

Case Report

Can You Have the Perfect Training Case?

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This case involves a bomb threat letter listing the Aurora Police Department in Colorado as its intended target. When responding to the return address on the letter, officers retrieved multiple harassment letters with pornographic material and were informed by the individuals at this address of stalking by a suspicious neighbor. The recipients of these harassing letters offered that there were additional victims in the neighborhood. Examination of the initial bomb threat document using the elements of document examination tied the multiple cases in the neighborhood together. This case involved handwriting identification, indented writing, observations of an ink defect in the printing process of a notepad and a crease in another notebook, and a physical match to prove the connection between the multiple cases. The results of these examinations were instrumental in obtaining a conviction.

Introduction

Any student who has made it through the training process to become a document examiner knows how arduous that period was, especially with the seemingly endless reading and observations of varieties of handwriting. At first glance, all handwriting looks similar. Then there are the characteristics that, to the beginner, appear unique but to the experienced examiner are not unique at all. Add the indented writing examinations using an electrostatic detection device that too often yield no results, and one can begin to get a picture of just how onerous the field of questioned documents (QD) can be to conquer.

I received my training under the auspices of Beverly Mazur, who, prior to coming to the Aurora Police Department (APD) Crime Laboratory, worked for 11 years as a document examiner with the Omaha, Nebraska Police Department. The first 13 months of training involved reading, prepping cases, and completing practical exercises. Once I became well versed in daily evidence procedures, various aspects of the work became routine. However, on June 15, 1998, the APD received a letter threatening to blow up the police station. Examination of that letter became exciting, as it was a great opportunity to learn something new.

Background

The letter was delivered by United States mail in a plain white envelope with the handwritten

address "Police Dept Headquarters [sic]." The return address was handwritten on 2 lines: The 1st line was "Joe," and the 2nd line contained the street address "1151 Hillside St." Inside the envelope were 2 sheets of white 3-ring spiral notebook paper. The 1st sheet contained a letter written on both sides of the page in black ballpoint pen using primarily upper case letters. The writing deteriorated as the language became offensive. The 2nd sheet contained a rough map showing the police station and a demand for \$1,000,000. The quality of the handwriting on the letter showed consistent speed and appeared to be that of a poorly educated and low-skilled writer (Figures 1a,b,c).

APD (Victim #1) officers immediately responded to the listed return address on 1151 Hillside Street and contacted the residents. The residents denied writing or sending the bomb threat letter but told officers that they also had been the recipients of harassing letters and pornographic materials (Victim #2). The officers collected a note, an envelope, and a pornographic advertisement from the victims at this location. These residents indicated that 4 of their neighbors also received similar material.

When contacted, the individual neighbors recalled receiving the letters and pornographic material, but not all had retained the items. At one residence, 1170 Hillside Street, the pornographic material was torn from a magazine and taped to the daughter's bedroom window (Victim #3). This resident reported that an unknown man had attempted entry through a bedroom window

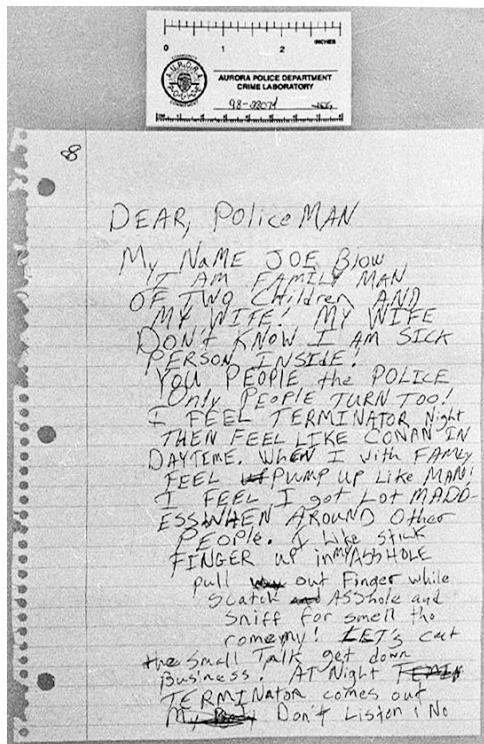


Figure 1a.

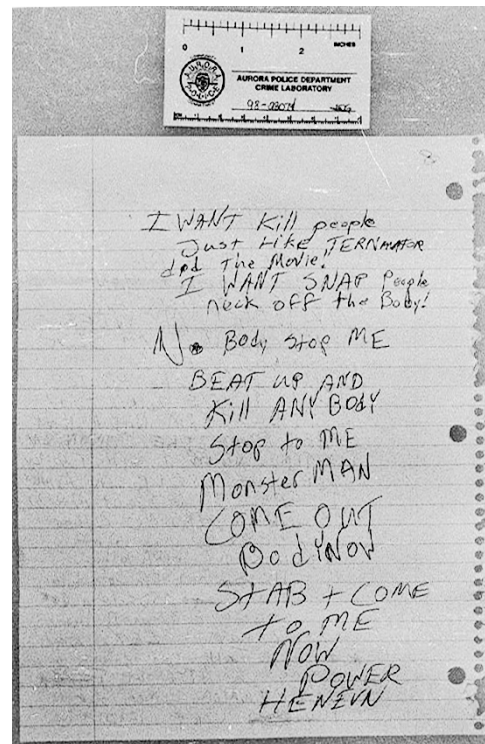


Figure 1b.

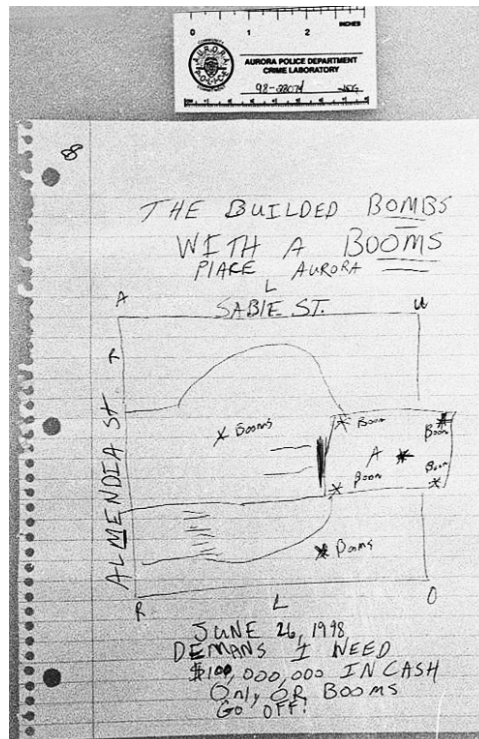


Figure 1c.

Figures 1a,b,c. Anonymous demand letter received by the Aurora Police Department on 2 sheets of paper: front (a) and back (b) of first sheet, and second sheet (c).

"Boo!" You Know
 Who?
 "So, Where Is
 My Letter?"
 Maybe you Bitches
 don't like Black people?
 I told you Bitches how
 I feel about one lady or
 feshbro bitch?
 What's promble Bitch?
 No Letter more promble
 with you Bitch! ~~That's~~
 Madass want stop! That's
 promiss!
 I want Letter Now! Not
 Later Not Towwer!
 Date Set!
 Turnage October 2, 1997 Thursday
 Near ~~the~~ your tree place!

Time: 8:00 AM 10:00 AM
 No Letter more prombles
 Then you guys have 30 Days
 From Now! "Do You Got It!"
 "Scares Halloween"
 Booms Way Bitches!
 Ha! Ha! Ha! Boo! Boo!
 Going get you!
 Happy Halloween
 Oct 31, 1997
 Dead Violence,
 Comming Soon!
 Worse will comming
 to you people
 you have key?

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Figures 2a,b. Anonymous letter (front and back) received by Victim #4.

and had been seen on her front porch. She believed the man lived down the street, although she did not know him personally. The female resident reported that the man down the street walked up and down in front of her house and down the alley near the home during the nighttime hours.

A victim residing at 1141 Hillside Street (Victim #4) stated she also received letters through the mail. One letter contained threats to use a bomb to blow up her house, and the 2nd contained pornographic material in addition to a letter. These items were recovered and placed into evidence (Figures 2a,b). The final victim (Victim #5) lived at 1180 Hillside Street and received several letters similar in content to the other victims (Figures 3a,b).

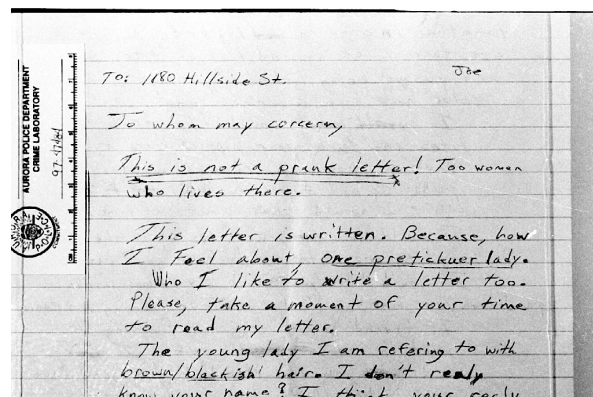
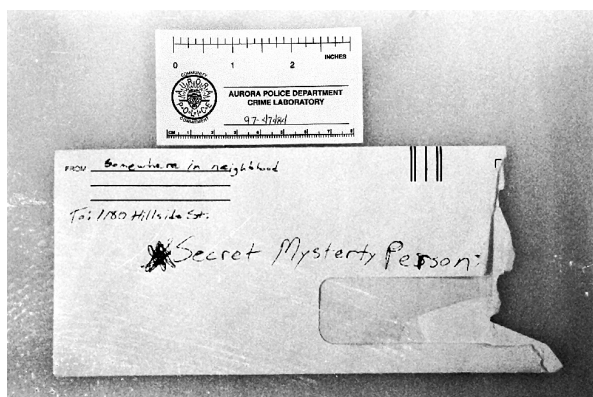
All 5 victim families expressed certainty that the suspect lived down the block at 1160 Hillside Street. The victims were able to identify the suspect through a photo line-up. The identification, along with statements of attempted burglary and trespass, allowed officers to obtain a municipal warrant for the suspect's arrest. Prior to executing the warrant, officers called the QD office and asked for assistance regarding the items to look for during the search. They were told to

look for tablets, spiral notebooks, pornographic magazines, and handwriting examples.

Officers contacted the suspect and, in addition to the warrant, obtained consent to search his home. At the suspect's residence the officers collected a Roaring Spring spiral notebook, a Management Series Record notebook, a Stuart Hall spiral notebook, a white Ampad notepad, a yellow Stuart Hall tablet, and additional handwritten documents. When these items were brought to the QD laboratory, initially it was thought that the examination primarily involved a handwriting case utilizing an electrostatic detection device.

Methods and Materials

All of the notebooks and tablets were visually examined using oblique lighting. No indented writing was visually observed in 4 of the notebooks (Osborn 1964). However, indented writing was observed on several pages of the yellow Stuart Hall tablet. Photographs were taken before the project began (Figure 4). It was noted that the Stuart Hall tablet contained a blue headstrip with "Stuart Hall" imprinted at the upper-left corner. The paper was yellow in color, and the pages



Figures 3a,b. Anonymous letter and envelope received by Victim #5.

measured approximately 8 ½" by 11" (215 mm x 276.5 mm) with perforations across the top. There were 2 vertical red margin lines measuring 32 mm and 34 mm from the left side of the paper. Blue horizontal ruled lines ran from top to bottom with spacing of 9 mm between each line (Glossary of Printing Terms 2006).

After obtaining permission from the investigating officer, the Stuart Hall tablet was disassembled. The blue headstrip was removed, and each header above the line of perforation was numbered to determine missing pages. The remaining pages were numbered, and the staples at the top were removed. At this stage of the examination process additional objectives became apparent: process the pages using the Electrostatic Detection Apparatus (ESDA) by Foster + Freeman, conduct a physical match comparison, examine the paper thoroughly, and then process for fingerprints (Hilton 1996; Osborn and Osborn 1991).

Each questioned item and several pages from the tablet were processed with the ESDA. Each page was processed, 1st without humidity and then with timed humidity (2 minutes, 5 minutes, and 10 minutes) in the chamber. A "Big Foot" photo stand (Lynn Peavy Co., Lenexa, Kansas) was used to photograph the recovered indentations prior to lifting (Figure 5). The "Big Foot" fits perfectly at the base of the ESDA machine, allowing for in situ photographs. ESDA lifts were recovered from 6 pages of the seized Stuart Hall yellow tablet. Three pages corresponded to 2 of the letters received by Victim #4. ESDA lifts that corresponded with the bomb threat letter to APD (Victim #1) (Figures 6a,b,c) were also recovered from the letter received by Victim #2.

Ink Defect

During the examination, a printing ink defect was observed in the red printed margin lines at the left side of the page on the Stuart Hall yellow tablet. There was a void of the red vertical ink line from the top of the page (including the headstrip) to approximately 76 mm down from the line of perforation. There were intermittent red ink "skip" marks horizontally across the page at approximately 83 mm down from the line of perforation. The "skip" marks appeared at approximately 70 mm, 115 mm, 160 mm, and 200 mm from the left edge of the paper.

The vertical ink defect was located on the even-numbered pages throughout the tablet. The defect appeared with the same registration throughout the tablet. The pages were numbered on the header to include those missing the pages under the line of perforation (Horton 2001). It was discovered that 2 of the questioned notes, received by Victims #2 and #5, contained this same ink defect.

A call was placed to Stuart Hall; and according to their representative, Cathy Owen, this yellow page style of tablet was printed from 2 large rolls of paper using a double web-press process; i.e., both sides of the paper are printed at the same time using an inked roller system. In the inked roller system, a defect of the vertical margin lines is not a common problem and results from the layout of the printer. Exactly where in the printing run the defect occurs determines the consistency of the defect. Plate wear could cause the lines to be less crisp and deteriorate the quality. The print setup used by Stuart Hall was for the production

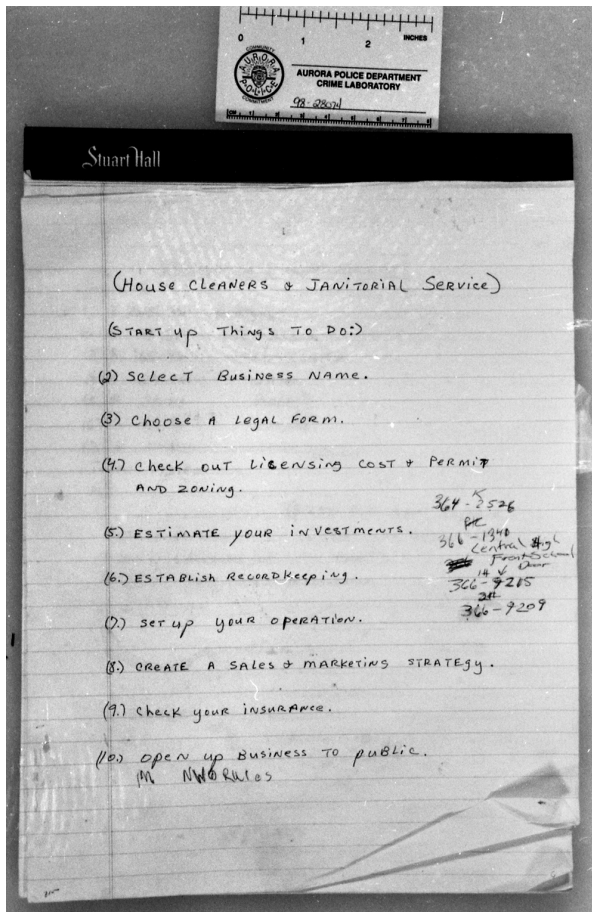


Figure 4. Yellow Stuart Hall tablet containing a blue headstrip.

of a "16" sheet of paper, which was cut into 4 sheets, then to single sheet, and finally bound (Pocket Pal 1992).

Additionally, Ms. Owen stated the Stuart Hall tablet in question has been in production for a "long time." A printing defect could appear in the same run; however, the defect is unlikely to continue due to quality control. The printing presses are checked once an hour, and during that time approximately 3,000 tablets are manufactured. Ideally the tablets with the defect would be pulled out and not distributed, with fewer than 1,000 in circulation. The same run is packaged in a case and distributed to the retailer. Ms. Owen further stated that it was impossible to determine the exact number of tablets produced with the defect and when they were produced.

The opinion of the Stuart Hall Head of Maintenance was that it was "very likely the

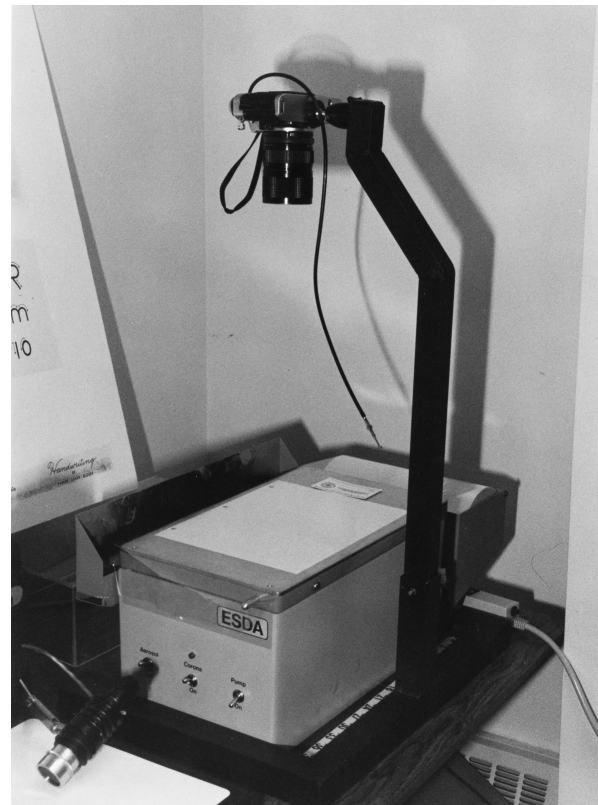


Figure 5. Electrostatic Detection Apparatus (ESDA) by Foster + Freeman with "Big Foot" by Lynn Peavy attached.

sheets came from the same pad" and that it was "highly unlikely" there were 1,000 pads in the Aurora area. Stuart Hall Co., Inc. was sold to Pen-Tab Industries, Inc., in 1998. When Pen-Tab went out of business in March of 2001, the equipment was auctioned; and the Mead Corporation purchased the Stuart Hall brand name. The brand name was sold to NewPage Corporation when the Mead Corporation became MeadWestvaco Corporation (Davis 2001).

Physical Match

A physical match, fracture match, or mechanical fit all refer to the irregular tear pattern that is created when 1 piece of paper is torn from the whole (Gencavage 1996). According to Ellen (1997), when paper is torn at the perforation there are "tongues" of paper which remain on either side of the torn perforation.

One of the questioned documents from Victim #5 was executed on the yellow notebook paper that had the ink defect with the correct

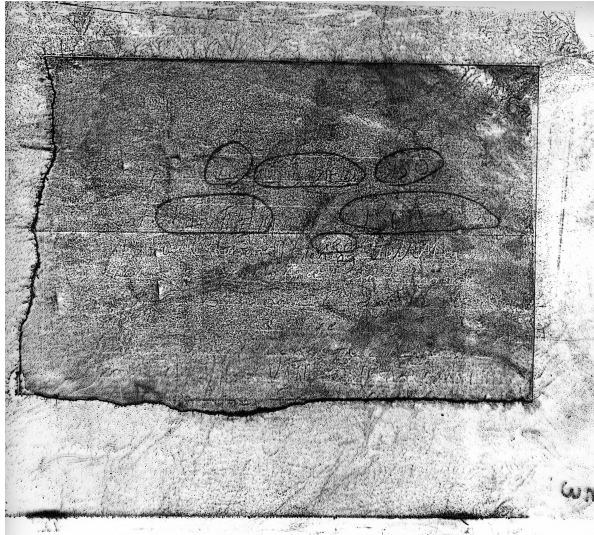


Figure 6a. ESDA lift taken from the letter sent to Victim #2.

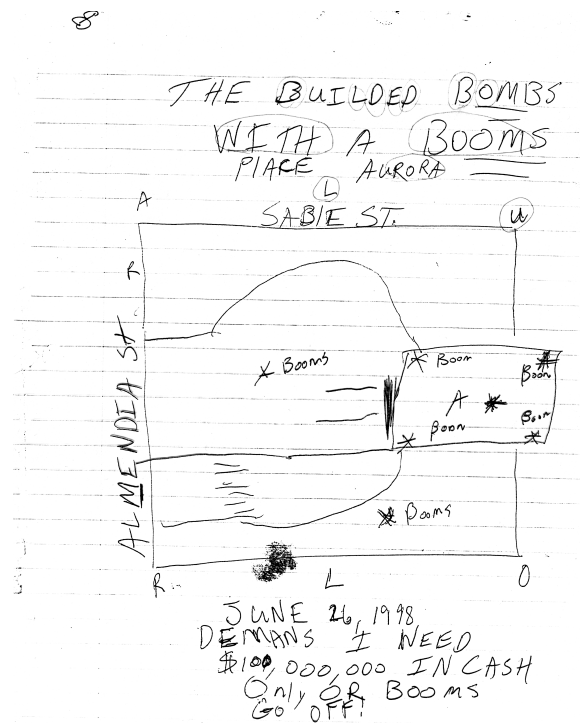


Figure 6b. Bomb threat letter sent to the Victim #1, Aurora Police Department.

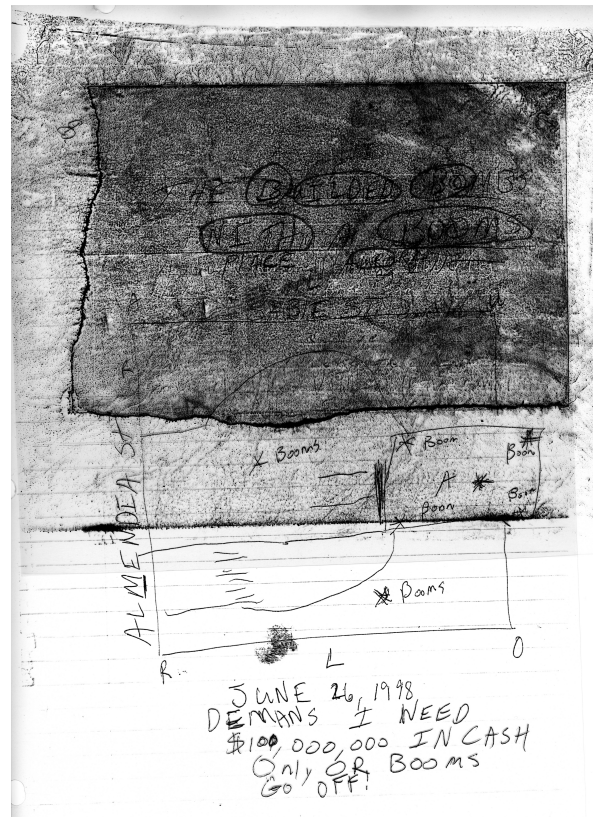


Figure 6c. Overlay of 6a with 6b showing a match.

"Boo!" You know
Who.
"So Where Is
My Letter?"
Maybe you Bitches
don't like Black people?
I told you Bitches how
I feel about one lady or
lesbro bitch?
What's promble Bitch?
No Letter more promble
with you Bitch. ~~Thats~~
Maddess want Stop! That's
promiss!
I want Letter Now! Not
Later, Not Towwer,
Date Set.
Turnpage October 2, 1997 Thursday
Near ~~your~~ Tree place,

Figure 7a. Questioned document from Victim #4 that matched to the header marked #18.

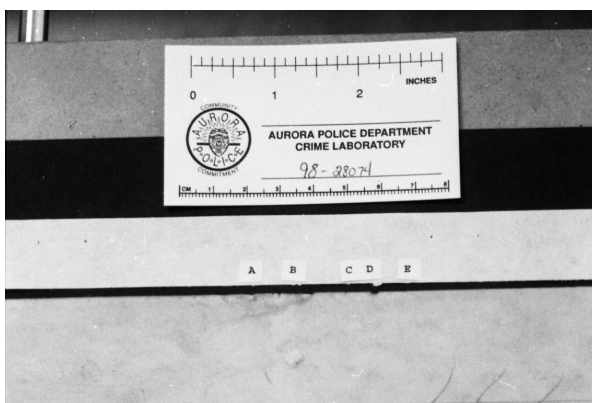


Figure 7b. Close-up of the locations of the 5 areas of physical match (A, B, C, D, and E) of the questioned document received from Victim #5 to the header of the known Stuart Hall tablet.

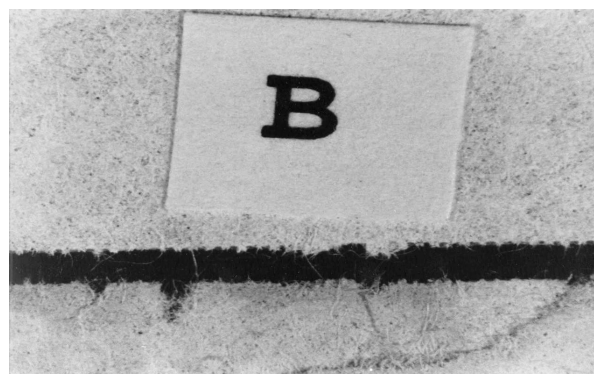
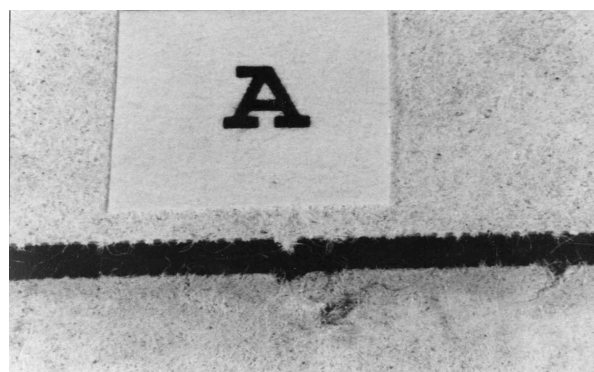


Figure 7c,d. Close-up of match A and match B.

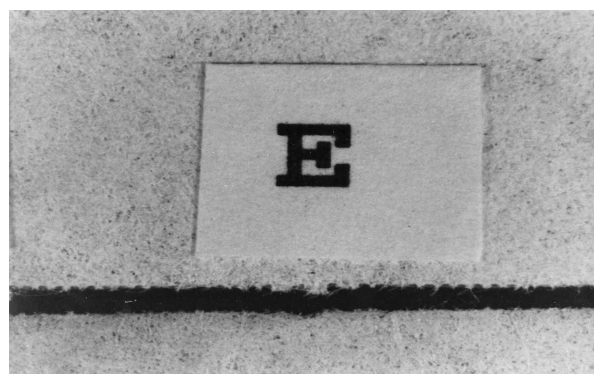
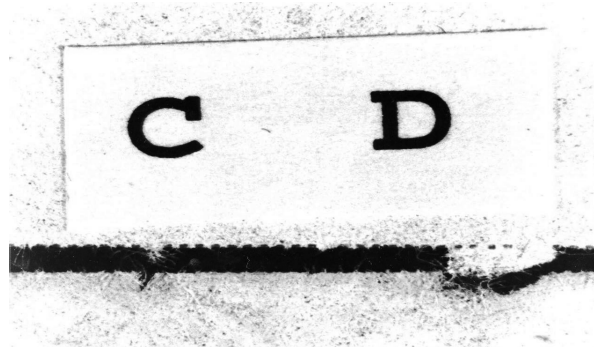


Figure 7e,f. Close-up of match C and D, and E.

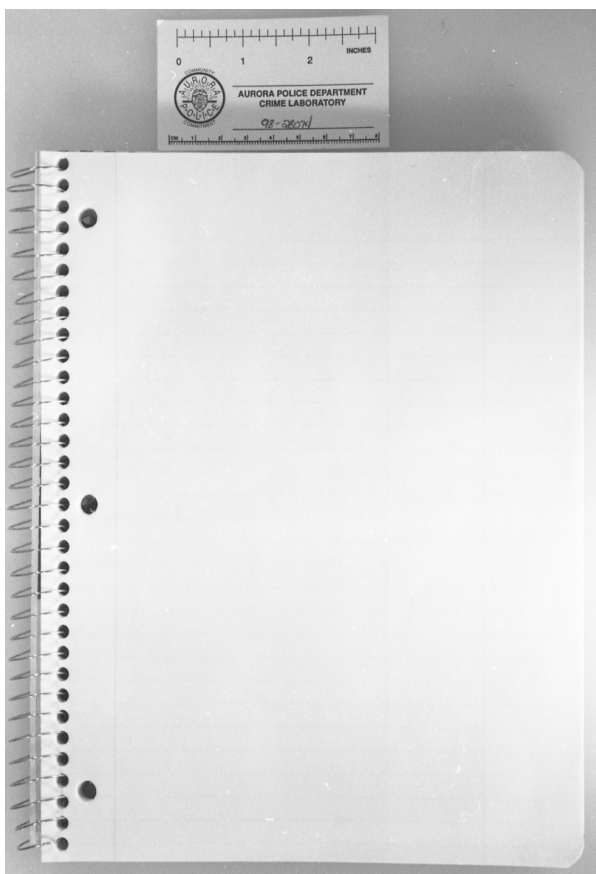


Figure 8. The known Stuart Hall spiral notebook taken from the suspect's home displaying a defect as a raised vertical ridge at approximately 71 mm from the right edge.

registration. Prior to the physical match examination, this item was processed for fingerprints using ninhydrin. The processing had no effect on the examination, except to note the discoloration of the full page to the matching header. The questioned document was matched to the header marked #18 in the yellow Stuart Hall tablet. Note that this was an even-numbered header and coincided with the ink defect noted on the even pages of the tablet. There were 5 areas of physical match of the document to the known header from the tablet (Figures 7a,b,c,d,e,f).

The header on the yellow Stuart Hall tablet had relatively long paper fibers extending from the bottom of the perforation line (Figure 7d). According to the AMPAD Resource Center (2003), the perforation size falls into the category of microperforation. Microperforations are small perforations created to be unnoticeable and provide easy removal from the tablet. The physical matches were photographed (using bracketing techniques) with a Canon AE-1 and 200 speed color film. Regarding the physical match of the questioned letter to the known tablet, the author of this paper and her supervisor considered a single match to be somewhat significant and 5 matches to be exceptionally significant.

Paper Defect

When using oblique lighting to examine each recovered notebook and tablet, I noted a paper defect in the Stuart Hall spiral notebook (Mesnig

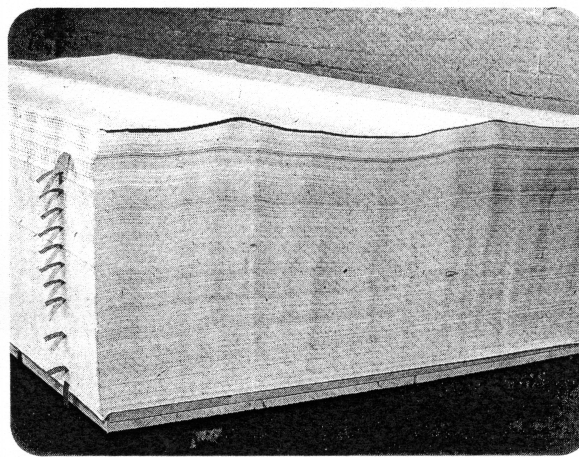
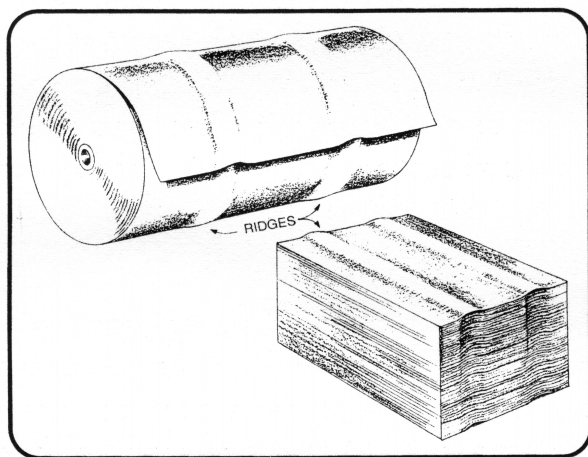


Figure 9. Example of "ridges" that can occur during the paper-making process. (Permission to reprint photo obtained from NewPageCorp. 2006)

1972). This defect appeared as a vertical ridge at approximately 71 mm from the right edge and was raised to the touch (Fig. 8a).

A "ridge" is a narrow, well defined raised band around the circumference of a roll of paper. Ridges are the result of a continuous streak of higher caliper paper (possibly less than 1/10000"), always oriented in the grain direction, around the roll (Figure 9). A ridge develops only when many wraps are wound with the streak of high caliper paper in exactly the same location. This streak of higher caliper may be caused by an area of heavier basis weight or by some other consistent in-line irregularity on the paper machine during forming, pressing, drying, and calendaring. The final thickness or caliper of the paper is partially adjusted at the wet press. The mechanical rewinding process is another area where roll quality is influenced. If any "consistent variations in caliper were allowed to accumulate in the same area throughout the thousands of wraps that create the roll, poor roll quality would likely result in the form of ridges" (Mead 1990). With this knowledge, it can be stated that a ridge defect similar to the defect found in the Stuart Hall spiral notebook was found on 2 separate notes recovered from Victim #4.

Conclusions

The author had the experience of testifying in court on the ESDA evidence in this case. This was also the author's 1st time testifying in questioned documents. The suspect was found guilty of harassment and stalking. For the author, who was trainee at the time she became involved in this case, it was the perfect case. Now, 9 years later, this author can still recall this case as 1 of her most memorable in terms of challenges and accomplishment due to the many facets of the examination process. The handwriting in this case was examined by Beverly Mazur. The suspect was identified as having written the content of the questioned letters. During the preparation of this paper, a written confession of the suspect was located. He confessed to having written the anonymous letters, as well as the bomb threat letter to the APD.

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