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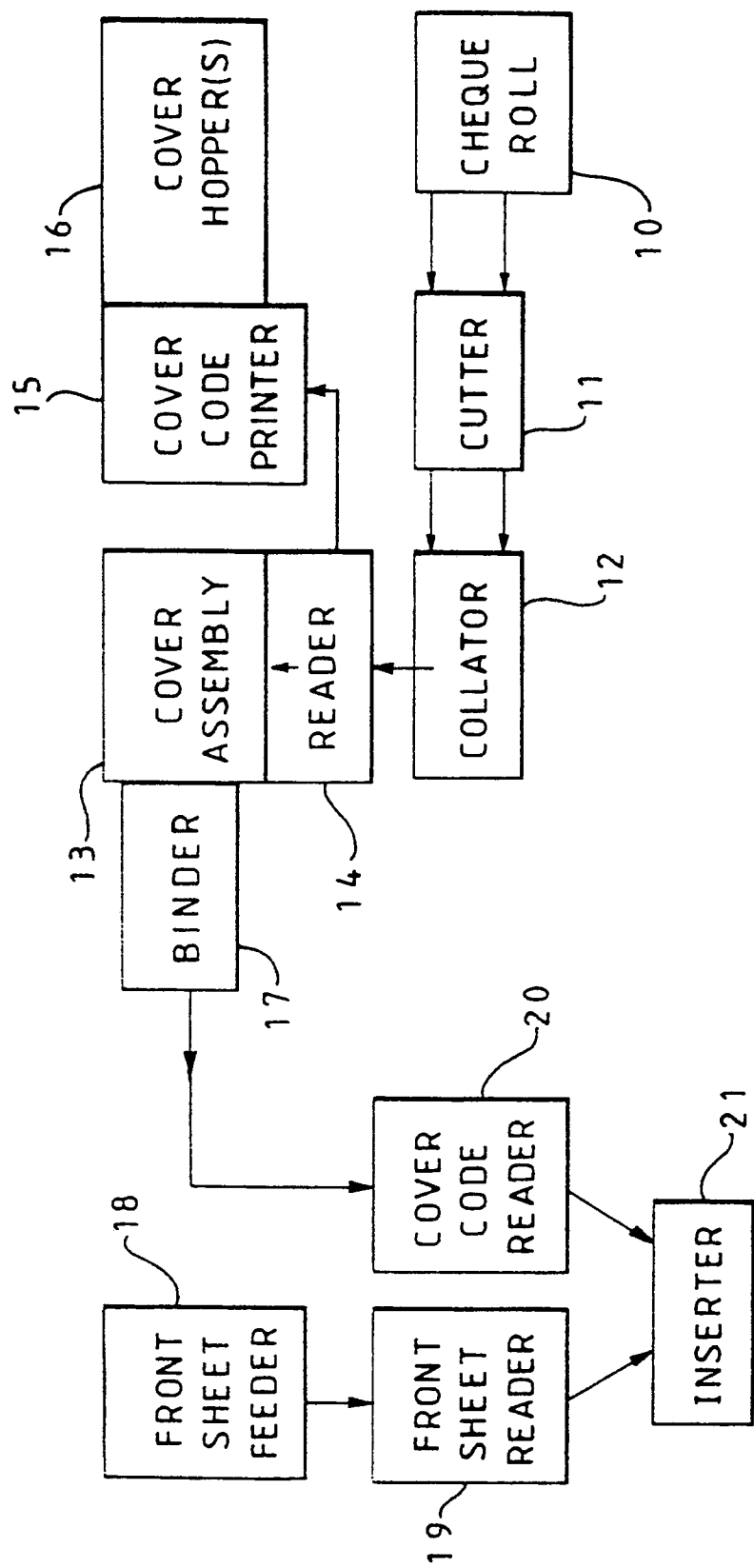
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⑤④ **Cheque books and other multi-leaf security documents.**

⑤⑦ A method of producing cheque books and other multi-leaf security documents comprising collating (12) documents pre-printed with machine readable personalised data into sets, reading (14) the personalised data from the top document of each set, printing (15) on the outer surface of one of a pair of cover sheets, a machine readable code which is substantially un-readable by the naked human eye, assembling (13) said cover sheets with the corresponding set, with said machine-readable code on an exterior surface, and using such machine-readable code to control subsequent operations on the finished document.

EP 0 439 257 A2



CHEQUE BOOKS AND OTHER MULTI-LEAF SECURITY DOCUMENTS

This invention relates to the manufacture of personalised cheque books and other personalised multi-leaf security documents not all of the leaves of which are imprinted with "personalised" data.

In the case of a cheque book, for example, the individual cheques are imprinted with personalised data at least some of which is machine readable and it is very important to ensure that such a cheque book is not inadvertently allowed to fall into the wrong hands. Current cheque book production methods involve the printing of cheques on continuous paper, the personalised data being printed as one stage of the printing process. The cheques are then cut off and collated, assembled with front and back cover sheets and then bound into books. To enable the cheque books to be mailed to the right user, each cheque book is produced with a detachable page immediately inside the front cover sheet. This is manually detached, placed in front of the book and then inserted with the book into a window envelope so that the name and address of the user is visible.

These manual finishing procedures add very considerably to the cost of producing cheque books and it is an object of the present invention to provide a method of producing cheque books and other multi-leaf security documents in which this disadvantage is safely avoided.

In accordance with the invention a method of producing cheque books and other multi-leaf security documents comprises collating documents pre-printed with machine readable personalised data into sets, reading the personalised data from the top document of each set, printing on the outer surface of one of a pair of cover sheets a machine-readable code which is substantially un-readable by the naked human eye, assembling said cover sheets with the corresponding set with the machine-readable code on an exterior surface, and using such machine-readable code to control subsequent operations on the finished document.

Such subsequent operations may comprise associating the finished document with a separate front sheet already pre-printed with appropriate personalised data and automatically inserting both into an envelope. In this case the personalised data is read from the front sheet, the code is read from the cover sheet and a comparison is made. If the front sheet is found not to match the code, the process is stopped.

Alternatively, the subsequent operations may involve reading the code from the cover sheet and using it to control the operation of an envelope printer. Where printing of a name and address on the front cover is acceptable the code could be used to control this.

The code printed on the cover sheet is preferably in the form of a bar code.

Preferably, the code is printed using an ink which has infra-red or ultra-violet reflection qualities different from those of the cover sheet material. Alternatively the code may be printed in an ink which fluoresces when irradiated with ultra-violet radiation.

An example of the invention is shown in the accompanying drawing, of which the single figure is a block diagram of the method (and the apparatus) of the invention.

Pre-printed cheques are stored on a roll 10 which may contain two or more cheques intended for different books side by side across the width of the paper. Each cheque (and any other sheets to be included in the cheque book) is already imprinted with personalised data some of which is in the form of machine-readable magnetic ink characters.

The cheques from the roll 10 pass through a cutter 11, which separates them, into a collator 12 which collates them into sets. A conveyor (not shown) transports the cheques endwise to a cover assembly station 13, via a reading station 14. This reading station incorporates a magnetic character reading head which reads the personalised data on the top cheque and provides data to a cover code printer 15 located between a cover sheet hopper 16 and the cover assembly station 13.

The cover code printer is computer controlled to print a bar-code in an "invisible ink" on the back of a back cover for each cheque book, in accordance with the data read by the reader 14. The ink used may be one which provides different ultra-violet or infra red reflection characteristics from the cover material or one which fluoresces under ultra-violet radiation.

The assembled cheque books next pass through a binding station 17 on emergence from which they are married up with corresponding front sheets from a front sheet feeder 18. The front sheets are already pre-printed with personalised data as well as names and addresses. The personalised data is read by a front sheet reader 19, and the bar code printed on the cover sheet is read by a cover code reader 20. If the data read matches, the front sheet and the cheque book are passed on to an inserting machine 21 where the front sheet and the cheque book are inserted into an envelope. If no match is found the process is stopped.

The code printed on the cover sheet may also be used for sorting finished cheque books (for example by post-code if the bar code enables this to be ascertained), for controlling printing of the name and address directly on the front of the cheque book or on an envelope into which the cheque book has been inserted immediately after code reading or for other

tasks.

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Claims

1. A method of producing cheque books and other multi-leaf security documents comprising collating documents pre-printed with machine readable personalised data into sets, characterised by the steps of reading the personalised data from the top document of each set, printing on the outer surface of one of a pair of cover sheets, a machine readable code which is substantially unreadable by the naked human eye, assembling said cover sheets with the corresponding set, with said machine-readable code on an exterior surface, and using such machine-readable code to control subsequent operations on the finished document. 10 15 20
2. A method as claimed in Claim 1, further comprising associating each finished document with a separate pre-printed front sheet for automatic insertion into an envelope, personalised data on said front sheet and the machine-readable code on the cover sheet being read and compared to control the insertion process. 25 30
3. A method as claimed in Claim 1, further comprising the printing of an address on an envelope or the front cover sheet, in accordance with the machine readable code printed on the cover sheet. 35
4. A method as claimed in any preceding claim in which the machine readable code is a bar code.
5. A method as claimed in Claim 4, in which the code is printed in an ink which has infra-red or ultra-violet reflection qualities different from those of the cover sheet material. 40
6. A method as claimed in Claim 4, in which the code is printed in an ink which fluoresces when illuminated with ultra-violet radiation. 45

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