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EP 0844551 A2 **WO 95/19593 A1**

(58) Field of Search
UK CL (Edition R) **G4A AAP , G4H HTG**
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(54) Abstract Title
Secure communication

(57) A method is presented for validating a purchase instruction which a user transmits to a server by internet. The server accesses a database to obtain contact information for the user, e.g. a phone number, and transmits a validation code to the user using the contact information. The user returns the validation code to the server by internet, and so validates the purchase.

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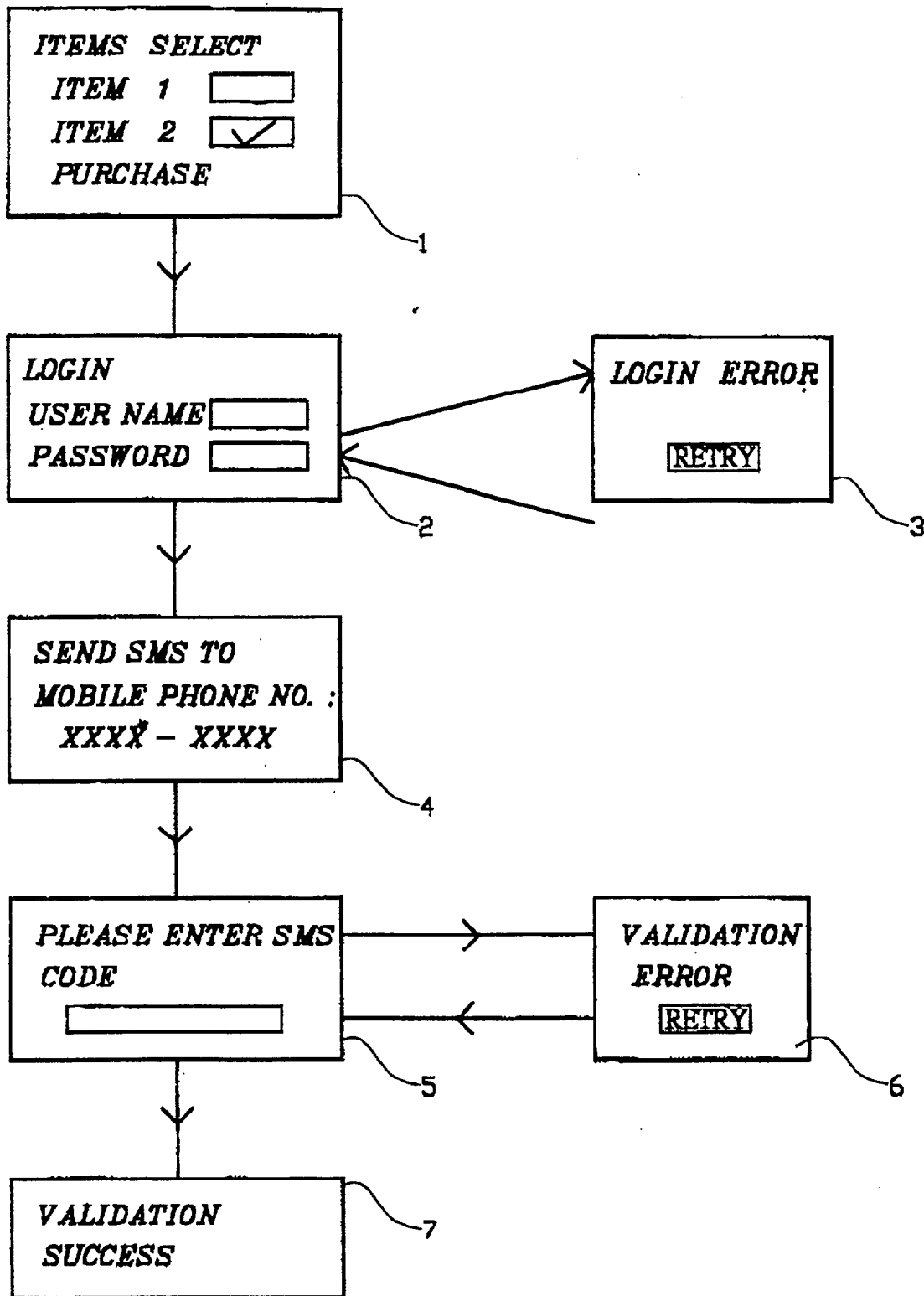


Fig.1

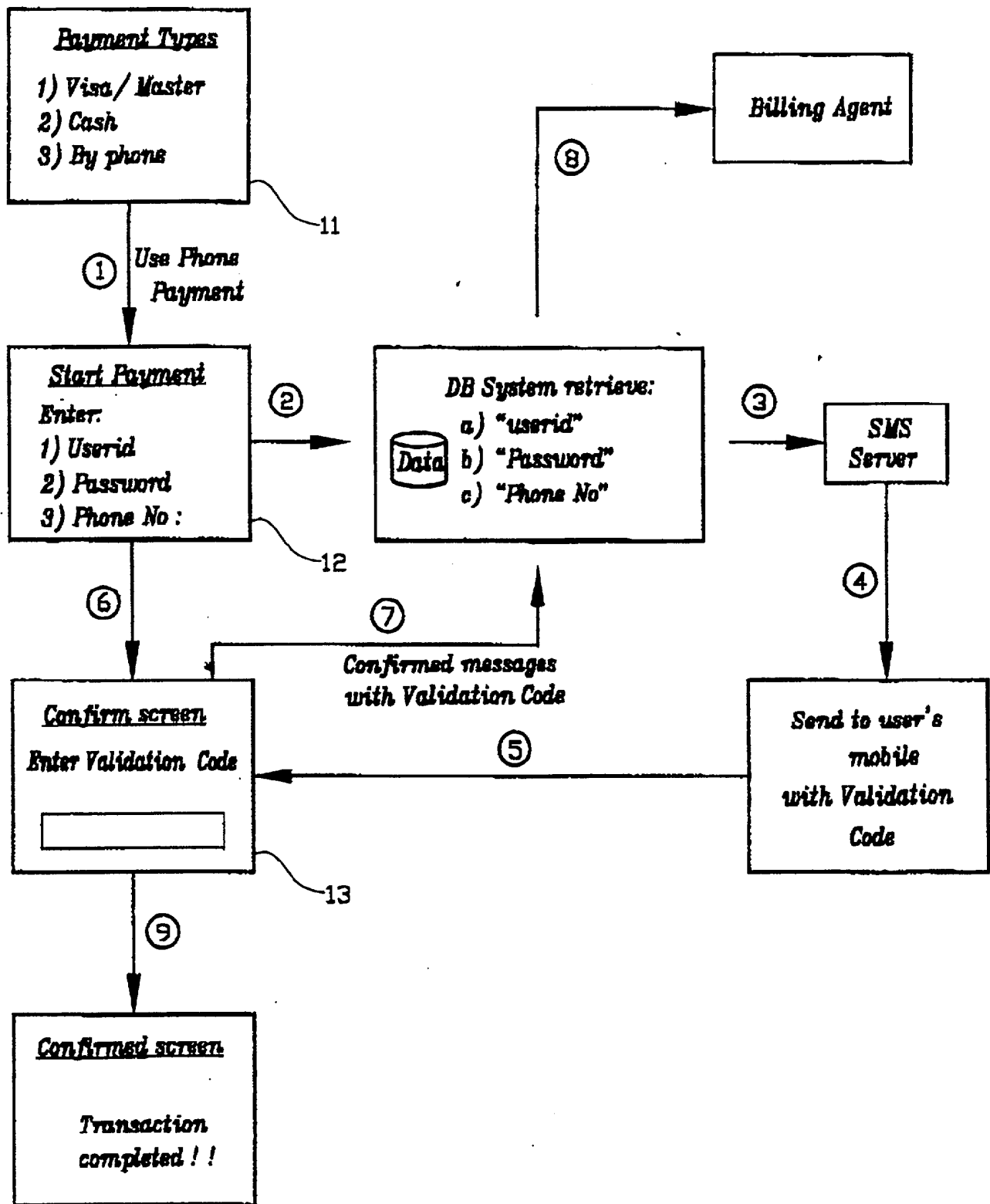


Fig.2

Secure communication

Field of the invention

5 The present invention relates to methods and apparatus for securely transferring instructions over a telecommunications network, such as the internet. The invention is especially useful for instructing commercial transactions online.

Background of the invention

10

Internet commerce is presently growing rapidly, and encompasses the purchase by users of goods, services and even information (e.g. it is now possible to pay to download music).

To make a purchase, a user communicates purchase instructions via the
15 internet to a website operated by a retailer. The instructions often include details of a credit card account held by the user. Typically, this data is printed on the credit card itself. The retailer accepts the purchase (e.g. the retailer may dispatch the purchased goods), and debits the user's credit card accordingly.

The above system is subject to a security problem that the data on the credit
20 card is accessible to any third party who gains access to the card. Such a person can remember the credit card data printed on the card, and make purchases on his own account at any later time.

Often a single user will make multiple purchases from the same website over

an extended period of time. To avoid the necessity for a given user to transmit the same credit card data repeatedly, it is known for the website to maintain a database of credit card information for many respective users. Each user is supplied with (or chooses) identification data which identifies him. The identification data includes a password and normally also a user name. Whenever a user wishes to make a purchase from the website he supplies the website with his identification data. The website uses the identification data to access the database of credit card data, and extracts the credit card information for the user.

This arrangement exacerbates the security problem identified above, since a third party who gains access to the identification data can use the website to make purchases. Such a third party may, for example, be an operative of the retailer. Alternatively, the third party may gain access to the identification data because the user has recorded it somewhere (e.g. on paper) to avoid having to remember it. In fact, the level of crime associated with online purchasing is rising rapidly.

Although, as explained, the problem of internet security is particularly acute in the example of online purchasing, it arises in other cases also. Indeed, there are many instances in which a user wishes to communicate securely with a website.

Summary of the invention

The present invention seeks to provide methods and apparatus for secure internet communication, especially for transmitting purchase instructions to an internet retailer.

In general terms the present invention proposes that user supplies a website

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