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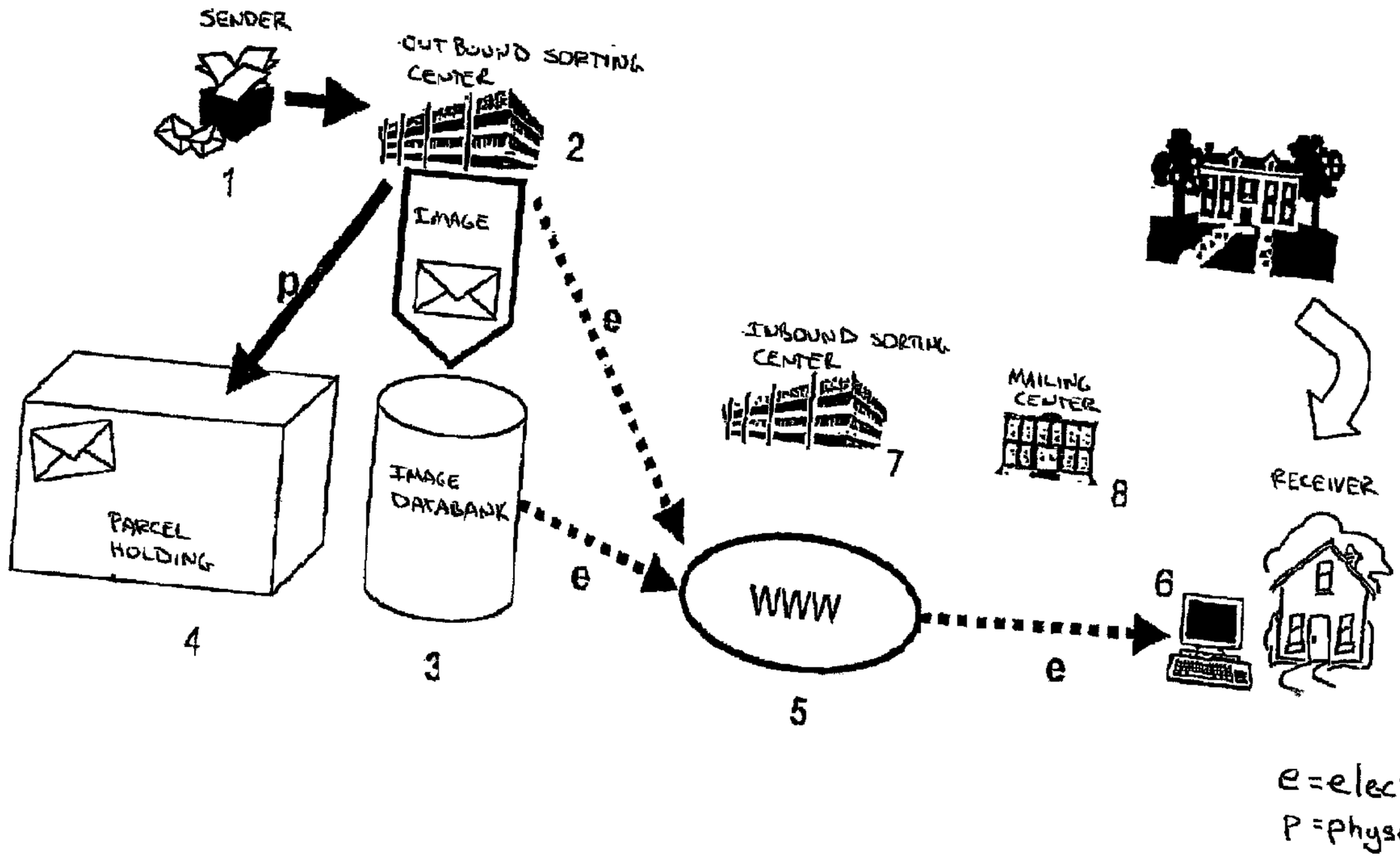
(54) Titre : PROCEDE DE DISTRIBUTION D'ENVOIS POSTAUX
(54) Title: METHOD FOR THE DISRTIBUTION OF MAIL ITEMS




(57) Abrégé/Abstract:
The invention relates to the distribution of postal objects. After the postal objects have been sent, the surfaces of said objects complete with the addresses thereof are scanned, recipient data is read out and the recipient data thus determined is searched in a re-routing data bank containing stored re-routing instructions, indicating names and addresses for delivery. The trigger for said re-routing instructions contains an identifier, which is also a searchable component of a stored re-routing instruction. When a re-routing instruction is found, the postal objects are stored under the respective identifier and a current number and the mailing service makes information on the incoming postal objects available to the trigger for said re-routing instructions. The trigger for said re-routing information, indicating the identifier and the current number, electronically informs the mailing service of the address to which the postal object(s) is/are to be sent and the time at which they are to be sent and/or indicates whether information on the contents of letters is to be made available electronically.

WO 01/63496 A1

**(57) Abstract:** The invention relates to the distribution of postal objects. After the postal objects have been sent, the surfaces of said objects complete with the addresses thereof are scanned, recipient data is read out and the recipient data thus determined is searched in a re-routing data bank containing stored re-routing instructions, indicating names and addresses for delivery. The trigger for said re-routing instructions contains an identifier, which is also a searchable component of a stored re-routing instruction. When a re-routing instruction is found, the postal objects are stored under the respective identifier and a current number and the mailing service makes information on the incoming postal objects available to the trigger for said re-routing instructions. The trigger for said re-routing information, indicating the identifier and the current number, electronically informs the mailing service of the address to which the postal object(s) is/are to be sent and the time at which they are to be sent and/or indicates whether information on the contents of letters is to be made available electronically.

Description

Method for the distribution of mail items

The invention concerns a method for the distribution of mail items according to the generic terms of claim 1.

A common process for post service delivery is the occurrence of two sorting steps. After the delivery by the sender to the post office, mail pieces are scanned by an automatic reading device at the outbound sorting center, read, and then sorted in such a way that they can be sent to a corresponding inbound sorting center. The items are there (or partially again in the mailing back-up office) sorted, more precisely, so that the mail items to be delivered by each letter carrier are available to him.

If a mail recipient has moved away (or is temporarily relocated to a different place), his mail can be appropriately rerouted. This forwarding has been a problem for a long time eventhough a large number of the mail items are forwarded manually. Deliveries with wrong or old addresses get to the letter carrier of the old district during the manual forwarding. For the sorting of the deliveries in line-of-route, the letter carrier uses an order of route case, whose bin number equals the maximum number of delivery points in his delivery route. If a forwarding order is placed, a forwarding label with the new address is sent to the letter carrier in the old district.

A forwarding indicator card is placed into the bin corresponding to the old address. During the line-of-route sorting, the mail to be forwarded is not sorted into bins with forwarding indicator cards. Instead, the letter carrier writes the new address on the envelope and turns the delivery over to manual processing. In systems which are further developed, the letter carrier identifies the letters to be forwarded, withdraws them from the mail stream and sends them to a central processing center for the letters to be forwarded. With the help of extraction techniques, the operational staff enters the invalid address into a computer which is connected to a central database. The database contains information about all change of address orders and displays the new address as well as a list of names with persons who placed forwarding orders. The operational staff looks for the indicated name on the envelope in the list. As soon as a match is found, a new label with the new address is either automatically or manually

applied to the letter. The label is thereby positioned in such a way, that the old bar code is covered up. By this, the letter can be read and coded automatically with the remaining mail pieces. The disadvantage of this method is the high manual expenditure for the processing and the division between the mail pieces to be forwarded and the normal ones from the stream of letters. This causes delays and re-routing of the deliveries to be forwarded. (Computer forwarding system II of USPS).

More advanced systems use OCR technology. In this case, the mail pieces to be forwarded are intercepted by the letter carrier, stamped "Relocated, address unknown", and sent to an automatic forwarding center. The mail forwarding center is equipped with automatic address readers which automatically recognize recipient and sender addresses for all mail pieces to be forwarded. With the help of a forwarding database, the new address is determined. The automatic address reader can read and evaluate mailing remarks, advance orders and other characteristics. The evaluation of the characteristics provides for the decision as to how to further treat the mail piece. In an additional automatic step, a label with the new address is applied to the mail piece. After the bar code has been printed thereon, the mail piece is re-introduced into the regular stream of letters for delivery.

In US Patent 5,422,821, a system for the re-forwarding of incorrectly labeled address items is described, wherein, the system recognizes the mail items to be forwarded at an earlier stage in the letter processing and distinguishes between machine readable and machine illegible mail items.

After the recording of an image of the address part of the mail piece, an OCR reader reads the name and address of the recipient. Then the zip code of the distribution center for the address is determined from a USPS zip+4 database. Via a USPS national change of address (NCOA) database, it is determined if entered forwarding requirements are present. At the same time, the forwarding labels located on the mail items are evaluated automatically. During the time of detecting the right address, the mail pieces are located in a mechanical delay loop/temporary storage.

If the address, including ZIP+4, during the time in which a mail item is in the delay loop, can not be determined automatically, an image of the address is saved into memory along with an identification (ID) number. The ID number is then printed on the mail item as a bar code and

further processing occurs offline with the support of video coding along in the above described way, wherein these mail pieces are removed from the mailstream and collected in a special sorting bin. If the correct address can be determined during the delay loop holding time of a mail piece, a label with a new address printed thereon is applied over the wrong address. A bar code sorter then distributes the mail piece according to the new bar code. This process occurs online.

The object of the invention indicated in claim 1 lies in lowering the expenses for transporting and sorting mail items whose recipients have started a forwarding request.

The mail items subject to a forwarding request, the request being stored in a rerouting database, are not delivered immediately but stored in a password protected memory address, the password and individually assigned running consecutive number having been received by the mail forwarding requester when he placed the request.

If it has been determined via the mail recipient's information in the re-routing database that a re-routing order is present, information regarding incoming mail items is made available to the forwarding requester. On the basis of this information, the forwarding requester communicates electronically to the mail service, by indicating the password and the consecutive number, which mailing address the time-conditioned mail item(s) have to be sent and/or if information of the content of the mail piece should be made electronically accessible.

Per instruction, the desired mail pieces are taken from the storage by using the password and the consecutive number and sent to the indicated mailing address. Upon request for information about the content of the mail piece, the select mail piece is opened, and the contents scanned and made electronically available to the forwarding requester. If, in addition, it is requested that the mail pieces be physically delivered, either the opened envelopes are closed again or the contents are placed into new appropriately labeled envelopes. By this method, it is therefore possible to create a rerouting process wherein mail pieces are distributed to chosen addresses per the requirements of the forwarding requester, or alternatively, not distributed in place of electronically forwarded information.

Advantages of the present invention are set out in the sub-claims.

An additional advantage provides for the forwarding of available mail item information, via electronic communication, as triggered by a password protected request from the forwarding requester to the mail service.

In another advantage, the forwarding requester is informed, electronically, by the mailing service, that one or more mail pieces is available to him.

In another advantage, in order to expedite the sending of information concerning mail pieces, the information, being the senders information or a scanned image of the mail piece when the senders' information is unavailable, is sent to the forwarding requester along with a general announcement of the mail pieces' presence.

In another advantage, the physical characteristics of mail pieces, including: measurement, weight, and mailing categories such as express deliveries and registered mail, are detected and stored into memory along with other information about the mail pieces.

The invention, by was of example, is set out in more detail below in accordance with the drawings.

The figures depict:

FIG 1 is a schematic disclosure of the process for the production of electronic information to a relocated recipient;

FIG 2 is a schematic disclosure of the electronic request of the sender and the triggered delivery of the mail piece;

FIG 3 is a schematic disclosure of the electronic request of the recipient and the triggered electronic transmission of the scanned content of the mail piece;

FIG 4 is a flow diagram of the procedure steps.

As is shown in Figs 1 through 4, mail pieces 1 of the sender are delivered 10 to outgoing sorting center 2, wherein: the scanning of the surface of the delivery 11 occurs, the reading of

the recipient's address 12 occurs, and a rerouting data base 13 search for the recipient's name and recipient address within a rerouting order is performed. The order would have been placed by a recipient, to the post service 14, because the recipient is temporarily available under a new address, has permanently relocated, or simply wants to have pre-information about arriving mail pieces. The rerouting order (name, old address, new address(es), time frame) is stored in the rerouting database and password protected. the password provided to the forwarding requester at the time of the request 16. If a corresponding order has been detected 17 concerning the read recipient, data concerning the mail item is stored under the password 18 and a consecutive number in a holding station 4 and the sender's information is read and acquired 19. Optionally characteristics of the mail items, including: measurements, weight, and mailing classification, are determined.

If the reading of the sender's information is successful 20, an electronic message is sent 21 to the receiver station 6 of the relocated forwarding requester by a corresponding medium 5 wherein which is communicated that *n* mail items are waiting. This is noted by indicating the sender and possibly other characteristics of the mail pieces. If the decoding of the sender's information is unsuccessful, scanned images of the entered mail item surface is stored in an image database 3 under the password and consecutive number 22 along with an electronic message sent to the forwarding requester 23. Alternatively, the forwarding requester receives access to the image database 3. A procedure is also possible wherein the forwarding requester requests independent information from the mailing service, over his password, if or whether mail items are being held for him.

Based on information about mail pieces, sender's data, or mail piece images, the forwarding requester decides which mail pieces he wants sent to which mailing addresses. This decision is communicated electronically to the mail service with the password 24. Afterwards, the mail pieces are extracted from holding 4 and sent, via the incoming sorting center 7 which was assigned to the new mailing address and corresponding mailing center 8, to the recipient (FIG 3).

If the forwarding requester communicated to the mailing service that he wants to have electronically transmitted contents of certain letters, the letters are withdrawn from the holding 4 and opened. The contents are scanned and electronically sent to the forwarding requester by the corresponding medium 5 as an e-mail attachment (FIG 4). Then the

forwarding requester decides if the original mail pieces are to be closed again (or contents put into new envelopes) and forwarded (either to the new or old mailing address) or discarded. In addition, an alternate possibility is for the forwarding requester to request the contents of the information from the mailing service.

Patent Claims

1. A method for the distribution of mail items, wherein: address labeled mail surfaces are scanned; the recipient's information read; and rerouting orders, stored in a rerouting database by requester name and delivery address, are searched;

characterized in that,

- the forwarding requester receives a password which is a searchable part of the stored trigger of said rerouting orders,
- the mail items are held under the password and a consecutive number,
- information about held mail pieces is made electronically available to the forwarding requester,
- the forwarding requester electronically communicates to the mail service, by indicating the password and the consecutive number, which delivery address select mail item(s) are to be sent, at which time, and/or if information as to the content of the select mail item(s) should be made available electronically and/or via normal post,
- the requested mail pieces are removed from holding, per use of the password and consecutive number, and reintegrated into the mail stream, wherein a machine-readable code for the selected delivery address is applied onto the mail pieces, and
- if the content of select mail pieces is requested, the held select mail pieces are opened and the contents scanned and made electronically available to the forwarding requester, and if additionally requested, made available by normal post delivery to the forwarding requester. wherein the mail pieces are resealed or the contents put into new envelopes.

2. The method according to claim 1, wherein the forwarding requester requests electronic information from the mail service concerning held post via password.

3. The method according to claim 1, wherein the forwarding requester is informed, electronically, by the mail service, that one or more deliveries have been held for him.

4. The method according to claim 1, wherein at a database memory address containing the forwarding requesters order, mail piece senders information, if successfully read,

or a scanned image of the mail piece, if an unsuccessful read, of a held mail piece, is saved.

5. The method according to claim 1, wherein physical characteristics of the mail pieces and mail categories are detected and transmitted electronically to the recipient.

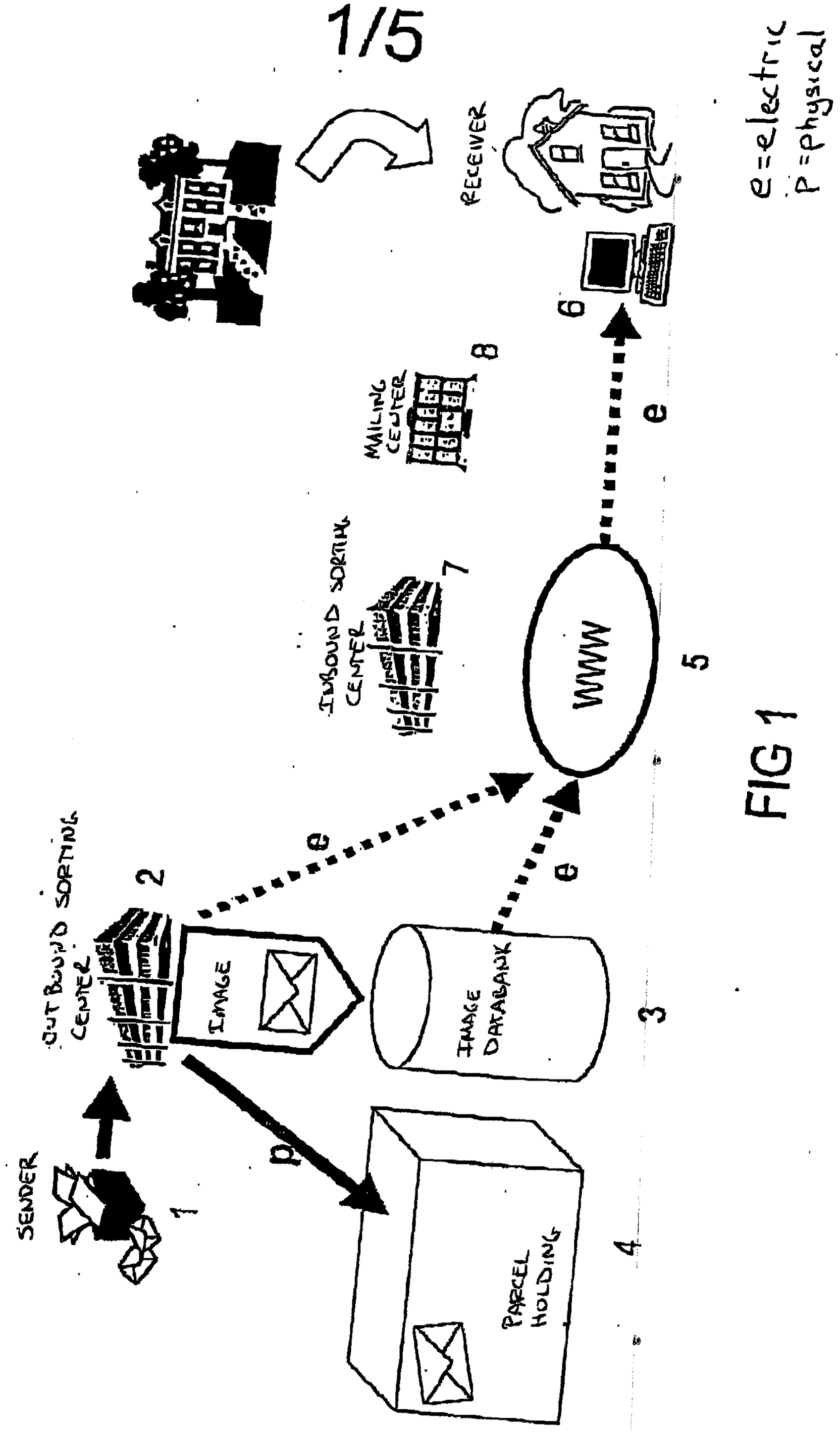

e=electric
P=Physical
RECEIVER
8
6
e
MAILING CENTER
INBOUND SORTING CENTER
7
WWW
5
e
e
OUTBOUND SORTING CENTER
2
IMAGE
IMAGE DATABASE
3
SENDER
1
P
4
PARCEL HOLDING

FIG 1

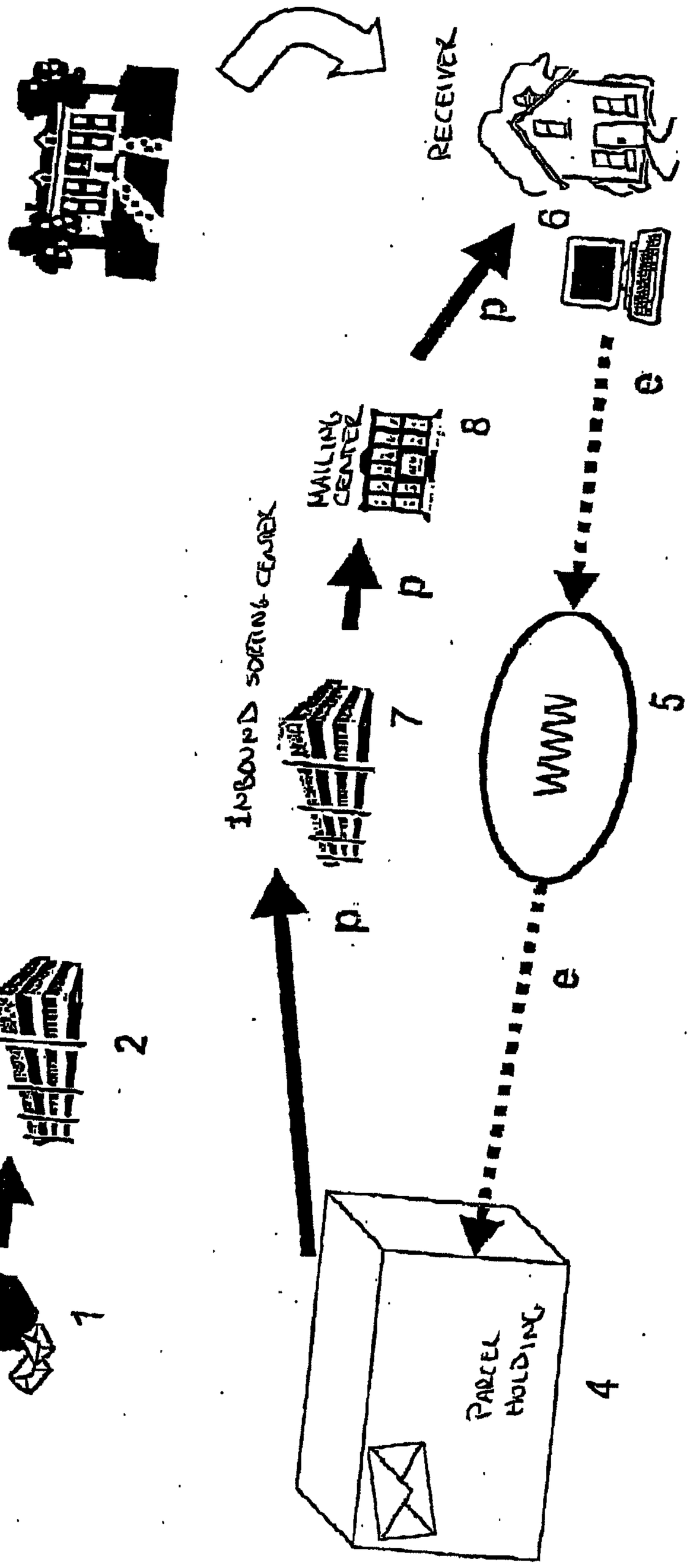

E=ELECTRIC
P=PHYSICAL
RECEIVER
9
e
p
8
MAILING CENTER
p
7
INBOUND SORTING CENTER
WWW
5
p
e
PARCEL HOLDING
4
OUTBOUND SORTING CENTER
2
Sender
1

FIG 2

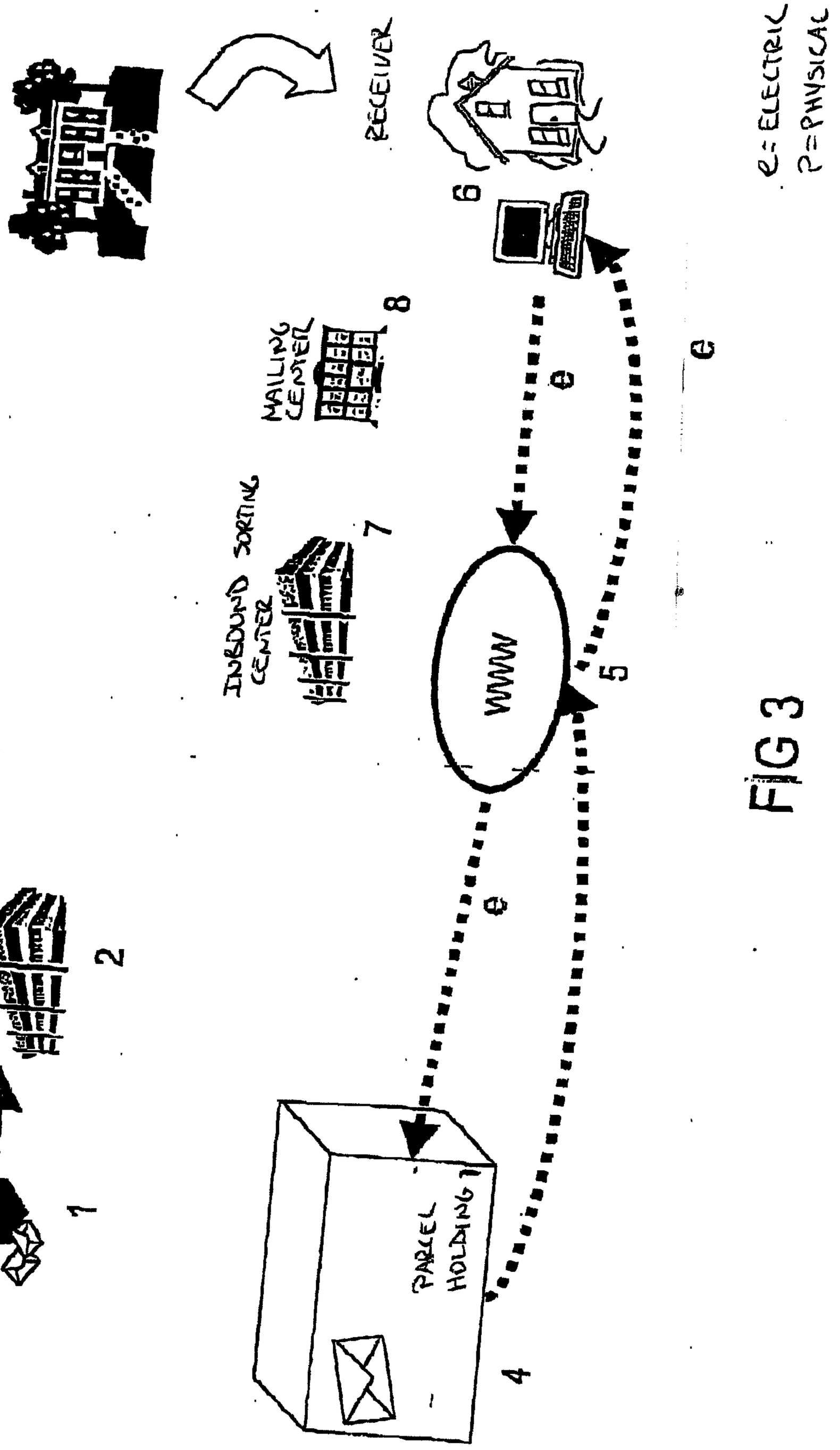

SENDER
1
OUTBOUND SORTING CENTER
2
INBOUND SORTING CENTER
7
MAILING CENTER
8
RECEIVER
6
E= ELECTRIC
P= PHYSICAL
WWW
3
PARCEL HOLDING
4
5

FIG 3

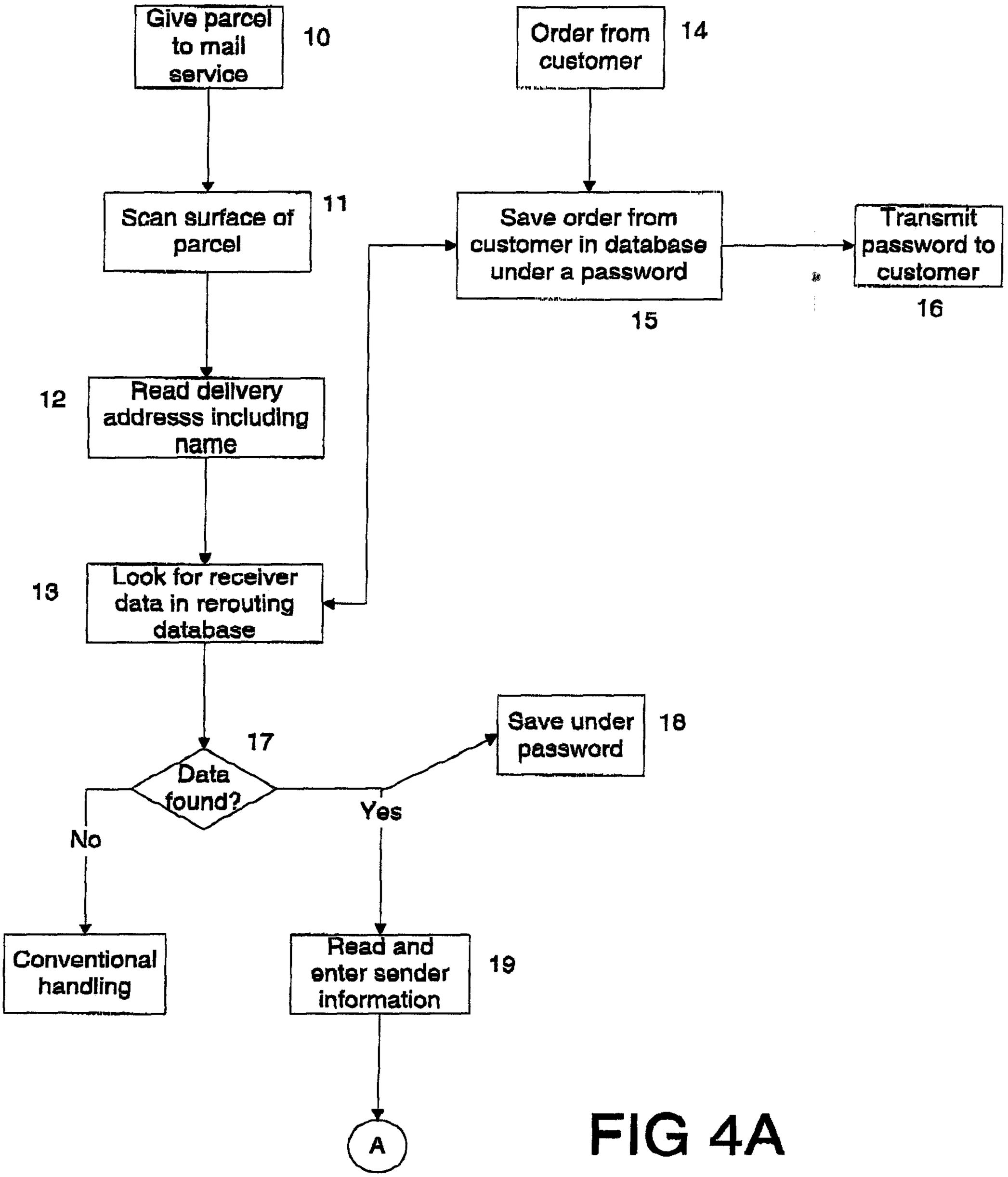

Give parcel to mail service
10
Order from customer
14
Scan surface of parcel
11
Save order from customer in database under a password
15
Transmit password to customer
16
12
Read delivery addresss including name
13
Look for receiver data in rerouting database
17
Data found?
Save under password
18
No
Yes
Conventional handling
Read and enter sender information
19
A

FIG 4A

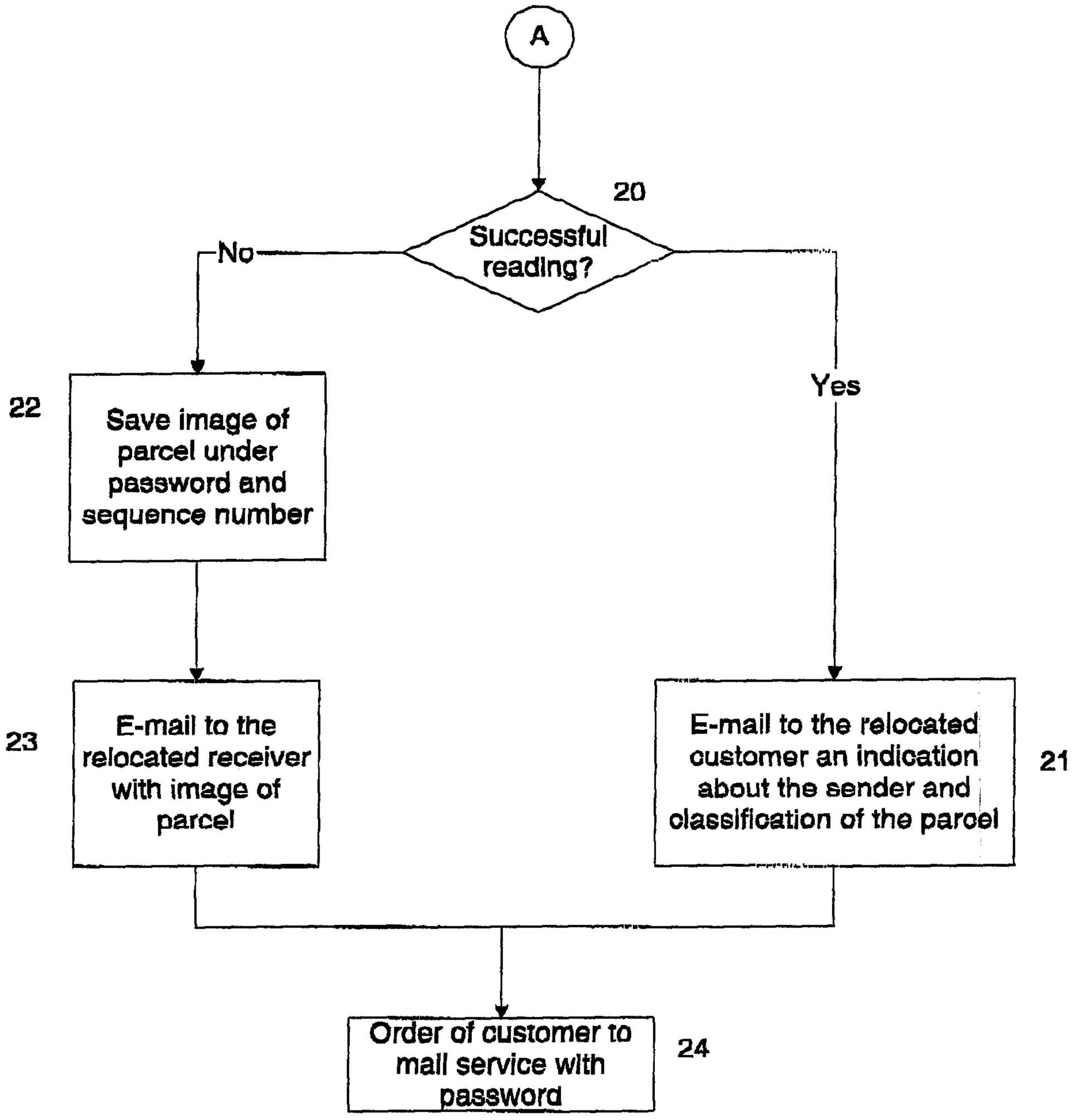
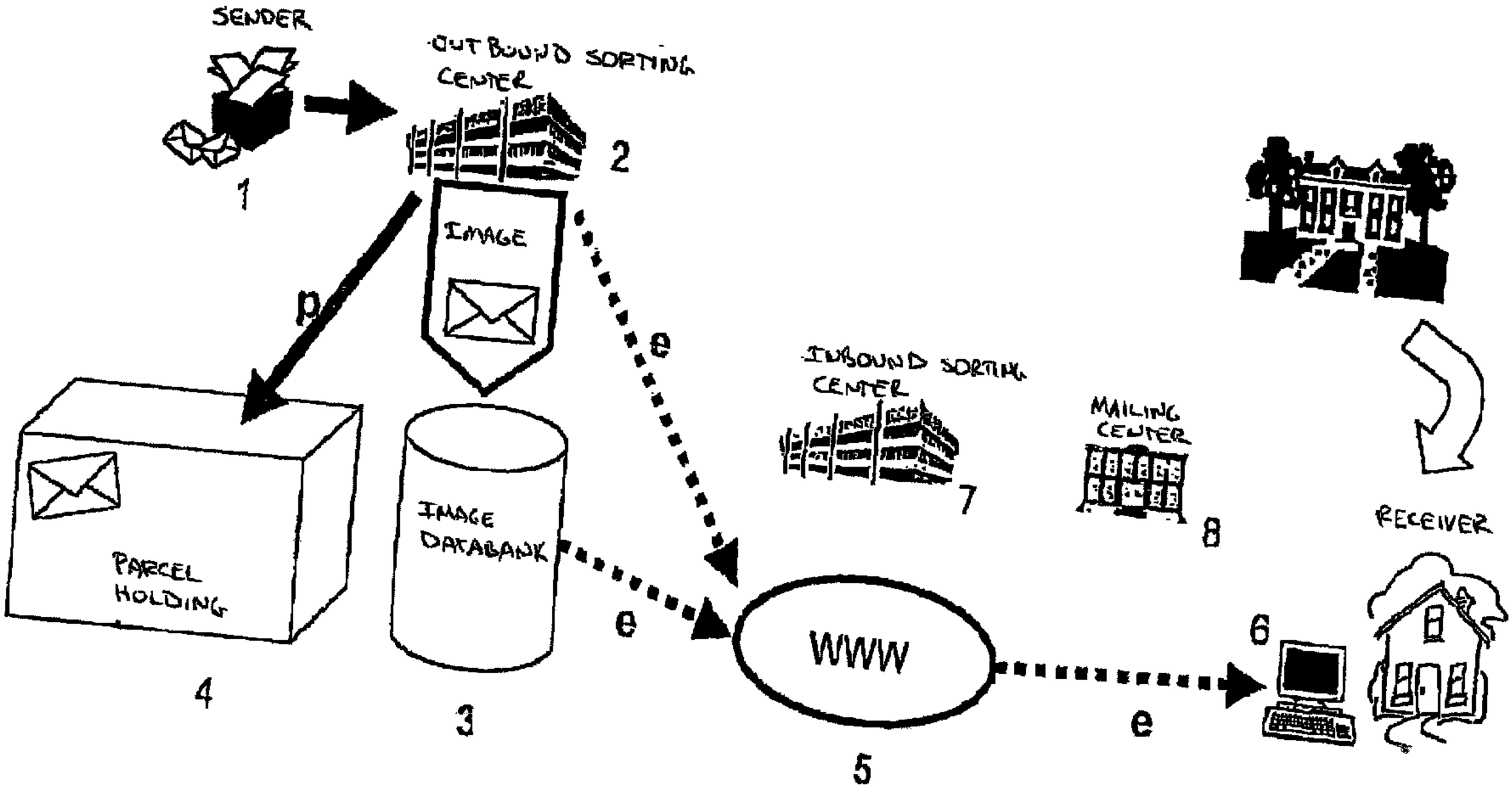

A
20
Successful reading?
No
Yes
22
Save image of parcel under password and sequence number
23
E-mail to the relocated receiver with image of parcel
E-mail to the relocated customer an indication about the sender and classification of the parcel
21
Order of customer to mail service with password
24

FIG 4B




e = electric
P = physical