information for the shipment list of the grouped component parts having the same delivery destination. Specifically, for each shipment list of component parts having the same delivery destination, a shipment label is created for identifying each shipment group and component parts belonging to the shipment group. The shipment label can be configured to include, for example, a parent label for each shipment list (having the same delivery destination) and a child label linked to the parent label and different for each p/o data (representing component parts) within the shipment list.

[0069]

Figure 8 is a diagram showing an example of the shipment list of a plurality of component parts to be delivered to the same delivery destination and of the shipment label information. In the example of fig. 8, the shipment list is created by grouping a plurality of component parts to be shipped to the same destination site "factory a in China", with which a shipment label "Q0001" is associated as the parent label for identifying the destination site and label sub-numbers "0001, 0002, ... " are associated as the child label. The shipment list can be created on the basis of the article master information shown in fig. 4(b) or fig. 4(c), and includes the p/o number, item id, item name 1, item name 2, number of shipped parts corresponding to the receiving and inspection quantity, unit price, unit weight, and bond management

information.

[0070]

The shipment list shown in fig. 8 includes the unit weight and the bond management information. The shipment list can be regarded as a pack of a plurality of component parts to be shipped to the same delivery destination and can be used as a packing list (packing details). As described above, the customs procedures should be performed in a bonded area for an overseas delivery destination. Thus, the shipment list including the bond management information (corresponding to the packing details information) can be used as import clearance documents (corresponding to the packing list).

[0071]

The printing control section 423 controls printing of the shipment list and the shipment label in a printing apparatus such as a printer connected to the warehouse side management apparatus 400. When the operator performs operations to print the created shipment list and shipment label information, the shipment management section 422 instructs the printing control section 423 to perform output from the printing apparatus, thereby printing out the shipment list and shipment label from the printing apparatus through the printing control section 423.

[0072]

After the shipment processing described above, the operator creates and provides a receiving and shipping report for the logistics operator side management apparatus 300. The receiving and shipping report is the p/o data in which the receiving record, shipping date, and scheduled delivery date are registered. In response to operation

for creating the receiving and shipping report by the operator, the shipment management section 422 extracts the p/o data having the receiving record (receiving quantity, remaining order, inspection date, number of parts for which inspection is completed, amount of money for inspected parts), shipping date, and scheduled delivery date registered therein from the storage unit 430 to create receiving and shipping data (s412). The shipment management section 422 transmits the created receiving and shipping data to the logistics operator side management apparatus 300.

[0073]

The receiving and shipping information control section 323 receives the receiving and shipping data, associates each p/o data of the receiving schedule information with the receiving record (receiving quantity, remaining order, inspection date, number of parts for which inspection is completed, amount of money for inspected parts), shipping date, and scheduled delivery date to create and store receiving and shipping registration information in the storage unit 330 (s315, and see fig. 7(b)).

[0074]

The receiving and shipping information control section 323 can also serve as a delivery schedule information providing section. The receiving and shipping information control section 323 creates delivery schedule information to be provided for the product manufacturer based on the receiving and shipping data received from the warehouse-side management apparatus 400 (s316) and transmits the created information to the product manufacturer side management apparatus 100 and the terminal at the delivery destination (s317). The delivery schedule

information is information about inventory determined to be delivered to the delivery destination in the product manufacturer and is used as delivery destination inspection information. For example, in the example of fig. 7(b), the delivery schedule information can be created by adding an input field for delivery destination inspection check to the receiving schedule information having the receiving information, shipping date, and scheduled delivery date registered therein. The field for delivery destination inspection check receives input of an inspection and delivery date at the delivery destination in the product manufacturer or of the inspection and delivery quantity of component parts. The delivery schedule information including the inspection and delivery date and the inspection and delivery quantity can be received from the product manufacturer side (the product manufacturer side management apparatus 100 or the terminal at the delivery destination) to know the inspection situation at the delivery destination.

[0075]

Now, description is made of partial delivery processing in the receiving record registration processing (step s410 in fig. 6) performed by the warehouse side management apparatus 400. As described above, the parts supplying vendor supplies a particular number of component parts ordered in the p/o to the product manufacturer. For example, by reason of production management of component parts, partial delivery may be performed in which the component parts ordered in the p/o are shipped over a plurality of times instead of at one time.

[0076]

The partial delivery allows the product manufacturer to early ensure the inventory of a certain number of component parts suppliable

by the parts supplying vendor although the number does not reach the order quantity, which enables flexible manufacturing management of products. However, even when those component parts are delivered early in the partial delivery, the overall p/o information cannot be inspected until the order quantity in the p/o is reached. The inspection for the p/o, that is, the payment of the amount of money for inspected parts to the parts supplying vendor is not made until the delivery of the remainder (remaining order) is completed.

[0077]

To address this, in embodiment 1, even when the receiving and inspection quantity is smaller than the order quantity in the p/o, those received component parts fewer than the order quantity undergo partial inspection to register the receiving record such that the amount of money for the partially inspected p/o can be determined. With this configuration, the amount of money for partially inspected parts can be paid to the parts supplying vendor each time partial delivery is performed.

[0078]

Figure 9 is a diagram showing a processing flow for describing detailed processing and partial delivery processing of the receiving record registration processing in fig. 6. First, the receiving and shipping management section 421 can perform control to display the remaining order on the input screen for inputting the receiving and inspection quantity. For example, when the input receiving and inspection quantity is "800" of the order quantity "1000", "200" is displayed as the remaining order quantity. When the same receiving and inspection quantity as the order quantity is input, "0" is displayed

as the remaining order quantity. When the receiving and inspection quantity is not input, the order quantity is displayed as the remaining order quantity.

[0079]

As shown in fig. 9, upon input of the receiving and inspection quantity on the input screen showing the p/o data (yes at s4101), the receiving and shipping management section 421 of the warehouse side management apparatus 400 determines whether or not the input receiving and inspection quantity is the same as the remaining order quantity (s4102).

[0080]

When the receiving and inspection quantity is the same as the remaining order quantity, the receiving and shipping management section 421 calculates the amount of money for inspected parts for the p/o data and stores the receiving and inspection quantity together with the calculated amount of money for inspected parts based on the receiving record in association with the receiving schedule information in the storage unit 430.

[0081]

When it is determined that the receiving and inspection quantity is not the same as the remaining order quantity, the receiving and shipping management section 421 proceeds to step s4103 and determines whether or not the input receiving and inspection quantity is smaller than the remaining order quantity. When it is determined that the quantity is smaller (yes at step s4103), the receiving and shipping management section 421 partially inspects those received parts fewer than the remaining order quantity and calculates the amount of money

for the partially inspected parts based on the receiving and inspection quantity and the unit price (s4104).

[0082]

The receiving and shipping management section 421 performs partial delivery processing involved in the partial inspection (s4105). Specifically, the receiving and shipping management section 421 calculates the number of yet-to-be-received parts by subtracting the input receiving and inspection quantity from the remaining order quantity, and creates p/o data for partial delivery including the calculated number of yet-to-be-received parts as the remaining order quantity and linked to the p/o data having partial receiving record registered therein.

[0083]

To link the p/o data having the partial receiving record registered therein to the p/o data for partial delivery, the receiving and shipping management section 421 can create sub-numbers of the same p/o number and assign them to the p/o data. Specifically, the receiving and shipping management section 421 assigns a sub-number to p/o data for partial delivery created in association with p/o data having the same p/o number and having any remaining order quantity (having a remaining order quantity other than zero).

[0084]

For example, the sub-number can be created as identification information indicating a partial delivery number (the number of partial deliveries) in the overall p/o data having the order quantity "1000." As shown in fig. 7(b), a p/o number "p0002" having an order quantity "1000" is subjected to two partial deliveries. the first receiving

number is "800", "800" and "200" are registered as the partial receiving and inspection quantity and the remaining order quantity, respectively, and a sub-number "0001" is provided for the p/o number "p0002." When the first receiving quantity "800" is subjected to partial inspection, p/o data for partial delivery is created for the same p/o number and is assigned a sub-number "0002". When the remaining "200" parts are received, the receiving and inspection quantity "200" is registered in the p/o data for partial delivery, the remaining order quantity becomes "0", and the partial inspection is performed for the p/o data having the p/o number "p0002".

[0085]

As described above, in embodiment 1, the order quantity in the p/o data is managed as the remaining order quantity of component parts scheduled to be received at the logistics warehouse, and the receiving and shipping management section 421 determines whether or not the input receiving and inspection quantity is smaller than the remaining order quantity. When it is determined that the receiving and inspection quantity is smaller than the remaining order quantity, the receiving and shipping management section 421 subtracts the receiving and inspection quantity from the remaining order quantity to calculate the number of yet-to-be-received parts. The receiving and shipping management section 421 registers the input receiving and inspection quantity as the partial receiving record in the p/o data, creates the p/o data for partial delivery linked to the p/o data having the partial receiving record registered therein and having the calculated number of yet-to-be-received parts as the remaining order quantity, and registers the created p/o data as the receiving schedule information.

Thus, in the situation where the p/o data has any remaining order quantity, part of the p/o data having the partial receiving record registered therein can be subjected to separate inspection.

[0086]

The receiving and shipping management section 421 registers a receiving and inspection quantity input to the same p/o data after the registration of the partial receiving and inspection quantity as a receiving record in the p/o data for partial delivery. The receiving and shipping management section 421 also determines whether or not the input receiving and inspection quantity is smaller than the new remaining order quantity. When it is determined that the receiving and inspection quantity is smaller than the remaining order quantity, the receiving and shipping management section 421 subtracts the receiving and inspection quantity from the remaining order quantity in the p/o data for partial delivery to calculate the number of yet-to-be-received parts. The receiving and shipping management section 421 registers the input receiving and inspection quantity as a partial receiving record in the p/o data for partial delivery, creates new p/o data for partial delivery (p/o data for partial delivery having a p/o number "p0002" and a sub-number "0003") linked to the p/o data for partial delivery having the partial receiving record registered therein and having the calculated number of yet-to-be-received parts as the remaining order quantity, and registers the new p/o data as the receiving schedule information.

[0087]

At step s4103 of fig. 9, when it is determined that the input receiving and inspection quantity is larger than the remaining order

quantity (no at step s4103), the receiving and shipping management section 421 performs predetermined alert processing (s4106). The alert processing includes, for example, outputting a message recommending check or correction of the order quantity in the p/o data since the input receiving and inspection quantity is larger than the order quantity in the p/o data. It is also possible to output a message indicating that the receiving and inspection quantity cannot be input (registered). This is because, when the receiving and inspection quantity is large, the resulting amount of money for inspected parts in payment agency processing, later described, is higher than the amount of money calculated from the order quantity in the p/o data and thus it is necessary to check for any shipment error on the side of the parts supplying vendor.

[0088]

Next, the payment agency control section 324 performs payment agency processing. Figure 10 is a diagram showing a payment agency processing flow in embodiment 1. As shown in fig. 10, after the delivery (shipping) of component parts to the product manufacturer, the logistics operator side management apparatus 300 acquires delivery destination inspection information from the terminal at the delivery destination (s3042). For example, the delivery destination inspection information corresponds to the delivery schedule information including the input field for delivery destination inspection check added thereto and provided for the product manufacturer (including the delivery destination) at step s317 in fig. 6.

[0089]

Upon receipt of the delivery destination inspection information

from the terminal at the delivery site, the payment agency control section 324 performs inspection matching processing (s320). The inspection matching processing includes determining whether or not a match is found in at least the quantity and the unit price of component parts for each p/o data between the delivery destination inspection information transmitted from the delivery destination, the receiving and shipping registration information, and the article master information stored in the storage unit 330.

[0090]

At the delivery destination, for example based on the delivery schedule information provided by the logistics operator side management apparatus 300, the inspection and delivery quantity and the inspection and delivery date of the delivered actual component parts can be input for each p/o data. In addition, the unit price of component parts included in the delivery schedule information can be matched with the p/o data issued by the product manufacturer. For example, when any change is made in the p/o data after the receiving at the logistics warehouse from the parts supplying vendor or after the shipping of component parts to the delivery destination from the logistics warehouse, the unit price can be changed with reference to the changed (latest) p/o data, for example, at the time of inspection in the delivery destination to reflect that change in the inspection and delivery information.

[0091]

The payment agency control section 324 matches the inspection and delivery quantity and the unit price in the delivery destination inspection information transmitted from the delivery destination with

the receiving and inspection quantity and the unit price in the receiving and shipping registration information for each p/o data. The unit price in the article master information can also be matched with those pieces of information. When any mismatch is found in the inspection and delivery quantity or unit price at least between the delivery destination inspection information and the receiving and shipping registration information (yes at s321), the payment agency control section 324 extracts the p/o data having the mismatch of the inspection and delivery quantity or unit price and creates a mismatch list. Then, the payment agency control section 324 provides the created mismatch list for the product manufacturer side management apparatus 100 and the vendor side management apparatus 200 (s3201) to perform checks.

[0092]

The mismatch of the inspection and delivery quantity or unit price in the p/o data included in the mismatch list is checked and examined by the product manufacturer and the parts supplying vendor, and then information for confirming the correct unit price and inspection and delivery quantity is provided by the product manufacturer, for example. The payment agency control section 324 reflects the unit price and inspection and delivery quantity included in the confirmation information in the receiving and shipping registration information for each p/o data within the mismatch list. When the unit price is changed, the unit price in the article master information is updated for each associated item id (s3202).

[0093]

After the data correction processing for the receiving and

shipping registration information and the article master information based on the confirmation information, the payment agency control section 324 again performs the inspection matching processing at step s320 such that the receiving record of component parts at the logistics warehouse for the p/o data is consistent with the inspection and delivery quantity and unit price at the delivery destination. The confirmation information provided by the product manufacturer may include the fact that the delivery destination inspection information is incorrect, and in this case, the corrected delivery destination inspection formation can be received from the terminal at the delivery site or from the product manufacturer side management apparatus 100 to perform the inspection matching processing at step s320.

[0094]

As described above, in embodiment 1, the amount of money for inspected component parts in the p/o data is determined at the time of receiving at the logistics warehouse, and the logistics operator acts as a broker between the product manufacturer and each of the parts supplying vendors to collectively perform confirmation based on the final inspection information at the delivery destination, thereby eliminating any mismatch between the amount of money for inspected parts based on the receiving record of component parts at the logistics warehouse and the amount of money for inspected parts at the delivery destination. As a result, the product manufacturer does not need to confirm the amount of money for inspected parts based on the delivery destination inspection information with each of the parts supplying vendors and can smoothly determine the amount of payment to each parts supplying vendor. Since it is not necessary for the product

manufacturer and each of the parts supplying vendors to individually check for match/mismatch in the delivery destination inspection information, the time from the delivery destination inspection to the determination of the amount of money for inspected parts can be shortened in the product manufacturer to allow payment to the parts supplying vendors on time.

[0095]

The delivery destination inspection information corresponds to the delivery schedule information including the input field for delivery destination inspection check added thereto and provided for the product manufacturer, and is formed according to the data configuration (data structure) of the receiving and shipping registration information stored in the storage unit 330. Thus, as shown in fig. 7(a) and fig. 7(b), the delivery destination inspection information and the receiving and shipping registration information share each piece of data within the receiving schedule information and the receiving record information (those pieces of data are linked), so that the comparison of pieces of data (including update) in the inspection matching processing at step s320 can be performed readily on the basis of the common data structure. For example, if the delivery destination inspection information and the receiving and shipping registration information have different data structures, it is necessary to perform data cleansing such as exclusive use of one of the data structures. In embodiment 1, however, such data cleansing is not required and thus speedy inspection matching processing can be performed. In addition, since manual correction in such data cleansing is not required, human error associated with the data correction can

be prevented.

[0096]

After the mismatch between the amount of money for inspected parts based on the receiving record at the logistics warehouse and the amount of money for inspected parts at the delivery destination is eliminated, the payment agency control section 324 determines the amount of money for inspected parts for each p/o data based on the receiving and shipping registration information matched with the delivery destination inspection information (s322). When no mismatch is found in the p/o data between the inspection and delivery quantity and the unit price in the delivery destination inspection information and the receiving and inspection quantity and the unit price in the receiving and shipping registration information at step s321 (no at s321), the amount of money for inspected parts is determined for that p/o data without correcting the receiving and inspection quantity or unit price. The inspection and delivery date and the inspection and delivery quantity of component parts in the delivery destination inspection information can be reflected in the receiving and shipping registration information for each p/o data.

[0097]

When the amount of money for inspected parts is determined for each p/o data at step s322, the payment agency control section 324 creates payment details (transfer details) information for each parts supplying vendor (s323). Figure 7(c) is a diagram showing an example of the payment details information for parts supplying vendor. The payment agency control section 324 extracts the payment details information, for example shown in fig. 7(c), for each parts supplying

vendor based on the receiving and shipping registration information stored in the storage unit 330 to create payment details information for each parts supplying vendor. In the example of fig. 7(c), the payment details information for the supplier id "b0001" including the p/o numbers "p0001" and "p0002" can be extracted and created.

[0098]

The payment agency control section 324 provides the created payment details information for each vendor side management apparatus 200 (s324). The parts supplying vendor (billing processing section 223 of the vendor side management apparatus 200) performs confirmation (matching) of the amount of money for inspected parts for each p/o data based on the payment details information received from the logistics operator side management apparatus 300. The billing processing section 223 performs bill issuance processing based on the payment details information (s220) and transmits the issued bill data to the logistics operator side management apparatus 300. In other words, the payment agency control section 324 provides the payment details information at step s324 and requests each parts supplying vendor to issue a bill based on the payment details.

[0099]

At s323, the payment agency control section 324 creates billing details information for product manufacturer in association with the creation of the payment details (transfer details) information for each parts supplying vendor. Figure 7(d) is a diagram showing an example of the billing details information for product manufacturer. This information is formed such that pieces of payment details information for parts supplying vendors as shown in fig. 7(c) are rearranged for

each product manufacturer, and the amounts of payment to be given to the parts supplying vendors correspond to the amount of billing to be paid by the product manufacturer. The billing details information for product manufacturer in embodiment 1 serves as a deposit request in which the amounts of money for inspected parts (billing amount) to be paid to the plurality of parts supplying vendors are integrated and requested to be deposited to the logistics operator serving as the interface.

[0100]

The payment agency control section 324 transmits the billing details information for product manufacturer serving as the deposit request to the product manufacturer side management apparatus 100 (s325). The deposit processing section 123 of the product manufacturer side management apparatus 100 receives the billing details information for product manufacturer and performs deposit processing of depositing each amount of money for inspected parts for each p/o data within the billing details information for product manufacturer into an account of the logistics operator from an account of the product manufacturer (s120), by way of example. The product manufacturer side management apparatus 100 has information about the logistics operator's account stored beforehand, and the deposit processing section 123 can perform the deposit processing based on the billing details information for product manufacturer and the logistics operator's account information.

[0101]

The payment agency control section 324 confirms the deposit into the logistics operator's account from the product manufacturer (s326). For example, the payment agency control section 324 can acquire

information about deposit amount into the logistics operator's account from a predetermined financial institution. After the confirmation of the deposit from the product manufacturer, the payment agency control section 324 performs, for each of the parts supplying vendors, transfer processing of transferring the amount of money for inspected parts for p/o data into an account of the parts supplying vendor from the logistics operator (s327). When the amounts of money for inspected parts for a plurality of pieces of p/o data are transferred to one parts supplying vendor, the total of the amounts of money for inspected parts can be transferred into the parts supplying vendor's account. The transfer processing in embodiment 1 includes, for example, transfer request processing of requesting a financial institution which holds the logistics operator's account to transfer the amount of money for inspected parts into the account of each parts supplying vendor at a financial institution. The payment agency control section 324 can create transfer request data including account information of each parts supplying vendor at a financial institution, a transfer amount corresponding to the amount of money for inspected parts, and a transfer request date corresponding to a payment period, later described, and transmit the created transfer request data to the financial institution over the network such as the internet or by fax.

[0102]

In the payment agency processing from step s322 to step s328, the payment agency control section 324 also performs deposit processing and transfer processing on the amount of money for partially inspected parts in the p/o data having the partial receiving and inspection quantity registered therein (p/o number "p0002" and sub-number "0001")

as shown in fig. 7(c) and fig. 7(d).

[0103]

Figure 11 is a diagram showing an example of parts supplying vendor information. The parts supplying vendor information can be stored beforehand. For example, the logistics operator side management apparatus 300 provides the function of receiving input of the parts supplying vendor information on a parts supplying vendor registration screen and stores the parts supplying vendor information input on the registration screen by a manager or the like into the storage unit 330. The parts supplying vendor information can include the supplier id, supplier name, address, and contact information associated with p/o data, as well as a bank name for payment, and a bank account for payment.

[0104]

After the deposit processing and the transfer processing, the payment agency control section 324 creates deposit and transfer information including a history of deposits made in response to deposit requests based on billing details information for product manufacturer and a history of transfers made to each parts supplying vendor and stores the created information in the storage unit 330 (s328). The history of deposits includes, for example, deposit amounts and deposit dates associated with deposit request numbers each including a plurality of p/o numbers for which deposits were made. The history of transfers includes transfer amounts and transfer dates linked to p/o numbers for which transfers were made to the respective parts supplying vendors.

[0105]

Figure 12 is a diagram for describing the payment agency

processing based on respective payment periods for parts supplying vendors. For example, each parts supplying vendor can set the payment period of 30 days, 60 days, or 120 days after delivery. The delivery destination inspection date at the product manufacturer can be used as the date from which 30 days after delivery are counted.

[0106]

For example, it is necessary to make payment for delivered component parts to a parts supplying vendor covered by the act against delay in payment of subcontract proceeds, etc. to subcontractors within 30 days of the end of a month of appropriation determined from the delivery destination inspection date and a cut-off date. In embodiment 1, the payment period based on the law and the payment period preset by the product manufacturer and the parts supplying vendor are managed (set) such that the payment to the parts supplying vendor is made on date.

[0107]

The payment period can be set by inputting a predetermined payment date to a payment period field on the parts supplying vendor information registration screen. For a parts supplying vendor covered by the act against delay in payment of subcontract proceeds, etc. to subcontractors, an "act for subcontract" check box can be displayed on the registration screen, and when the "act for subcontract" check box is marked, the payment period can be automatically set at "30 days" for such a parts supplying vendor, by way of example.

[0108]

As shown in fig. 12, the payment agency control section 324 can store the delivery destination inspection date in the delivery

destination inspection information transmitted from the delivery destination for each p/o data and determine a month of payment to the parts supplying vendor based on the delivery destination inspection date, that is, the month of appropriation corresponding to the month in which the product manufacturer should deposit the amount of money for inspected parts to make payment. The month of appropriation can be determined from the delivery destination inspection date and the cut-off date. For example, when the cut-off date is the 29th day of each month, the month of appropriation of any delivery destination inspection date before the 29th day of a month can be regarded as that month, whereas the month of appropriation of any delivery destination inspection date after the 30th day of a month can be regarded as the next month. The accounting determination of the cut-off date or the month of appropriation can be set as appropriate.

[0109]

The payment agency control section 324 can calculate the transfer date (transfer period) based on the month of appropriation determined for each p/o data and the payment period set in the parts supplying vendor information. For example, when p/o data of a parts supplying vendor includes the month of appropriation set at may and the payment period at the 30 days, the end of the next month or June can be calculated as the transfer date. The payment agency control section 324 sets the month of appropriation determined from the delivery destination inspection date and the cut-off date and the transfer date calculated from the month of appropriation and the payment period in the pieces of p/o data having the delivery destination inspection date registered therein, of the pieces of p/o data included in the receiving and shipping

registration information. The processing of determining and setting the month of appropriation and transfer date can be performed at a predetermined time set as appropriate.

[0110]

The payment agency control section 324 can perform the processing from steps s323 to s325 in fig. 10, for example based on the deposit date of the product manufacturer set associated with the transfer date (transfer period). For making payment to the parts supplying vendor assuming that deposit is made by the product manufacturer, the deposit date can be set several days before the transfer date, and the billing details information can be provided for the product manufacturer before the deposit date, by way of example.

[0111]

In the example of fig. 12, the payment agency control section 324 creates billing information for product manufacturer in which the deposit date is set at Jun. 25 in relation to the transfer date at the end of June. In this case, as shown in fig. 12, the payment agency control section 324 can calculate the total of deposit amounts for June by adding up the amounts of money for inspected parts from all the associated pieces of p/o data for the parts supplying vendors and create a deposit request for the total of deposit amounts provided by adding up the amounts of money for inspected parts to be paid to the parts supplying vendors.

[0112]

As described above, the payment agency control section 324 calculates the period of transfer to each of the parts supplying vendors in the transfer processing based on the month of appropriation to which

the delivery destination inspection date belongs and the payment period different for each parts supplying vendor, extracts the pieces of p/o data having the same transfer period, calculates the total of deposit amounts by adding up the amounts of money for inspected parts from the extracted pieces of p/o data for the parts supplying vendors, and creates and provides the billing details information for product manufacturer. For each parts supplying vendors, the payment agency control section 324 performs the transfer processing for the p/o data in the calculated transfer period.

[0113]

The product manufacturer receives the deposit request in which the amounts of money for inspected parts to be paid to the plurality of parts supplying vendors for the pieces of p/o information are integrated and requested to be deposited to the logistics operator serving as the interface, and the logistics operator performs the transfer processing for transfer to each of the parts supplying vendors. Thus, the billing and payment management for the p/o data can be managed collectively by the logistics operator to reduce the costs such as labor costs.

[0114]

As shown in the example of fig. 12, in embodiment 1, pieces of p/o data from partial inspection due to partial delivery individually undergo deposit processing and transfer processing over more than one month. Specifically, the p/o data having a p/o number "p0002" and a sub-number "0001" undergoes deposit processing and transfer processing with the transfer date set at the end of May, and the p/o data for partial delivery having the same p/o number and a sub-number "0002" undergoes

deposit processing and transfer processing with the transfer date set at the end of the next month or June.

[0115]

In embodiment 1, the partial delivery processing described above is performed such that the p/o data for partial delivery is created in association with the p/o data for which partial inspection was performed, and after the partial inspection, the receiving and inspection quantity input to the same p/o data (p/o number) is registered as the receiving record in the p/o data for partial delivery. Thus, the p/o data is managed as receiving schedule information until the order quantity of the overall p/o data is reached, and when additional component parts are received within the number of yet-to-be-received parts, the parts are associated with the p/o data for which partial inspection was performed, and the receiving and inspection is performed and the amount of money for inspected parts is determined independently.

[0116]

The payment agency control section 324 can perform the deposit processing and the transfer processing separately on each amount of money for partially inspected parts in the p/o data (sub-number "0001") having the partial receiving and inspection quantity registered therein and the p/o data (sub-number "0002") for partial delivery.

[0117]

This can eliminate the situation in which, even when component parts are delivered early through partial delivery, the overall p/o data cannot undergo inspection until the order quantity of p/o data is reached, and thus the inspection for p/o data, that is, the payment

of the amount of money for inspected parts to the parts supplying vendor is not performed until the remaining delivery is completed. Each time the partial delivery is performed, the amount of money for partially inspected parts can be paid to the parts supplying vendor.

[0118]

In embodiment 1 described above, the receiving information registration processing (including the partial delivery processing) and the shipping information registration processing shown in fig. 6 and fig. 9 are performed by the warehouse side management apparatus 400. However, such processing may be performed in the logistics operator side management apparatus 300.

[0119]

For example, the receiving and shipping information control section 323 of the logistics operator side management apparatus 300 is configured to have the functions of the receiving and shipping management section 421 and the shipment management section 422. In this case, the receiving and shipping management section 421 performs display control on the input screen and input control for information input by an operator. When the supplier id or the p/o number is input to the input screen, the receiving and shipping information control section 323 extracts p/o data associated with the input supplier id or p/o number from the storage unit 330 and transmits the extracted data to the warehouse side management apparatus 400. The receiving and shipping management section 421 displays the received p/o data on the input screen.

[0120]

On the input screen showing the p/o data, when the inspection

date and the receiving and inspection quantity are input for each p/o data associated with the inspected p/o number, the receiving and shipping control section 421 transmits the input information to the logistics operator side management apparatus 300, and the receiving and shipping information control section 323 stores the inspection date and the receiving and inspection quantity received from the warehouse side management apparatus 400 as the receiving record linked to the receiving schedule information in the storage unit 330. The receiving and shipping information control section 323 uses the unit price of component parts included in the p/o data or the unit price stored in the article master information and the receiving and inspection quantity input to the input screen to calculate the amount of money for inspected parts for the p/o data and stores the result as the amount of money for inspected parts based on the receiving record in the storage unit 330 in association with the receiving schedule information.

[0121]

Upon receipt of a shipment processing request from the warehouse side management apparatus 400, the receiving and shipping information control section 323 extracts p/o data with its shipping date not determined (not input) from the storage unit 330, and the warehouse side management apparatus 400 displays the p/o data on the shipment processing screen. When one delivery destination is selected on the shipment processing screen showing the p/o data for yet-to-be-shipped component parts, the receiving and shipping management section 421 transmits the selected delivery destination to the logistics operator side management apparatus 300. The receiving and shipping information control section 323 extracts p/o data for yet-to-be-shipped component

parts linked to the selected delivery destination, and creates and transmits a shipment list of component parts having the same delivery site to the warehouse side management apparatus 400. When the shipping date and the scheduled delivery date are input to the screen showing the shipment list, the receiving and shipping management section 421 transmits the input data to the logistics operator side management apparatus 300, and the receiving and shipping information control section 323 stores the received shipping date and scheduled delivery date for each p/o data in association with the receiving schedule information having the receiving record registered therein.

[0122]

In addition, the receiving and shipping information control section 323 can create shipment label information or create a shipment list including the unit weight and bond management information from the shipment list provided by grouping the plurality of component parts to be delivered to the same delivery destination and can transmit them to the warehouse side management apparatus 400. The warehouse side management apparatus 400 can perform control such that the received shipment label information or shipment list including the unit weight and bond management information is printed by a printing apparatus through the printing control section 423. In this case, since the receiving and shipping data is stored in the logistics operator side management apparatus 300 as described above, the receiving and shipping report creating processing can be omitted. For example, the operator selects a receiving and shipping completion button corresponding to the receiving and shipping report creation, and the warehouse side management apparatus 400 transmits a receiving and shipping completion

request to the logistics operator side management apparatus 300, thereby making it possible to complete the receiving and shipping report creation.

[0123]

Each of the apparatuses 100, 200, 300, and 400 described above can have a browser function of controlling display of screens and information. In addition to the above components, the hardware configuration can include a display apparatus such as a liquid crystal display, a cpu responsible for overall control of the apparatus (respective components), a memory (main storage apparatus), operation input means such as a mouse, keyboard, touch panel, and scanner, output means such as a printer and speaker, and an auxiliary storage apparatus (including hard disk).

[0124]

Each function of the present invention can be achieved by a program. a computer program prepared for achieving each function is stored in an auxiliary storage apparatus, the program stored in the auxiliary storage apparatus is read by a control unit such as a cpu to a main storage apparatus, and the program read to the main storage apparatus is executed by the control section, thereby allowing a computer apparatus to provide the function of each of the logistics operator side management apparatus 300 and the warehouse side management apparatus 400. Each function of the present invention may be configured by a separate control apparatus, and a plurality of such control apparatuses can be connected directly or over a network to configure the logistics operator side management apparatus, for example.

[0125]

The program can be recorded on a computer readable recording medium and provided for a computer. the computer readable recording medium includes an optical disk such as a CD-ROM, a phase change optical disk such as a DVD-ROM, a magneto-optical disk such as a magneto-optical (mo) disk and MD (mini-disk), a magnetic disk such as a floppy® disk and removable hard disk, and a memory card such as a compact flash®, SMARTMEDIA, SD memory card, and memory stick. A hardware apparatus such as an integrated circuit (including IC chip) designed and configured particularly for the purpose of the present invention is included in the recording medium.

DESCRIPTION OF THE REFERENCE NUMERALS

[0126]

100	PRODUCT MANUFACTURER SIDE MANAGEMENT APPARATUS
110	COMMUNICATION UNIT
120	CONTROL UNIT (CPU)
121	P/O CONTROL SECTION
122	ARTICLE MASTER MANAGEMENT SECTION
123	DEPOSIT PROCESSING SECTION
130	STORAGE UNIT
200	VENDOR SIDE MANAGEMENT APPARATUS
210	COMMUNICATION UNIT
220	CONTROL UNIT (CPU)
221	P/O RECEIPT SECTION
222	DISPATCH MANAGEMENT SECTION
223	BILLING PROCESSING SECTION
230	STORAGE UNIT

300 LOGISTICS OPERATOR SIDE MANAGEMENT APPARATUS
310 COMMUNICATION UNIT
320 CONTROL UNIT (CPU)
321 P/O RECEIPT SECTION
322 ARTICLE MASTER MANAGEMENT SECTION
323 RECEIVING AND SHIPPING INFORMATION CONTROL SECTION
324 PAYMENT AGENCY CONTROL SECTION
330 STORAGE UNIT
400 WAREHOUSE SIDE MANAGEMENT APPARATUS
410 COMMUNICATION UNIT
420 CONTROL UNIT (CPU)
421 RECEIVING AND SHIPPING MANAGEMENT SECTION
422 SHIPMENT MANAGEMENT SECTION
423 PRINTING CONTROL SECTION
430 STORAGE UNIT

CLAIMS

[Claim 1]

A logistics and payment agency management system in which a product manufacturer ordering component parts of a product, a plurality of parts supplying vendors each supplying the ordered component parts to the product manufacturer, and a logistics operator managing receiving and shipping at a logistics warehouse cooperate to perform processing of payment for the ordered component parts to the parts supplying vendor from the product manufacturer, the component parts shipped from the parts supplying vendor being received at the logistics warehouse and being shipped out of the logistics warehouse to a delivery destination in the product manufacturer, the system comprising:

a p/o receipt section configured to receive p/o information about the component parts issued by the product manufacturer to each of the parts supplying vendors, the p/o information being received from a manufacturer side apparatus of the product manufacturer upon issuance to the parts supplying vendor;

a storage unit configured to store the received p/o information as receiving schedule information about the component parts to be received at the logistics warehouse from each of the parts supplying vendors;

a receiving and shipping management section configured to register a receiving and inspection quantity as a receiving record in the receiving schedule information, the receiving and inspection quantity being input through a warehouse side apparatus operated by an operator inspecting the component parts received at the logistics

warehouse and being the number of the component parts inspected by the operator based on the p/o information; and

a payment agency control section configured to perform deposit processing of calculating an amount of money for inspected parts for each p/o information based on the receiving and inspection quantity and previously acquired unit price information about the component parts and transmitting to the manufacture side apparatus a deposit request in which the amounts of money for inspected parts to be paid to the plurality of parts supplying vendors are integrated and requested to be deposited to the logistics operator serving as an interface, and perform, for each of the plurality of parts supplying vendors, transfer processing of transferring the amount of money for inspected parts to the parts supplying vendor from the logistics operator,

wherein the receiving and shipping management section is configured to determine whether or not the receiving and inspection quantity is smaller than an order quantity in the p/o information, and when it is determined that the receiving and inspection quantity is smaller than the order quantity, register the receiving and inspection quantity as a partial receiving and inspection quantity for the p/o information, calculate a number of yet-to-be-received parts from a difference between the order quantity and the partial receiving and inspection quantity, and create p/o information for partial delivery linked to the p/o information having the partial receiving and inspection quantity registered therein, the p/o information for partial delivery having the calculated number of yet-to-be-received parts as the order quantity, and

the payment agency control section is configured to perform the deposit processing and the transfer processing for an amount of money for partially inspected parts in the p/o information having the partial receiving and inspection quantity registered therein.

[Claim 2]

The logistics and payment agency management system according to claim 1, wherein the receiving and shipping management section is configured to set the order quantity in the p/o information as a remaining order quantity representing scheduled receiving to the logistics warehouse and determine whether or not the receiving and inspection quantity is smaller than the remaining order quantity, and when it is determined that the receiving and inspection quantity is smaller than the remaining order quantity, register the receiving and inspection quantity as a partial receiving and inspection quantity for the p/o information, calculate a number of yet-to-be-received parts by subtracting the partial receiving and inspection quantity from the remaining order quantity, and create the p/o information for partial delivery linked to the p/o information having the partial receiving and inspection quantity registered therein, the p/o information for partial delivery having the calculated number of yet-to-be-received parts as a new remaining order quantity,

the receiving and shipping management section is configured to register a receiving and inspection quantity input to the same p/o information after the registration of the partial receiving and inspection quantity as a receiving record in the p/o information for partial delivery, and

the payment agency control section is configured to perform the deposit processing and the transfer processing separately on each amount of money for partially inspected parts in the p/o information having the partial receiving and inspection quantity registered therein and the p/o information for partial delivery.

[Claim 3]

The logistics and payment agency management system according to claim 1 or 2, wherein the payment agency control section is configured to calculate the total of the amounts of money for inspected parts ordered in the pieces of p/o information for the plurality of parts supplying vendors, create a deposit request for the total amounts provided by adding up the amounts of money for inspected parts to be paid to the parts supplying vendors, and transmit the deposit request to the manufacturer side apparatus.

[Claim 4]

The logistics and payment agency management system according to claim 3, wherein the storage unit is configured to store parts supplying vendor information in which a payment period for the amount of money for inspected parts is set for each of the parts supplying vendors, and

the payment agency control section is configured to receive from the manufacturer side apparatus a delivery destination inspection date on which the component parts shipped from the logistics warehouse are inspected at the delivery destination in the product manufacturer, calculate a period of transfer to each of the plurality of parts

supplying vendors in the transfer processing based on a month of appropriation to which the delivery destination inspection date belongs and the payment period, extract the p/o information having the same transfer period, and calculate the total amount to perform the deposit processing, and perform the transfer processing for each of the parts supplying vendors associated with extracted the p/o information on the transfer date.

[Claim 5]

The logistics and payment agency management system according to claim 4, further comprising a delivery schedule information provision section configured to create delivery schedule information based on the receiving schedule information having the receiving record registered therein and provide the delivery schedule information for the manufacturer side apparatus,

wherein the payment agency control section is configured to receive from the manufacturer side apparatus the delivery schedule information in which the inspection and delivery date is input for each p/o information.

[Claim 6]

The logistics and payment agency management system according to any one of claims 1 to 5, further comprising an article master management section configured to receive article master information including a delivery destination of each type of the component parts from the manufacturer side apparatus and store the article master information in the storage unit,

wherein the article master management section is configured to transmit to the warehouse side apparatus the article master information in which the component parts are associated with bond management information about the component parts, the bond management information being provided by the product manufacturer or the delivery destination beforehand, and

the warehouse side apparatus includes:

a shipment management section configured to create packing details information for performing delivery to the delivery destination in groups of the pieces of p/o information about the component parts having the same delivery destination extracted from all the component parts received at the logistics warehouse, the packing details information corresponding to a packing details list including the bond management information about the component parts within each of the groups, and create shipment label information attached to the component parts included in the packing details list and provided for identifying the component parts belonging to each of the groups; and

a printing control section configured to output the packing details list and the shipment label information through a predetermined printing apparatus.

[Claim 7]

A logistics and payment agency management apparatus in which a product manufacturer ordering component parts of a product, a plurality of parts supplying vendors each supplying the ordered component parts to the product manufacturer, and a logistics operator managing receiving and shipping at a logistics warehouse cooperate to perform

processing of payment for the ordered component parts to the parts supplying vendor from the product manufacturer, the component parts shipped from the parts supplying vendor being received at the logistics warehouse and being shipped out of the logistics warehouse to a delivery destination in the product manufacturer, the apparatus comprising:

a p/o receipt section configured to receive p/o information about the component parts issued by the product manufacturer to each of the parts supplying vendors, the p/o information being received from a manufacturer side apparatus of the product manufacturer upon issuance to the parts supplying vendor;

a storage unit configured to store the received p/o information as receiving schedule information about the component parts to be received at the logistics warehouse from each of the parts supplying vendors;

a receiving and shipping management section configured to register a receiving and inspection quantity as a receiving record in the receiving schedule information, the receiving and inspection quantity being input through a warehouse side apparatus operated by an operator inspecting the component parts received at the logistics warehouse and being the number of the component parts inspected by the operator based on the p/o information; and

a payment agency control section configured to perform deposit processing of calculating an amount of money for inspected parts for each p/o information based on the receiving and inspection quantity and previously acquired unit price information about the component parts and transmitting to the manufacture side apparatus a deposit request in which the amounts of money for inspected parts to be paid

to the plurality of parts supplying vendors are integrated and requested to be deposited to the logistics operator serving as an interface, and perform, for each of the plurality of parts supplying vendors, transfer processing of transferring the amount of money for inspected parts to the parts supplying vendor from the logistics operator,

wherein the receiving and shipping management section is configured to determine whether or not the receiving and inspection quantity is smaller than an order quantity in the p/o information, and when it is determined that the receiving and inspection quantity is smaller than the order quantity, register the receiving and inspection quantity as a partial receiving and inspection quantity for the p/o information, calculate a number of yet-to-be-received parts from a difference between the order quantity and the partial receiving and inspection quantity, and create p/o information for partial delivery linked to the p/o information having the partial receiving and inspection quantity registered therein, the p/o information for partial delivery having the calculated number of yet-to-be-received parts as the order quantity, and

the payment agency control section is configured to perform the deposit processing and the transfer processing for an amount of money for partially inspected parts in the p/o information having the partial receiving and inspection quantity registered therein.

[Claim 8]

A program executed in a logistics and payment agency management apparatus in which a product manufacturer ordering component parts of a product, a plurality of parts supplying vendors each supplying the

ordered component parts to the product manufacturer, and a logistics operator managing receiving and shipping at a logistics warehouse cooperate to perform processing of payment for the ordered component parts to the parts supplying vendor from the product manufacturer, the component parts shipped from the parts supplying vendor being received at the logistics warehouse and being shipped out of the logistics warehouse to a delivery destination in the product manufacturer, the program causing the logistics and payment agency management apparatus to perform:

a first function of receiving p/o information about the component parts issued by the product manufacturer to each of the parts supplying vendors, the p/o information being received from a manufacturer side apparatus of the product manufacturer upon issuance to the parts supplying vendor;

a second function of storing the received p/o information as receiving schedule information about the component parts to be received at the logistics warehouse from each of the parts supplying vendors;

a third function of registering a receiving and inspection quantity as a receiving record in the receiving schedule information, the receiving and inspection quantity being input through a warehouse side apparatus operated by an operator inspecting the component parts received at the logistics warehouse and being the number of the component parts inspected by the operator based on the p/o information; and

a fourth function of performing deposit processing of calculating an amount of money for inspected parts for each p/o information based on the receiving and inspection quantity and previously acquired unit

price information about the component parts and transmitting to the manufacture side apparatus a deposit request in which the amounts of money for inspected parts to be paid to the plurality of parts supplying vendors are integrated and requested to be deposited to the logistics operator serving as an interface, and performing, for each of the plurality of parts supplying vendors, transfer processing of transferring the amount of money for inspected parts to the parts supplying vendor from the logistics operator,

wherein the third function includes determining whether or not the receiving and inspection quantity is smaller than an order quantity in the p/o information, and when it is determined that the receiving and inspection quantity is smaller than the order quantity, registering the receiving and inspection quantity as a partial receiving and inspection quantity for the p/o information, calculating a number of yet-to-be-received parts from a difference between the order quantity and the partial receiving and inspection quantity, and creating p/o information for partial delivery linked to the p/o information having the partial receiving and inspection quantity registered therein, the p/o information for partial delivery having the calculated number of yet-to-be-received parts as the order quantity, and

the fourth function includes performing the deposit processing and the transfer processing for an amount of money for partially inspected parts in the p/o information having the partial receiving and inspection quantity registered therein.