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The U.S. Postal Money Order As a Questioned Document

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ABSTRACT: The U.S. Postal Money Order is a negotiable instrument widely used by the general public for conducting financial transactions. The integrity of this document has occasionally been violated by those individuals bent on criminal intent. Criminal activities such as counterfeiting, altering, and raising have been used to derive illicit gain. Knowledge of the production methods of genuine postal money orders and the proper manner in which they are issued to customers is essential in detecting the fraudulent money order. Some of the physical properties of the postal money order, as specified by the U.S. Postal Service, are presented in this paper, as are characteristics of the money order properly issued through the data recorder. Examination procedures, which can be effectively used by the document examiner to perceive those characteristics of the U.S. Postal Money Order that are indicative of genuineness, are discussed.

KEYWORDS: questioned documents, money orders

Ever since 1864, when domestic money orders were first offered as a mail service by the Post Office Department, they have been well accepted and depended upon by the general public as a means of conducting financial transactions. In 1973, the U.S. Postal Service introduced a new form of its money order. This money order, in keeping with the spirit of the Postal Reorganization Act, is a modern business form made suitable for use in high-speed optical character readers (OCR), magnetic ink character readers (MICR), and sorting equipment. This financial instrument is popular: 119 million money orders were issued in 1980 alone, which generated revenue fees in excess of 95 million dollars. Because of their wide acceptance, not only by banking institutions but by most every kind of business conducting monetary transactions, this document has also become an attractive instrument to the criminal manipulator.

Attempts to derive monetary gain through the illicit use of this money order have included the activities of counterfeiting, altering, and raising. The characteristics inherent in the production and issuance of the genuine money order are used by the document examiner to detect these criminal activities.

This paper describes the production (according to U.S. Postal Service Specification for 3-Part Form Set Postal Money Order) and the issuance of domestic U.S. Postal Money Orders, with specific attention given to those characteristics which are indicative of genuineness.

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Money Order Form Set

The negotiable U.S. Postal money order is one part of a three-part form set (Fig. 1). This form set consists of a customer copy or receipt, an office voucher, and the money order proper. There is a carbon interleaf between the customer copy and the office voucher, and one between the office voucher and the money order. These five sections of the money order, which include the two carbon interleafs, are glued together at one end and perforated to form a "break apart" set. The form set enables the essential issuing data to be recorded simultaneously on the three copies: customer receipt, office copy, and money order (Fig. 2).

The printing of the postal money order form set is accomplished primarily by the flexographic process. The flexographic printing process or flexography is a form of rotary web letterpress using flexible rubber plates and fast-drying fluid inks. As with other relief printing processes, flexography produces an effect referred to as "squash" or "ink squeeze," which is a heavy rim of ink at the edges of type characters. However, unlike typical letterpress, there is no reverse side embossment with flexography.

The printed image on each of the three parts of the money order form set is different in both color and format. Separate and distinct paper stocks are also used in forming each part of the form. The different printed images coupled with the paper stock make each part of the form set readily distinguishable from the others. When a money order is purchased, the customer is given the money order and receipt portion of the form set. The office copy or voucher is retained by the Post Office and is later used to reconcile the negotiated money order.

The negotiable money order is a hard copy of the form set. It measures 83 by 152 mm ($3\frac{1}{4}$ by 6 in.) and is made from OCR-processable bond paper having a basis weight of 48 lb. The average single sheet thickness is 0.1168 mm (0.0046 in.) with a plus or minus 0.0076-mm (0.0003-in.) tolerance. The paper stock is composed principally of bleached chemical wood pulp. No optical brighteners are added to the paper during its manufacture, and the paper is free of any water marks. There is a corner cut at the upper right 6.35 mm (0.250 in.) along the top and 9.525 mm (0.375 in.) along the side. Printing is done on both sides of the money order.

Serialization of postal money orders is accomplished by relief printing. (Relief printing, of which letterpress is the most common form, is printing from raised type.) Serialization occurs simultaneously with the flexographic printing. The serial number appearing in OCR type at the top left and in the MICR band at the bottom of the money order consists of the

Receipt and Money Order to Customer
Retain Voucher

NOT NEGOTIABLE **CUSTOMER'S RECEIPT** **NOT NEGOTIABLE**

2562500085

SERIAL NUMBER YEAR MONTH DAY POST OFFICE DOLLARS AND CENTS AMOUNT OF ORIGINAL MONEY ORDER

Remove Carbons with Stub and Destroy
SPEED-TEK MOORE BUSINESS FORMS INC. 24

UNITED STATES POSTAL SERVICE
U.S. MAIL

PAY TO **VOID**

PURCHASED BY

FOR

This receipt is your guarantee of a 100% refund if your money order is lost or stolen, provided you fill in the Pay To and Purchased By information on the money order in the space provided.

If your money order is lost or stolen, present this receipt and file a claim for a refund at your Post Office. Please allow 60 days before making a claim or inquiry.

Not Negotiable

FIG. 1—Three-part U.S. Postal money order form set first introduced to the public in 1973.

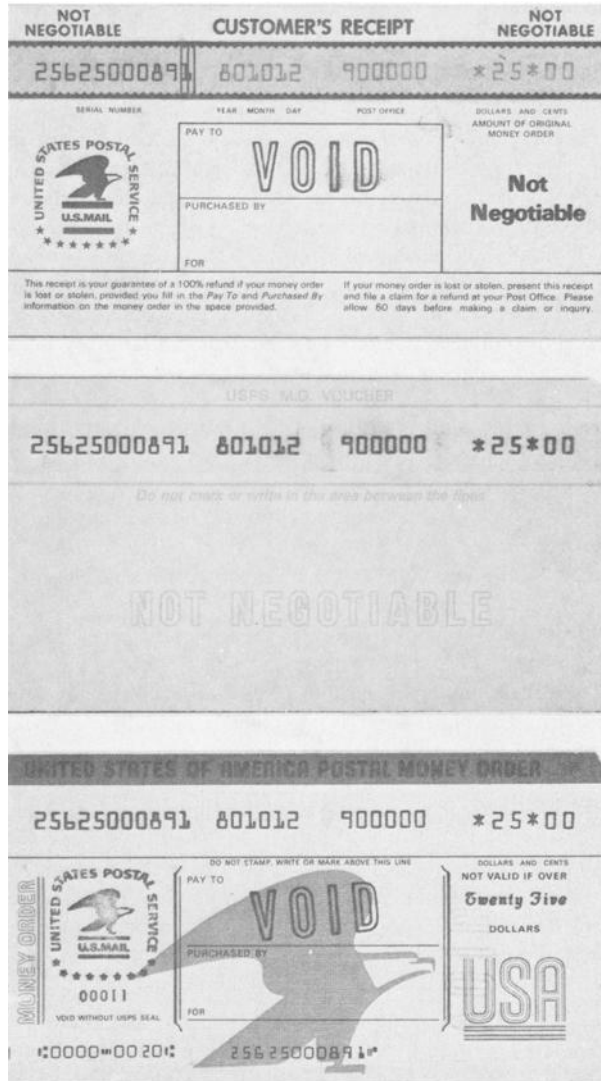


FIG. 2—Three-part form set enables the issuing data to be imprinted simultaneously on each part: customer's receipt (top), voucher (middle), and money order proper (bottom).

initial ten digits of an eleven-digit sequence. The eleventh digit appearing in this sequence is a check digit. All other printed images on the face of the money order are carbon impressions formed during the issuing of the money order through a money order machine.

The printing of the U.S. Postal money order is contracted out to private printing firms. To date, all three-part form set postal money orders have been printed by Moore Business Forms, Inc., of Green Bay, WI. The Postal Service reserves the right to make changes in the designs or specifications for its money order. The printed image found on the postal money order has been changed only once since the money order was introduced in 1973. These newly designed money orders (Fig. 3) were made available for distribution in late 1979.



FIG. 3—Money orders in this design were available for issue in late 1979.

Money Order Machine (Data Recorder)

The postal money order is issued to the customer with the use of the money order machine (data recorder) especially designed by Addressograph Multigraph Corp. for the U.S. Postal Service. This machine (Fig. 4) is portable and equipped with fixed, movable, and removable parts. The valid issuance of a postal money order imparts readily discernible characteristics to the money order.

A data recorder is actually an imprinter that embosses pertinent issuing data on the money order form sets in a manner similar to a credit card imprinter. The data, which are recorded on the form set at the time of issuance, include the office number, date, and amount. Originally, a limiting amount and a seal of validation were also recorded on the money order part of the form set. The requirement of a limiting amount and seal of validation was removed on a trial basis from U.S. Postal Service procedures on 22 March 1981.

The office number is recorded from a fixed plate on the money order machine. The date by year, month, and day (for example, 801012) and the actual amount of the money order are recorded from print wheels located within the machine. The date, which is changed daily, is set by use of a hand-held stylus, whereas the amount is changed depending on the amount

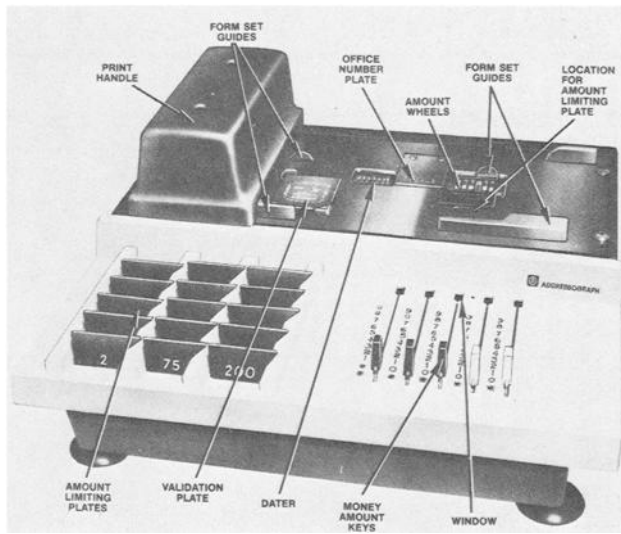


FIG. 4—The postal money order imprinter (data recorder).

of the money order purchased and is set by a series of manually operated levers. Any amount up to \$500.00 can be recorded on the money order. This maximum amount for a single money order has been changed twice since the introduction of the three-part form set money order. The maximum amount for a single money order was \$300.00 at first, then changed to \$400.00 in May 1978 and to \$500.00 on 22 March 1981. An image is formed in all digit positions: units, tens, and hundreds. Where there is no numerical value, the image appears as an asterisk, as does the decimal point. For example, a money order issued for \$5.00 would appear as **5*00, one for \$25.75 would be recorded *25*75, and one for \$200.10 would read 200*10.

The data to be recorded are raised slightly above the recording surface of the data recorder, and the imprinting of the form set is accomplished through pressure applied by a print handle. This pressure causes carbon impressions of the issuing data to be formed on the face of the money order form set. This pressure also imparts characteristics to the money order that, when examined, can resolve a question about genuineness. These characteristics are indentations formed by the raised type of the money order machine when pressed against the reverse side of the money order (Fig. 5). The absence of these indentations would be a sure indication that the money order was not issued properly through a money order machine.

Examination of Postal Money Orders

Possessing the knowledge of how the domestic U.S. Postal money order is produced and issued simplifies the examination of a questioned money order. Most fraudulent postal money orders can be easily detected through careful scrutiny of the documents' physical properties. Generally, those individuals who have manipulated money orders to illicitly obtain monetary gain have relied upon the ignorance and naiveté of the common public, which readily accepts negotiable instruments that are not genuine. It is the rare occasion that the counterfeiter or manipulator of postal money orders exercises the patience and diligence necessary to accurately duplicate the genuine document.

In examining the physical properties of a questioned money order, it is most advantageous



FIG. 5—Reverse of money order viewed with oblique lighting revealing the mirror image indentations of the issuing data.

to compare it with a known standard (genuine postal money order). Additionally, it is also beneficial to refer to the specifications used in the production of genuine money orders. Although it is not improbable to find variations even among genuine money orders, these variances should be within certain limits based on the tolerances provided within the production specifications. Any major deviation between questioned and standard would certainly have to be resolved accordingly.

Because there are provisions for quality assurances stated in the specifications, it would be unlikely to find major defects in the physical properties of a genuine money order. Any great departure from the specifications could be grounds for rejection by the Postal Service. Major defects classified by the Postal Service, in its inspection of sample money orders, would include incorrect size, incorrect color, corner cut not as specified, illegible printing, defective tinting, duplicated serial number, and incorrect check digit. Should a money order deviate greatly in any of these properties, its authenticity would be challenged (Fig. 6).

The laboratory instrument most useful for examining a suspect money order is a low-powered binocular microscope with a magnification of between $\times 3$ and $\times 10$. The microscope allows for the observation of the fine details that characterize a properly issued money order. Good general illumination by reflected light is also needed. In addition, illumination by oblique lighting is necessary to observe embossing and indentations in the document. Other energy sources, such as infrared and ultraviolet, can also be utilized to detect fraudulent money orders. Short- and long-wave ultraviolet lights (115 V, 60 cycles, manufactured by Spectroline, a division of Spectronics Corp., Westbury, NY) have been used to discern chemically altered money orders and will readily detect the presence of optical brighteners in the paper stock of the nongenuine document. Color filters can enhance or subdue certain colors found in the printed image of the money order, facilitating the examination of specific areas. (A Kodak Wratten® #47 filter is ideal for enhancing the pantograph or security design of the postal money order. Any disturbance of this design, either by physical abrasion or chemical eradicator, can be made readily visible.) All such equipment is readily available to the questioned document examiner.

The most important characteristic of an authentic postal money order, in the opinion of this author, is the presence of indentations reflecting the issuing data (date, office number,

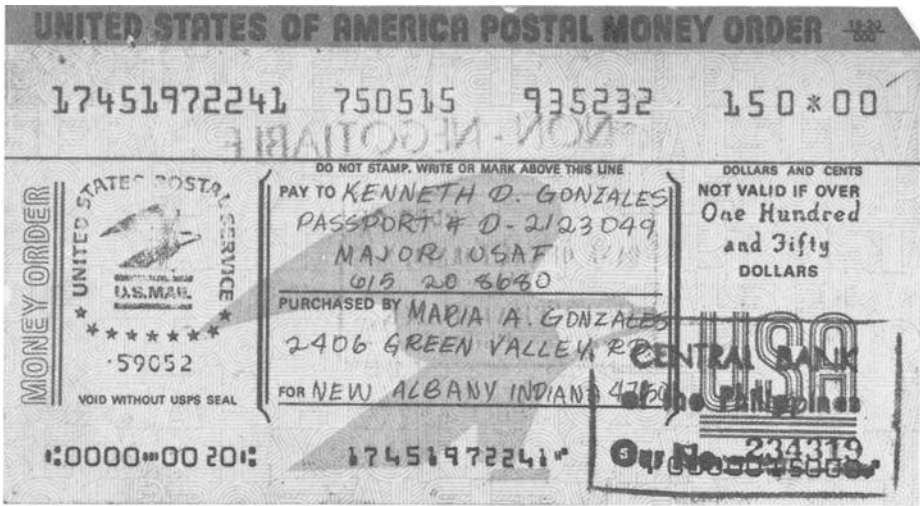


FIG. 6—Counterfeit money order. Examination of this document revealed major deviations from a genuine money order. The size, color, corner cut, printing, and security tint were not as specified by the Postal Service. The serial number was later found duplicated in other counterfeits, and the check digit is incorrect.

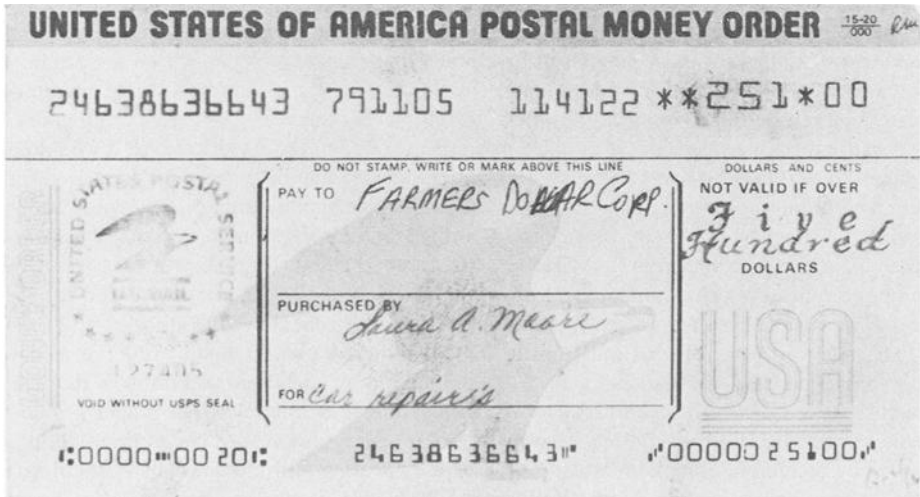


FIG. 7—Raised money order. This money order was raised from \$1.00 to \$251.00. The placement of the asterisks in the amount is incorrect and, at the date of issue, 5 Nov. 1979 (791105), the limit was not \$500.00.

and amount) formed when the money order is processed through the data recorder. These indentations, revealed on the reverse of the money order with oblique or side lighting, reflect the mirror image of the issuing data which are embossed on the face of the money order.

Counterfeiters attempt to imitate all recorded images found on the genuine document. Regardless of the printing or duplicating process used by the counterfeiter, the characteristics produced by the data recorder would not appear in the counterfeit document. Should off-

set printing, a planographic printing process, be used to reproduce a genuine money order, the printed image would appear flat and lack the embossment, both reverse and frontal, formed by the relief printing of the serial numbers and the imprinting of the issuing data by the money order machine. Letterpress, a relief printing process, will produce a reverse side embossing but will lack the frontal embossment produced by the money order imprinter. Color copiers, such as the Xerox 6500, will produce an image that appears slightly raised on the document but will lack the embossment and indentation caused by relief printing. Also, this color copier, because of its inherent characteristics, cannot accurately reproduce certain features of the genuine money order, such as security design, black lettering, and subtle color variations.

Altered or raised money orders will possess discrepancies between the amount shown on the face of the money order and the indentations formed when originally issued through the money order imprinter (Fig. 7). The original amounts can usually be ascertained by examining the reverse side indentations with oblique lighting.

Because the negotiated money order must be reconciled with the office copy or voucher, any money order that does not have a corresponding voucher or disagrees with the recorded data on the voucher is automatically separated and questioned. Subsequent examination of the money orders, with particular attention given to those characteristics of a properly issued postal money order, should ascertain whether the money order is counterfeit, altered, or raised or whether it is actually a genuine document.

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