

CASE REPORT

Maureen Casey Owens,¹ A.B.

The Comparison of Round-Hole Perforations of Postage Stamps

REFERENCE: Casey Owens, M., "The Comparison of Round-Hole Perforations of Postage Stamps," *Journal of Forensic Sciences*, JFSCA, Vol. 30, No. 4, Oct. 1985, pp. 1272-1278.

ABSTRACT: The comparison of round-hole perforations is discussed in terms of a case involving threatening and obscene anonymous letters sent to a young girl. The disguised, block style hand-printed letters could not be successfully compared with the suspect's normal handprinting. The last communication to the victim was a handwritten letter, subsequently identified with the suspect. A comparison was made between the postage stamp on the handwritten letter, now of known origin, with the postage stamps on each of the six anonymous letters.

KEYWORDS: questioned documents, postage stamps, comparative analysis, perforations

A brief background of the circumstances of the investigation is pertinent to understanding the final direction of scientific inquiry. The 17-year-old victim, a senior in high school, began receiving a series of anonymous phone calls and letters which were threatening and obscene in nature. There was strong suspicion that the threats originated from a young man, three years her senior, who had recently requested permission of her parents to date her and had been refused. The young man was under indictment for the murder of a high school senior two years earlier. He was presently free on bond because of a successful defense motion to suppress as evidence some statements made to police early in the investigation. The prosecution was appealing the decision. The circumstances in the first case were similar to these. All three persons had attended the same high school and were acquainted with one another.

The letters, phone calls, and a couple of incidents occurred over a nine-day period. There was an urgency to identify the offender lest a fate, similar to the previous young girl, happen again. The letters became the most important evidence to the identity of the offender.

Seven anonymous letters were received over a nine-day period. Latent prints were developed on two letters which were identified with the suspected young man, providing cause for his arrest. Six of the seven letters were prepared in a block style of handprinting, intended as a disguise. One letter was typewritten. The last letter, received on the ninth day, was handwritten, signed by the suspect and bore his return address. This handwritten letter was a note of sympathy for the girl's troubles and indicated a desire to be of help if needed.

Presented at the 37th Annual Meeting of the American Academy of Forensic Sciences, Las Vegas, NV, 12-16 Feb. 1985. Received for publication 19 Feb. 1985; accepted for publication 29 March 1985.

¹Chief document examiner, Chicago Police Department, Crime Laboratory, Chicago, IL.

After the suspect's arrest, handwriting standards were obtained for comparison with the anonymous handprinted and signed handwritten letters. The handwritten letter was prepared in an entirely normal hand and identity was effected. Although requested to do so, the suspect continuously claimed ignorance in the preparation of a block style of printing and so the known standards were never suitable for comparison with the six handprinted anonymous letters. These six letters, although prepared in a block style of handprinting intended as a disguise, were comparable to one another and could be identified as the work of one writer.

In preparation for trial, a request was made as to the feasibility of comparing the cancelled postage stamp on the handwritten letter with the cancelled postage stamps on each of the six handprinted anonymous letters. Since the handwritten letter had been identified with the offender, the postage stamp on this letter could be considered of known origin while the postage stamps on each of the six anonymous letters were of unknown origin. The purpose of comparison was to determine if any one or more of the six unknown postage stamps was at one time attached to the postage stamp of known origin.

Comparison of Stamps

The first phase of comparison was to determine if the questioned stamps contained class characteristics in common with the known stamp. All stamps had these class characteristics: USA, 13¢, liberty bell design, and removal from a booklet for counter sales. An examination of the location of cut edges and perforated edges on postage stamps will allow a discrimination among the formats in which stamps may be sold (Fig. 1), for example, booklets for counter sales, booklets for vending machine sales, sheets, or coils.²

After determining that the questioned and known stamps contained common class characteristics, a comparison of the individual characteristics was in order. A comparison of the perforated edges could only be made if the stamps were removed from the envelopes. Permission was received to do so and the postage stamps were steamed from the envelopes and marked accordingly. The appropriate perforated edges of each of the six stamps of unknown origin were then microscopically compared to the appropriate perforated edge of the stamp of known origin (Fig. 2). The known stamp has three perforated edges and one cut edge at the top; therefore, its position in the booklet was on the inside top row. The three perforated edges allowed the possibility of three stamps being matched. The perforated edges and cut edges of each of the questioned stamps determined their relative location in the booklet and therefore, the appropriate edge for comparison. In any case, only one edge of a questioned stamp could be in contact with the known stamp.

In comparing the perforated edges of the stamps, consideration was focused upon the following individual characteristics: alignment of the round holes and bridges, width of the bridges, length of the bridge tears, bias of the bridge tears, and tear-up or fragmenting of the edges. Five of the questioned stamps were readily eliminated using these criteria; one questioned stamp matched an edge of the known stamp in all respects (Figs. 3 and 4). The questioned stamp found to be in agreement with the known stamp in all individual characteristics was taken from the upper right corner of the booklet. Although only one questioned stamp was directly associated with the known stamp, all six anonymous letters would be associated with the known letter since the six were previously determined to be in the hand of one writer.

Perforation of Stamps

The manner of perforating postage stamps depends upon the format in which they are to be sold. L-Perforators, generally used for perforating sheet stamps, may have wheels in both directions or wheels in one direction and bars in another. The paper turns to perforate in the

²William Farrell, document examiner, retired FBI, private correspondence.

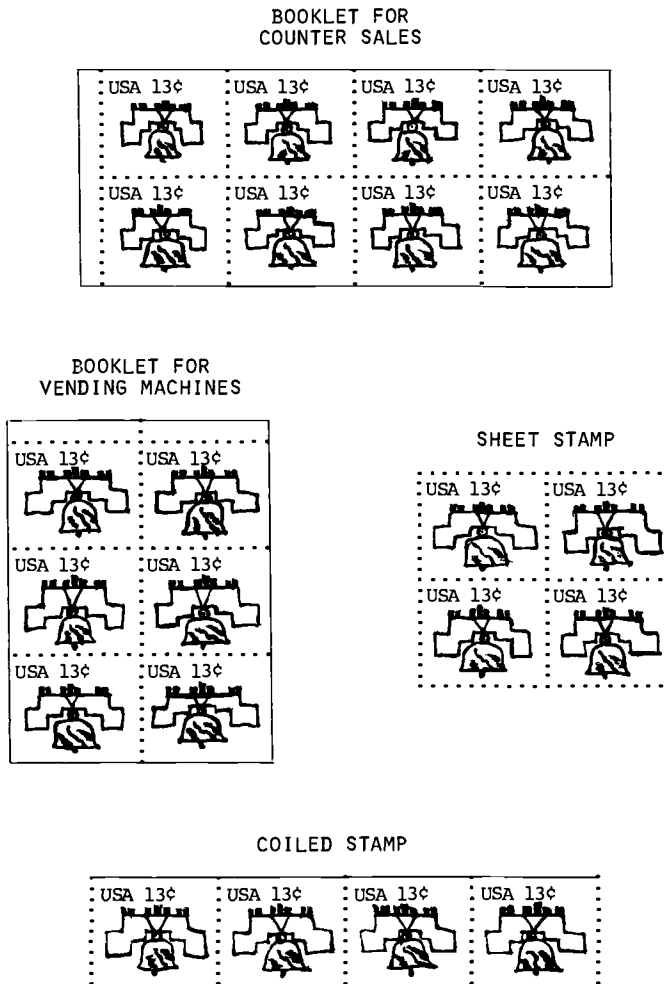


FIG. 1—*Formats of postage stamp sales.*

second direction. Rotary perforators are also used for sheet stamps, but these are usually located on the printing press. Coil perforators use wheels or bars to perforate a sheet before it is slit into coils. Panes for booklets (counter and vending) are perforated by plates the size of the pane. The plate moves up and down, perforating one pane at a time. All panes in one booklet should be perforated with the same plate. (These methods prevailed at the time this case was examined.)

Testimony

The presentation of this evidence in court was entirely different than any previously presented by the author. Thus, considerable thought was given to the manner of demonstrating the evidence effectively, to qualifications thought pertinent to presenting such testimony, and necessarily, to the course of cross-examination. The demonstration of the stamp evidence was made in the form of three large charts. The first chart was a sketch of the counter sales booklet

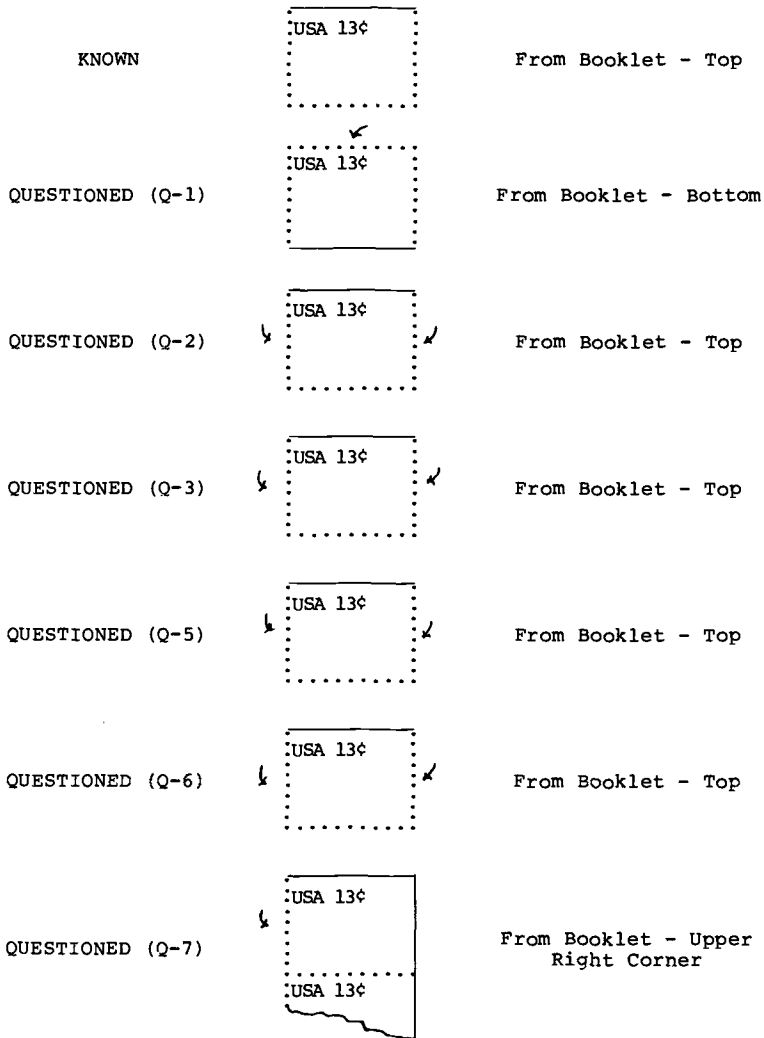


FIG. 2—Comparison of appropriate perforated edges of known and questioned stamps.

form of 13¢, USA, liberty bell stamps to explain class characteristics. The second and third photographic charts depicted the nonmatch of one of the questioned stamps with the known stamp, and the match of the one questioned stamp with the known stamp. It was felt that if a jury could see and understand the importance of individual characteristics with a nonmatch, the explanation of the match would be facilitated.

Before presenting the postage stamp evidence, additional qualifications were offered in this area. The author testified that she had previously examined a case involving the matching of postage stamp perforations and that she had seen the operation of printing and perforation of postage stamps. The defense objected to the pending testimony on two grounds: (a) that such an examination and comparison was not within the scope of document examination and (b) that the witness was not qualified to present such testimony. The judge ruled that based upon the examiner's testimony, the stamp evidence was within the scope of document examination



FIG. 3—Front and back views of nonmatching questioned stamp with known stamp.

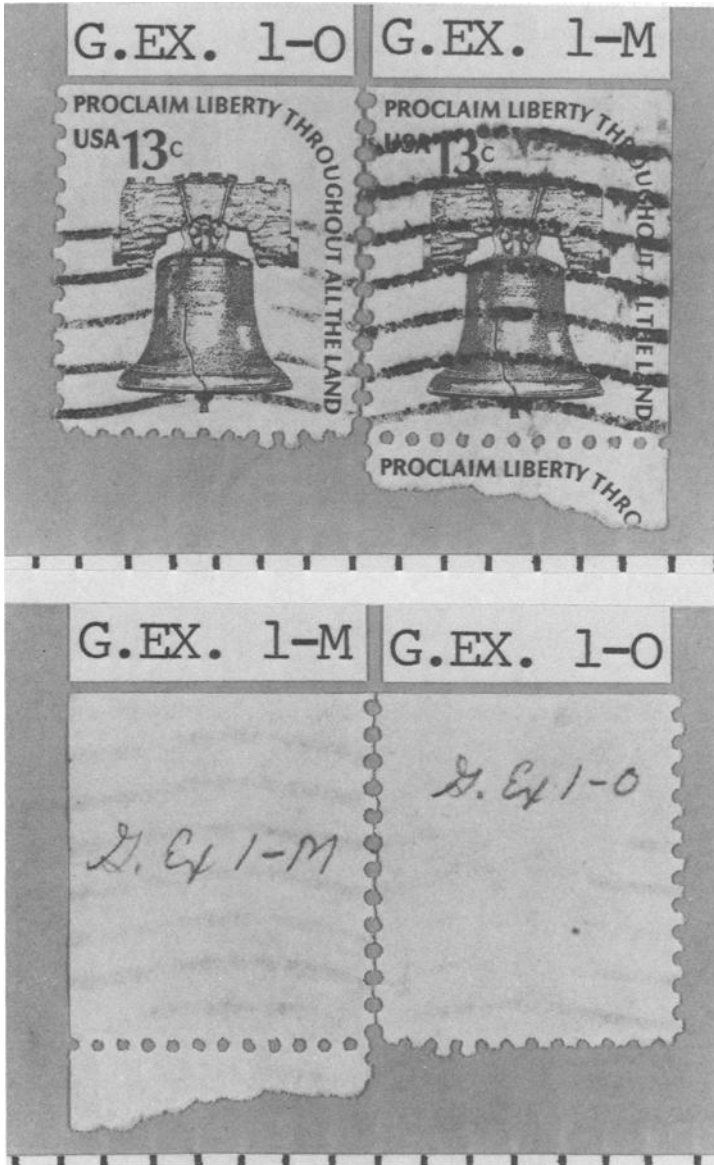


FIG. 4—Front and back views of matching questioned stamp with known stamp.

and that she was qualified to testify to this evidence. The jury would decide the weight to be placed upon this testimony.

Lastly, the author's previous postage stamp perforation experience, research in this area at the time, and opportunity to view and study the actual printing and perforating mechanisms provided a good foundation from which to answer reasonable inquiries on cross-examination. The practice of viewing and examining the actual mechanical operations proves to be a beneficial part of any such studies.

Address requests for reprints or additional information to
Maureen Casey Owens
Chicago Police Department
Crime Laboratory
1121 S. State St.
Chicago, IL 60605