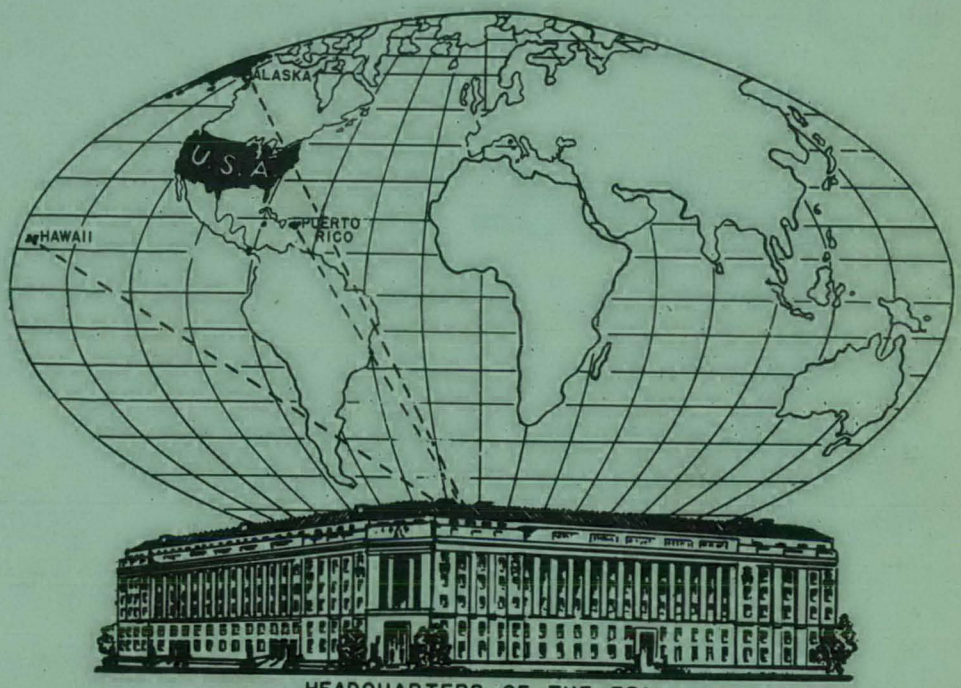
# FBI LAW ENFORCEMENT BULLETIN

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WASHINGTON, D.C.

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Federal Bureau Of Investigation
United States Department Of Justice
John Edgar Hoover, Director

The Federal Bureau of Investigation, United States Department of Justice, is charged with the duty of investigating violations of the laws of the United States and collecting evidence in cases in which the United States is or may be a party in interest.

The following list indicates some of the major violations over which the Bureau has investigative jurisdiction:-

National Motor Vehicle Theft Act
Interstate transportation of stolen property valued at $5,000 or more
National Bankruptcy Act
Interstate flight to avoid prosecution or testifying in certain cases
White Slave Traffic Act
Impersonation of Government Officials
Larceny of Goods in Interstate Commerce
Killing or Assaulting Federal Officer
Cases involving transportation in interstate or foreign commerce of any persons who have been kidnaped
Extortion cases where mail is used to transmit threats of violence to persons or property; also cases where interstate commerce is an element and the means of communication is by telegram, telephone or other carrier
Theft, Embezzlement or Illegal Possession of Government Property
Antitrust Laws
Robbery of National Banks, insured banks of the Federal Deposit Insurance Corporation, Member Banks of the Federal Reserve System and Federal Loan and Savings Institutions
National Bank and Federal Reserve Act Violations, such as embezzlement, abstraction or misapplication of funds
Crimes on any kind of Government reservation, including Indian Reservations or in any Government building or other Government property
Neutrality violations, including the shipment of arms to friendly nations
Frauds against the Government
Crimes in connection with the Federal Penal and Correctional Institutions
Perjury, embezzlement, or bribery in connection with Federal Statutes or officials
Crimes on the high seas
Federal Anti-Racketeering Statute
The location of persons who are fugitives from justice by reason of violations of the Federal Laws over which the Bureau has jurisdiction, of escaped Federal prisoners, and parole and probation violators.

The Bureau does not have investigative jurisdiction over the violations of Counterfeiting, Narcotic, Customs, Immigration, or Postal Laws, except where the mail is used to extort something of value under threat of violence.

Law enforcement officials possessing information concerning violations over which the Bureau has investigative jurisdiction are requested to promptly forward the same to the Special Agent in Charge of the nearest field division of the Federal Bureau of Investigation, United States Department of Justice. The address of each field division of this Bureau appears on the inside back cover of this bulletin. Government Rate Collect telegrams or telephone calls will be accepted if information indicates that immediate action is necessary.

FBI
LAW ENFORCEMENT
BULLETIN

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FEDERAL BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE
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The FBI LAW ENFORCEMENT BULLETIN is published by the Federal Bureau of Investigation, United States Department of Justice each month. Its material is compiled for the assistance of all Law Enforcement Officials and is a current catalogue of continuous reference for the Law Enforcement Officers of the Nation.

John Edgar Hoover, Director
Federal Bureau of Investigation
United States Department of Justice
Washington, D. C.

We enter the New Year with full realization that it will bring to us greater responsibilities than ever before but we face them confidently with the knowledge that law enforcement is fully prepared.

The emergency has rightfully placed upon us the grave duty of protecting the internal security of a great Nation. Upon us rests the obligation of meeting the fifth column challenge of the Godless forces of totalitarianism. It is reassuring to know that law enforcement enters 1941 better coordinated than at any other time and we stand united against our common enemies. Each officer, whether he be a patrolman, sheriff, or State policeman has his share in this present task of our profession. No greater service, and it will have its personal sacrifices, could be rendered to his America.

Thus far we have afforded maximum protection to the preparedness program. Our counterespionage work has been successful and efforts to sabotage industry have been prevented. The results achieved deserve confidence. Despite these facts, irresponsible statements and rumors during the closing weeks of 1940 created a wave of hysteria. Hysteria leads to confusion and irresponsibility in a field of activity where calmness and organization must prevail. It plays into the hands of those who would undermine democracy and hinder preparedness. Nothing could be more disastrous than the loss of the public's confidence in its constituted authorities.

We must continue to discharge our responsibilities in an effective manner so that the results of our work will stand as a bulwark against which the waves of hysteria will break in vain.

J. Edgar Hoover

Director

# FEDERAL BUREAU OF INVESTIGATION
# UNITED STATES DEPARTMENT OF JUSTICE

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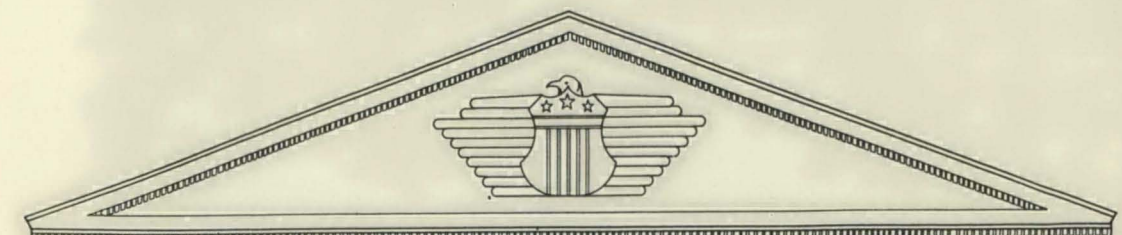


## THE FBI PLEDGE FOR LAW ENFORCEMENT OFFICERS

HUMBLY RECOGNIZING THE RESPONSIBILITIES ENTRUSTED TO ME, I DO VOW THAT I SHALL ALWAYS CONSIDER THE HIGH CALLING OF LAW ENFORCEMENT TO BE AN HONORABLE PROFESSION, THE DUTIES OF WHICH ARE RECOGNIZED BY ME AS BOTH AN ART AND A SCIENCE. I RECOGNIZE FULLY MY RESPONSIBILITIES TO DEFEND THE RIGHT, TO PROTECT THE WEAK, TO AID THE DISTRESSED, AND TO UPHOLD THE LAW IN PUBLIC DUTY AND IN PRIVATE LIVING. I ACCEPT THE OBLIGATION IN CONNECTION WITH MY ASSIGNMENTS TO REPORT FACTS AND TO TESTIFY WITHOUT BIAS OR DISPLAY OF EMOTION, AND TO CONSIDER THE INFORMATION, COMING TO MY KNOWLEDGE BY VIRTUE OF MY POSITION, AS A SACRED TRUST, TO BE USED SOLELY FOR OFFICIAL PURPOSES. TO THE RESPONSIBILITIES ENTRUSTED TO ME OF SEEKING TO PREVENT CRIME, OF FINDING THE FACTS OF LAW VIOLATIONS AND OF APPREHENDING FUGITIVES AND CRIMINALS, I SHALL GIVE MY LOYAL AND FAITHFUL ATTENTION AND SHALL ALWAYS BE EQUALLY ALERT IN STRIVING TO ACQUIT THE INNOCENT AND TO CONVICT THE GUILTY. IN THE PERFORMANCE OF MY DUTIES AND ASSIGNMENTS, I SHALL NOT ENGAGE IN UNLAWFUL AND UNETHICAL PRACTICES BUT SHALL PERFORM THE FUNCTIONS OF MY OFFICE WITHOUT FEAR, WITHOUT FAVOR, AND WITHOUT PREJUDICE. AT NO TIME SHALL I DISCLOSE TO AN UNAUTHORIZED PERSON ANY FACT, TESTIMONY, OR INFORMATION IN ANY PENDING MATTER COMING TO MY OFFICIAL KNOWLEDGE WHICH MAY BE CALCULATED TO PREJUDICE THE MINDS OF EXISTING OR PROSPECTIVE JUDICIAL BODIES EITHER TO FAVOR OR TO DISFAVOR ANY PERSON OR ISSUE. WHILE OCCUPYING THE STATUS OF A LAW ENFORCEMENT OFFICER OR AT ANY OTHER TIME SUBSEQUENT THERETO, I SHALL NOT SEEK TO BENEFIT PERSONALLY BECAUSE OF MY KNOWLEDGE OF ANY CONFIDENTIAL MATTER WHICH HAS COME TO MY ATTENTION. I AM AWARE OF THE SERIOUS RESPONSIBILITIES OF MY OFFICE AND IN THE PERFORMANCE OF MY DUTIES I SHALL, AS A MINISTER, SEEK TO SUPPLY COMFORT, ADVICE AND AID TO THOSE WHO MAY BE IN NEED OF SUCH BENEFITS; AS A SOLDIER, I SHALL WAGE VIGOROUS WARFARE AGAINST THE ENEMIES OF MY COUNTRY, OF ITS LAWS, AND OF ITS PRINCIPLES; AND AS A PHYSICIAN, I SHALL SEEK TO ELIMINATE THE CRIMINAL PARASITE WHICH PREYS UPON OUR SOCIAL ORDER AND TO STRENGTHEN THE LAWFUL PROCESSES OF OUR BODY POLITIC. I SHALL STRIVE TO BE BOTH A TEACHER AND A PUPIL IN THE ART AND SCIENCE OF LAW ENFORCEMENT. AS A LAWYER, I SHALL ACQUIRE DUE KNOWLEDGE OF THE LAWS OF MY DOMAIN AND SEEK TO PRESERVE AND MAINTAIN THE MAJESTY AND DIGNITY OF THE LAW; AS A SCIENTIST IT WILL BE MY ENDEAVOR TO LEARN ALL PERTINENT TRUTH ABOUT ACCUSATIONS AND COMPLAINTS WHICH COME TO MY LAWFUL KNOWLEDGE; AS AN ARTIST, I SHALL SEEK TO USE MY SKILL FOR THE PURPOSE OF MAKING EACH ASSIGNMENT A MASTERPIECE; AS A NEIGHBOR, I SHALL BEAR AN ATTITUDE OF TRUE FRIENDSHIP AND COURTEOUS RESPECT TO ALL CITIZENS; AND AS AN OFFICER, I SHALL ALWAYS BE LOYAL TO MY DUTY, MY ORGANIZATION, AND MY COUNTRY. I WILL SUPPORT AND DEFEND THE CONSTITUTION OF THE UNITED STATES AGAINST ALL ENEMIES, FOREIGN AND DOMESTIC; I WILL BEAR TRUE FAITH AND ALLEGIANCE TO THE SAME, AND WILL CONSTANTLY STRIVE TO COOPERATE WITH AND PROMOTE COOPERATION BETWEEN ALL REGULARLY CONSTITUTED LAW ENFORCEMENT AGENCIES AND OFFICERS IN THE PERFORMANCE OF DUTIES OF MUTUAL INTEREST AND OBLIGATION.


# OBLITERATED WRITING
# ITS DETECTION AND RESTORATION

INTRODUCTION: The restoration of obliterated writings of various types is a problem which will, at some time or another, invariably confront the scientific criminal investigator, and a thorough knowledge of the possibilities in the examination of evidence of this type is of inestimable value to the officer.

Particularly is this true in view of the fact that "a great number of convictions obtained in criminal cases are a result of thorough, and intelligent assembling of evidence by alert law enforcement officials. A study of the law will disclose that scientific analyses of evidence in criminal cases has been reviewed in the courts throughout the country with the result that the courts have not only approved of the use of scientific methods in crime detection, but have gradually opened new fields, permitting testimony and evidence of a scientific nature by experts who have made a disinterested, methodical study of the evidence." (1)

One of the fields in which the present problem has particular significance is its application to various phases of document examination involving suspected forgeries, alterations, erasures, spurious serial numbers, faded and illegible writing, charred and burned documents, and other papers of a similar nature. Although a great deal of work already has been done in this field, research indicates that even more outstanding results may be expected in the future.

It is not desired herein to present a comprehensive review of all available data existing on this subject but in a general way to acquaint the investigator with the more common established practices and scientific aids heretofore utilized with a high degree of success. Although certain difficulties may arise at times in attempting development of effaced writings because of the increasing complexity and changing formulae of some of the more modern types of commercial inks, specifically those containing dyes in solution, nevertheless, invaluable results have been achieved by the methods considered in the subsequent pages. For convenience of discussion, the material has been grouped under the various headings indicated.

1. "Scientific Evidence," FBI Law Enforcement Bulletin, October, 1935.

## I. CLASSES OF OBLITERATED WRITINGS

### A. Burned and Charred Documents

This particular class is self-explanatory. Frequently encountered in criminal investigations, the restoration of such material may afford important clues towards the solution of a crime.

### B. Writing Obliterated by an Overlayer of Ink or Some Foreign Matter

A second form frequently encountered in the examination of questioned documents is that accomplished by an overlapping or covering of the original writing with a layer of ink or some other opaque material serving the same purpose. Various documents, wills, bequests and other instruments of a similar nature are very often fraudulently altered in this manner.

### C. Erasures

#### 1. Mechanical Erasures

In addition to chemical erasures, physical means are very often resorted to in effecting removal of writing. The use of abrasives for this purpose, either in the form of an eraser or sharp instrument of some sort, is quite common, the method being applicable to the removal of inks as well as graphite, the normal medium of pencil writing. In many instances, the existence of erasures of this class is easily discernible due to the actual removal of the writing surface. However, writing obliterated by abrasion may be exceptionally difficult, if not impossible, to restore in such cases where the entire surface, and consequently the writing contained thereon, has been removed.

#### 2. Chemical Erasures

Chemical erasures are usually brought about through the use of so-called ink eradicators or solutions of chemicals which make the ink invisible through the process of bleaching. The administration of these reagents, however, does not effect the removal of the several ink ingredients, but merely make them colorless so that they are ordinarily invisible to the eye. The further application of still other chemicals may serve to restore the outline originally bleached and thus reproduce the erased word or letter.

According to Osborn "....These chemical erasures usually affect the document in such a way as to show clearly that it has been tampered with but when skillfully made they are not discernible by ordinary observation..... On some papers chemical bleaching solutions completely remove the sizing in the paper so that an ink line on such a portion of the paper 'runs', or 'feathers' in a perfectly evident manner, almost as in blotting paper. Chemical erasures show least upon heavy, rough linen or bond paper which, unfortunately, is the paper generally used by banks for checks and drafts and other commercial documents."(2)

Among such reagents commonly employed for this purpose may be cited the following:

1. Aqueous solution of oxalic acid.
2. Aqueous solution of chlorine and sodium hypochlorite.
3. Saturated aqueous solution of bromine.
4. Potassium permanganate slightly acidified with sulphuric acid in aqueous solution.
5. Ten per cent aqueous solution of stannous chloride.
6. Ten per cent aqueous solution of citric or tartaric acids.
7. Nascent hydrogen.
8. Twenty per cent aqueous solution of nitric acid.

Carbon inks such as India ink and "Chinese" ink are exceedingly difficult to remove chemically and attempts at bleaching usually result in failure.

### D. Faded and Illegible Writing

In this discussion the designation "Faded and Illegible Writing" is applied to that particular type which has become partly effaced or otherwise indistinct either as a result of constant usage, age, "wear and tear" or similar conditions. It has no reference to writing which is illegible because of the manner in which it is written.

## II. RESTORATION OF BURNED AND CHARRED DOCUMENTS

Both of the two principal methods for restoration of this class of obliterated writings utilize photographic materials.

2. A. S. Osborn, "Questioned Documents," 2nd Ed., pp. 534-535.

In one method, advantage is taken of the fact that writing on charred paper frequently possesses a selective reflection or absorptive in the infrared portion of the spectrum, which may be recorded by taking an infrared photograph of the area in question, thereby disclosing the original outline of the writing. Less frequently, a selective reflection or even fluorescent effect may be found under ultraviolet light with a similar result.

In the second method, although photographic emulsions are used, their sensitivity to light plays no direct part in the restoration. The National Bureau of Standards in a monograph released under Scientific Papers #454 (3) summarizes this method as follows: "....The charred papers are placed in contact with the emulsion of fast or medium speed photographic plates and kept in this condition in total darkness for a period of from one to two weeks. They are then developed in the usual manner.

"It appears that the gases contained in the charred papers have the power to fog the photographic plate and that the charred ink acts as a protective film, hindering the escape of the gas. That is, on development, it is found that the photographic plate has been blackened where it had been in contact with the charred paper, except in those places occupied by the ink.

"Films are not as well adapted for this purpose as plates. For these much longer time is required, about two months, and, furthermore, the effect is positive instead of negative. That is, with films the ink is the active portion and the charred paper is inactive.

"By washing a film in pure water for a short time and drying (in darkness) before placing in contact with the charred paper, results like those given by photographic plates are obtained.

"Very slow plates, such as 'process', and the enlarging and printing papers are not suited for the purpose because of their comparative insensitiveness to the gases."

Extreme care and manipulation are required in the handling of documents of this type and although the problem is comparatively simple where the paper is merely charred,

3. A detailed discussion of this procedure is outlined in reprint, "Action of Charred Paper on Photographic Plate and A Method of Deciphering Charred Records," January, 1933, issue of FBI Law Enforcement Bulletin. A copy of this reprint can be obtained upon request to the Director, Federal Bureau of Investigation, U. S. Department of Justice, Washington, D. C.

nevertheless, one may encounter considerable difficulty from this source where it has been reduced partially to an ash. Here preliminary treatment is usually necessary prior to restorative attempts.

Figures 1 and 2, page 8, reflect in respective order a photograph of a piece of charred paper believed to contain writing, and the result obtained by the contact method showing clearly the restored writing.

## III. RESTORATION OF WRITING OBLITERATED BY AN OVERLAYER OF INK OR SOME FOREIGN MATERIAL

Writing obscured by an overlayer of ink or some other opaque medium constitutes another form of obliteration frequently met and here the treatment will necessarily vary depending upon the several factors involved. For example, is the problem an "ink-upon-ink" obliteration and, if so, what is the nature of the ink employed in the original writing and the overlying portion? In other instances, lead pencils, copying pencils, crayons and similar writing media may have been employed and here the question may arise as to the most suitable solvent required to enable the matter underneath to be read.

Quirke (4) uses the following method of attack in dealing with problems of this type -- "The treatment of such documents is fairly simple. The process consists in first of all determining the nature of the ink used in the obliterating process, and in bleaching this with a suitable solution. In doing this we need exercise some care. A certain point will be reached when we get an optimum contrast between the original ink and the obliterating fluid. If the process is allowed to go too far, the chances are that the original ink may suffer in the bleaching also....Sometimes the process succeeds even in cases where the original and covering inks are chemically identical."

In this connection, appropriate consideration, however, should be given to the technique of removing the superficial layer. Quirke further states -- "The only danger to be guarded against is undue rubbing of the surface while damp. The writer never uses a brush to apply chemicals in such cases. Fluids are best applied by dropping them from a glass rod, or from a glass funnel, lined with a filter paper."

Graphite, the principal constituent of lead pencils, is chemically inactive and for that reason the "recovery" of pencil writing ordinarily affords no great difficulties. The application of a suitable bleaching medium or solvent, as the case may require, will usually produce sufficient removal of

4. A. J. Quirke, "Forged, Anonymous and Suspect Documents," pp. 180-181.

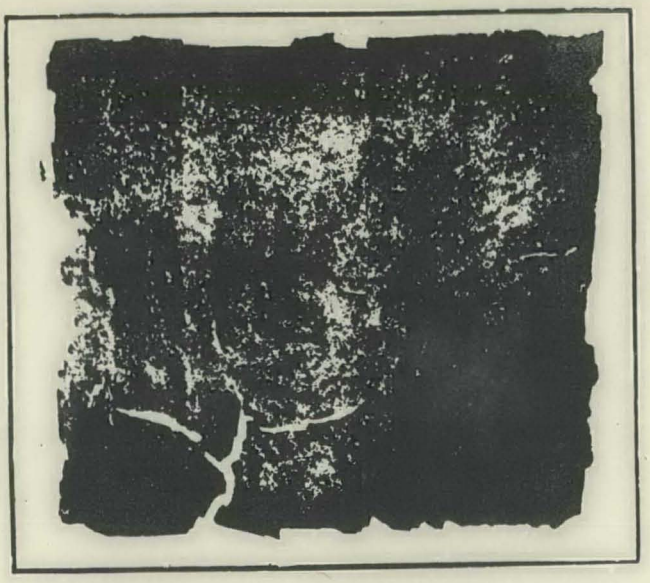


Figure 1 - Showing Appearance of Charred Paper

Exhibits Prepared to Show Results Secured in Deciphering Charred Records by Chemical Action of Paper and Writings on Photographic Plates, Being a Method Developed by the Bureau of Standards and Shown in their Scientific Papers No. 454.

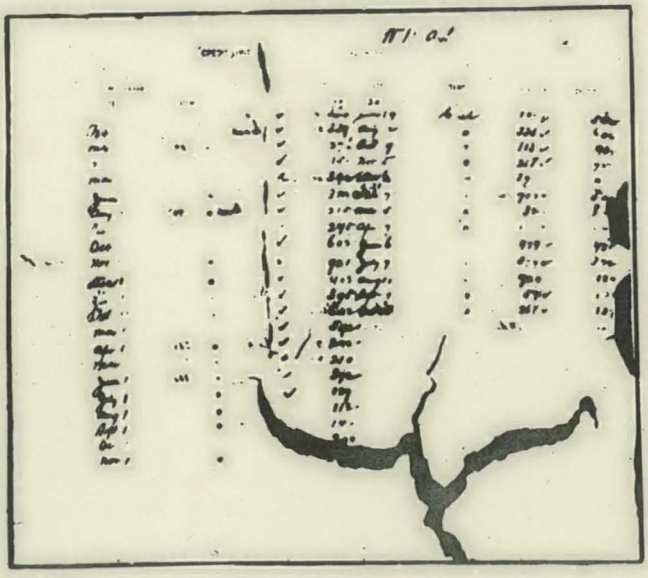


Figure 2 - Print Made from Negative Showing Writing and Printing on the Charred Paper

The Faint and Blurred Markings are Caused by the Ink on the Opposite Side. It Will be Seen from the Tear that this is a Print from the Reverse Side of the Sheet Shown in Figure 1.

the overlying strata to enable the original to become visible. The method may be further extended and utilized in connection with typewritten matter covered with writing ink and here the restorative principle, in effect, remains the same.

As an additional aid, the use of photography in this phase of document examination should not be overlooked. Special methods, utilizing various color "screens" and filters, with a view to effecting removal (i.e., "screening" out) of the super-imposed layer, have at times been productive of excellent results where other methods have failed.

Infrared photography is particularly applicable, especially in such cases where two different types of inks are employed. By eliminating everything but the infrared rays, that is, those beyond the visible rays at the red end of the spectrum, and then photographing the obliterated area, it may be possible to make the underlying layer of writing visible. The Technical Laboratory of the FBI has had frequent occasion in its examination of a wide variety of documentary evidence, (5) to make extensive application of this photographic principle.

An instance of such restoration was encountered in connection with the examination of several anonymous letters submitted to the FBI by the Chief of Police of Augusta, Kansas. It was noted that the envelope in which one of the letters was mailed bore in the upper left hand corner evidence of a printed return address which had been obliterated by an over-layer of ink so applied as to make the printing illegible; see upper photograph, Figure 3, page 10. Experts of the Bureau's Laboratory photographed through the outer layer of ink by utilizing the action of infrared rays on special photographic plates and in this way were successful in obtaining an excellent photograph of the original printing beneath the subsequently placed ink deposit. The clearly legible address may be seen in the lower photograph. (Figure 4, page 10)

## IV. DETECTION AND RESTORATION OF ERASURES

In considering the question of erasures generally, it is first desirable to ascertain whether the writing has been destroyed by mechanical methods such as an abrasive eraser, or by chemical methods as discussed earlier. Since, however, many of the methods applicable in one case may work equally well in the other, the methods of restoration are being grouped according to the nature of the methods themselves rather than according to the type of erasure to which they apply.

5. It is interesting to note that the Technical Laboratory of the Federal Bureau of Investigation during the fiscal year of 1939 received for examination 27,194 documents, practically all of which consisted of evidence in criminal cases.

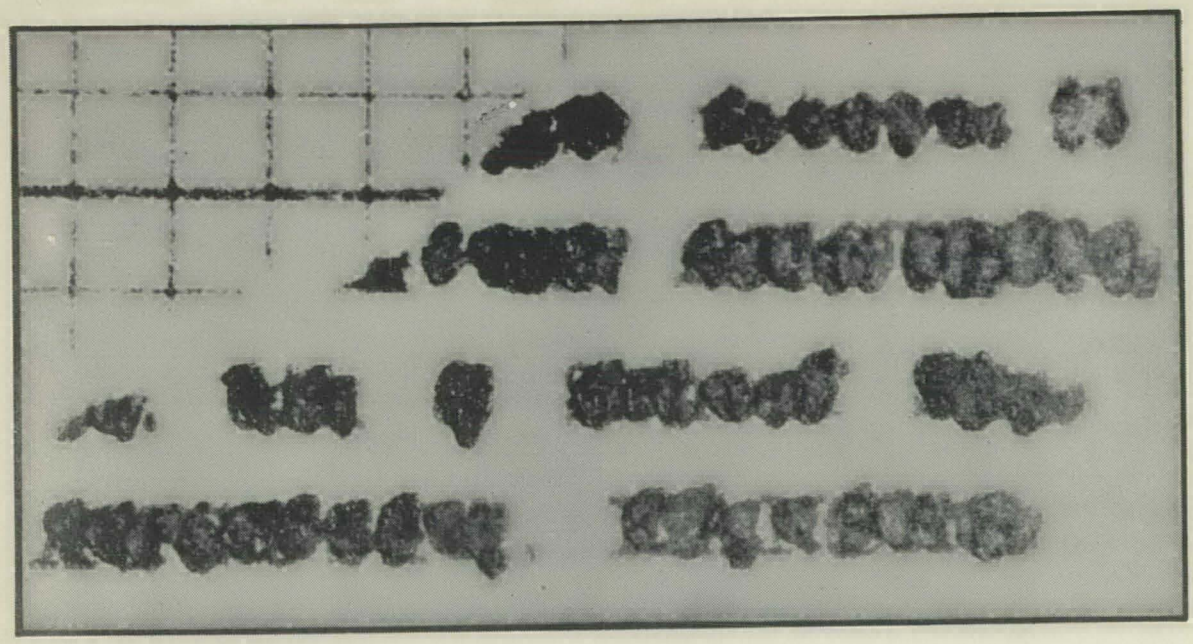


Figure 3

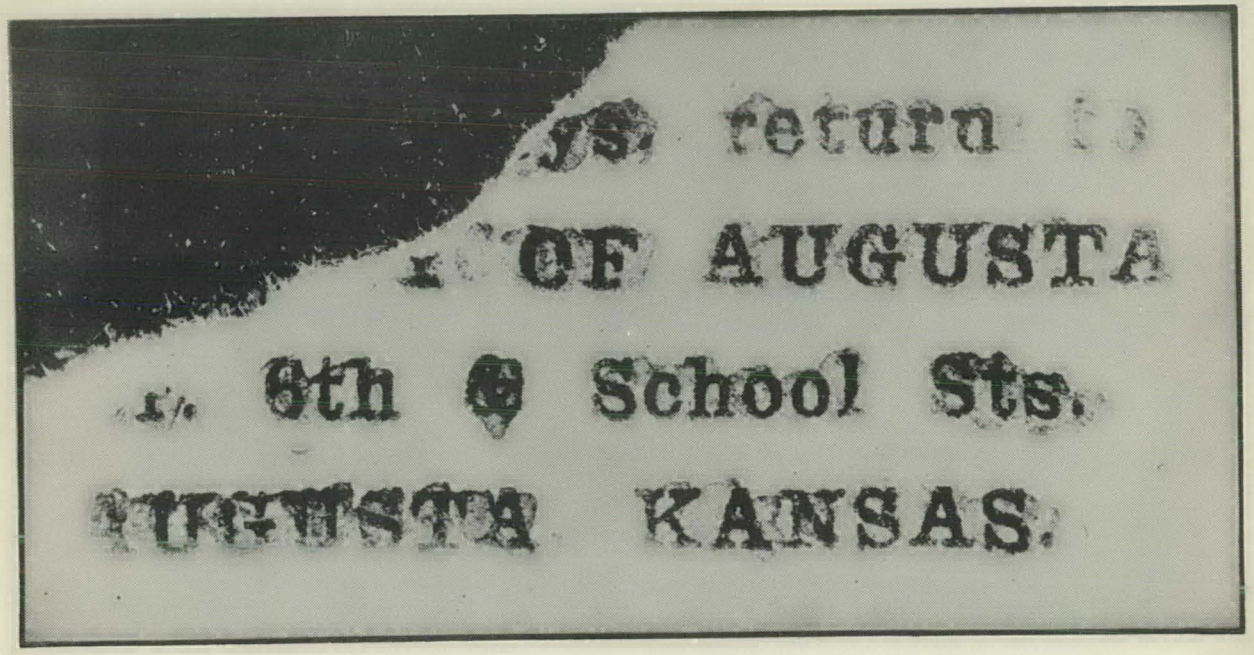



Figure 4

## A. PHYSICAL METHODS OF DETECTION AND RESTORATION

### 1. Macroscopic and Microscopic Examination

Both mechanical and chemical alterations, particularly those made by the unskilled operator, are usually apparent when examined closely, due to inherent qualities in the paper itself, and, except in unusual instances, leave sufficient traces to admit of detection and demonstration. Specifically, resultant disturbances and displacement of fibers may be detected by noting differences in reflective properties of the disputed document. That is, the smoother surface of the untampered portion will reflect a greater amount of light and will, necessarily, appear brighter than the disputed area.

The following are of additional evidentiary value in facilitating examination and in indicating the probable presence of mechanical erasures:

1. Absence of sheen in finish of paper.
2. Relative thinness of paper in questioned area.
3. Disarrangement and otherwise disturbed appearance of fibers.
4. Increased transparency of erased portion due to abrasion at this point.
5. Conspicuous absence of rulings, et cetera, at obliterated portion (providing alteration effected on such stationery).
6. If the erasure is written over with ink the latter will tend to diffuse and spread outward to the surrounding surface, presenting a more or less distorted appearance, often referred to as "feathering," "running," or "blotting," et cetera.(6)

6. The following must be given due consideration, however: "The attempt is sometimes made to smooth or rub down the erasure before writing and if this is skillfully done on good paper the ink line at such point will show but little difference from a normal line until it is looked at under proper magnification." A. S. Osborn, "Questioned Documents," 2nd Ed., page 531.

The probable presence of chemical erasures may be concluded from a combination of the following:

1. Discoloration of the paper; in certain instances, a pale yellow stain may be noticeably apparent.
2. Removal of the gloss or finish.
3. Examination for odor, especially that of chlorine.
4. "Running" or "feathering" of ink lines, provided the paper has not been subsequently resized or burnished after effecting erasure.
5. Loosening of paper fibers.
6. Testing with starch iodide paper, for possible presence of hypochlorite due to original chemical eradicator.
7. Testing with litmus paper, for possible presence of acid due to original chemical eradicator.
8. General appearance of suspected area as contrasted with that of other genuine portions of the document.

Microscopic examination will frequently reveal additional evidence of alterations and fraudulent erasure and, moreover, may serve to disclose parts of the previously eradicated writing due to remaining traces of graphite or ink deposits embedded in the fibers of the paper. Such examinations should be conducted with a good light source, including direct and transmitted as well as oblique light. In addition, the magnifications should vary over such a range and cover sufficient latitude to permit of proper examination.

## 2. Ultraviolet Light

The application of ultraviolet light to various phases of criminal investigations has long since definitely established it as one of the most powerful tools available to the scientific investigator. Of special significance, however, is its use in connecion with questioned document examinations, particularly those involving instruments suspected of containing erasures and other fraudulent alterations.(7) "So valuable in fact has

7. For a complete discussion concerning the theory, technique, and applications of

the ultraviolet light proven itself, both from the standpoint of results obtained and in ease of operation, that examination under the ultraviolet lamp has become a routine procedure in the handling of many types of cases involving documentary evidence....

(8)"In actual practice, ultraviolet light has been found particularly valuable for the detection of erasures on paper. Areas within which erasures have been made have their surfaces modified to such an extent that the difference in fluorescence(9) is readily visible under the ultraviolet light, whereas frequently little effect is discernible in ordinary light."

In many instances it is not only necessary to know that an erasure exists, although this in itself is significant, but it frequently becomes desirable to demonstrate the presence of the original obliterated writing. Here again ultraviolet light plays its part. It will be remembered, as explained earlier, that chemical ink eradicators, which ordinarily make the ink invisible through bleaching, do not effect the removal of the ink ingredients and that the latter retain their original position on the paper. It is the fluorescence of these apparently invisible and colorless compounds, through the medium of the ultraviolet light, that enable them to be read.

Where mechanical erasures are involved, i. e., those effected by abrasion, sharp instruments, or other physical means, it becomes necessary in many cases to utilize other techniques in an effort to restore the original writing, as examination under the ultraviolet light, while still revealing the presence of an erasure, very often fails to disclose any of the eradicated writing.

fluorescence analysis see Radley-Grant, "Fluorescence Analysis in Ultraviolet Light," Van Nostrand Company, New York, New York.

8. J. Edgar Hoover, "Applied Physics in the Field of Scientific Crime Detection." March, 1937, FBI Law Enforcement Bulletin.

9. Fluorescence has been defined as that property which some bodies have of emitting light while exposed to the action of certain rays of either the visible or ultraviolet spectrum, or of cathode rays, Roentgen Rays (X-Rays), et cetera. The light by fluorescence is quite distinct from that reflected at the surface of the body, which gives it its surface color, and also from that transmitted by the body.

Ultraviolet rays may be produced most conveniently through the use of quartz mercury-vapour lamps. However, the fluorescence of the objects under examination is, to a certain degree, obscured as a result of the visible light simultaneously released, and in order to eliminate this difficulty as much as possible, a suitable glass filter, opaque to the visible light only, is utilized. "As a note of warning, attention is here called to the fact that ultraviolet light contains rays that are injurious to the eyes and care should be taken that the light does not reach the eyes of the operator, keeping in mind the fact that this light also is reflected from polished surfaces. In some instances, it will prove desirable to wear proper goggles as a protection."(10) In this connection, it is further recommended that examinations by this means be conducted in a dark room with a view to eliminating undesirable effects due to the presence of extraneous light.

An interesting illustration of a restoration of obliterated writing, through the use of ultraviolet light, may be found in the following:

An investigation at the scene of the wreck of an airplane, which crashed into a mountain peak while on a regular commercial flight, led to the recovery of one sheet of the airplane log as maintained by the pilot. This chart was so badly stained with oil, spilled from the wrecked motor, that it was not possible to read the notations which had been made thereon.

It became very important to determine what notations were placed on this chart and for this reason it was submitted to the Technical Laboratory of the Federal Bureau of Investigation for examination. It was possible to detect the original writing under an ultraviolet light as a result of the fluorescence of the oil spots against the underlying graphite deposit from the lead pencil, and it was thus possible to clearly see the writing which had previously been invisible.

In a like manner, the Bureau's Technical Laboratory has, on numerous occasions, successfully utilized this same principle in applying restorative treatment to other documents of a similar nature.

10. "The Use of Ultraviolet Light in the Examination of Evidence," excerpt from the FBI Law Enforcement Bulletin, November, 1935.

3. Photography

In many instances photographic plates readily disclose erasures and other fraudulent alterations which, ordinarily, might not be noticeable and, in addition, discolorations brought about through the use of chemical eradicators are usually brought up with greater clearness than in the original itself. Various types of plates, filters and color screens, including the application of infrared and ultra-violet rays, are employed for this purpose. Situations frequently arise where chemical means may not be utilized in an effort to detect and restore the writing in dispute and here photography necessarily plays an important part, because of its non-injurious effect upon the evidence.

The selective absorption or reflection of infrared is found very useful in the Technical Laboratory of the Federal Bureau of Investigation in disclosing photographically otherwise invisible alterations. The principle as it applies to writing and printing inks is simple but most effective. The organic dye inks are practically transparent to the infrared ray, whereas the pigment inks are opaque to the infrared ray, thus making it possible to photograph through the one ink and not the other. Even invisible residue traces of the pigment ink below the surface of the paper or other material can sometimes be disclosed in clear-cut detail by infrared photography.

An example of the latter is found in connection with an examination made by the Technical Laboratory of the Federal Bureau of Investigation of a leather money bag found on the person of a desperate criminal and safe-blower who was captured by Special Agents of the Bureau for violation of the National Motor Vehicle Theft Act and other Federal statutes. The money bag in question was found among his possessions together with twenty-four sticks of dynamite, a supply of nitroglycerin, numerous traveler's checks, and a supply of weapons.

Visual examination of the money bag disclosed no identifying data which would be of assistance in tracing it, but upon its receipt by the Technical Laboratory, infrared photography clearly disclosed the name of the bank where it originated. Photographs of one side of the money bag are reproduced

herewith. The first photograph (Figure 5, below) depicts the bag as it appeared to the unaided eye and the second, (Figure 6, page 17) taken with infrared photography, discloses very clearly the printing which had been removed from the surface.

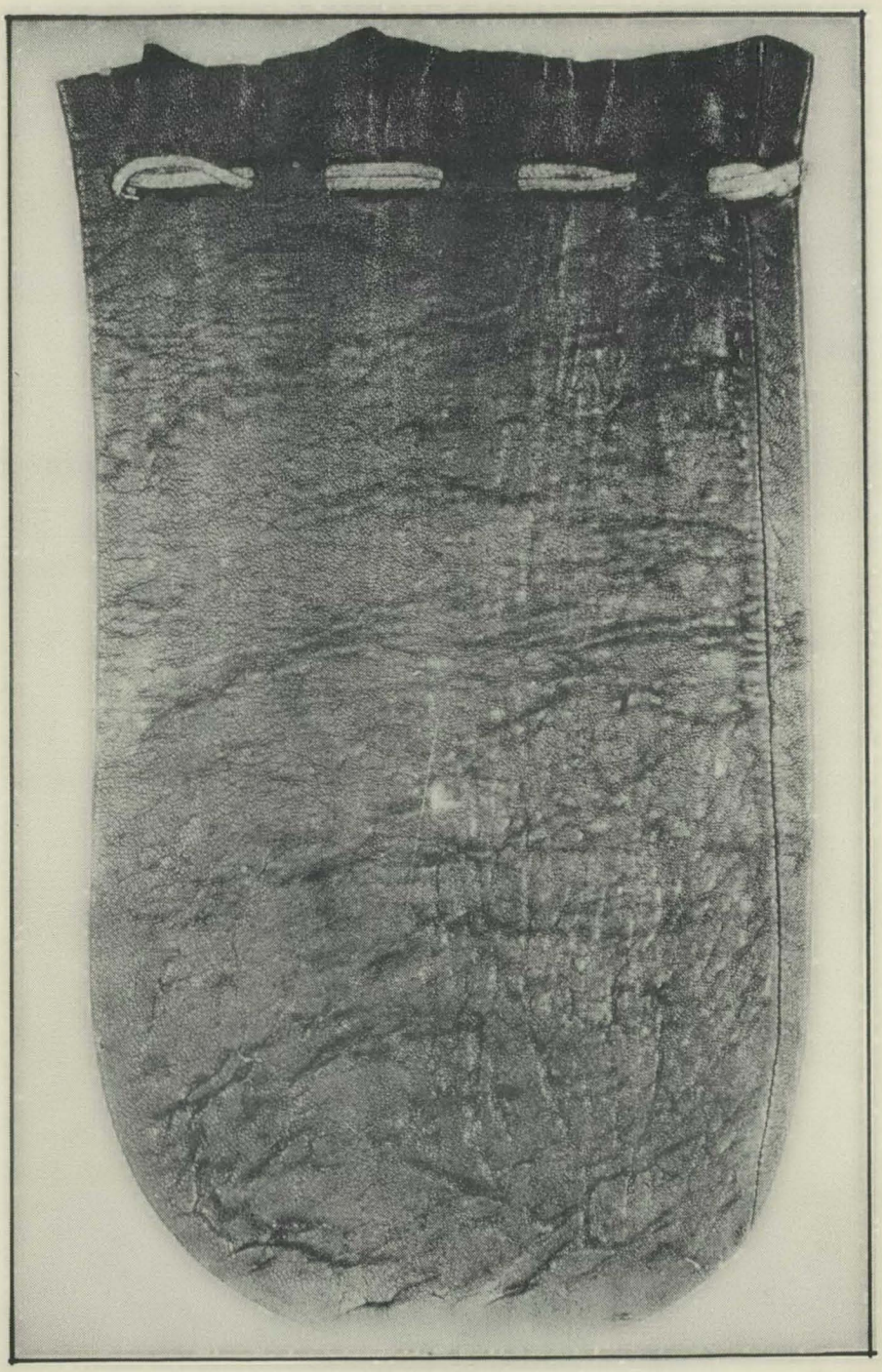


**Figure 5**

**Photograph of Money Bag as it Appeared to the Naked Eye with no Printing Visible.**

Another interesting application of this principle was made use of by the Laboratory in connection with an investigation involving a Federal violation of the National Stolen Property Act. There were transmitted for examination by

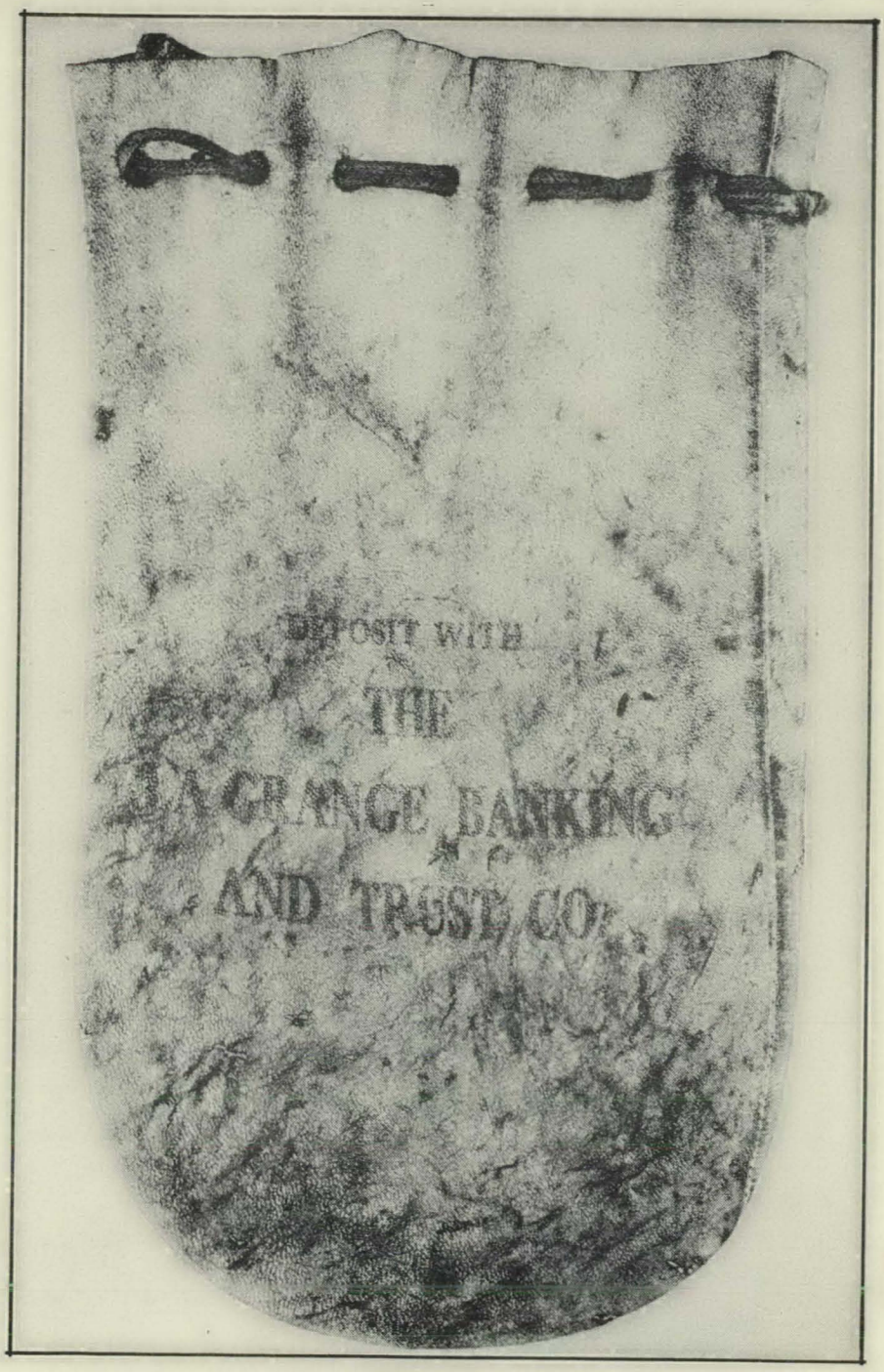



**Figure 6**

**An Infrared Photograph of the Same Money Bag Shown in Figure 5 Clearly Indicating the Printing Brought Out by Infrared Photography.**

the FBI's New York Office several bond coupons purportedly bearing altered and spurious serial numbers. A study of these bonds would lead the casual observer to believe that the original numbers had not been tampered with, but here again the utilization of infrared photography disclosed a fraudulent alteration. By the latter means, unusually clear photographs of the original numbers were obtained. This fact is amply illustrated by the photographs reproduced herewith. The first (Figure 7, page 19) taken by ordinary methods, shows the serial numbers as they appeared to the naked eye, while the other, (Figure 8, page 19) taken by means of a filter and an infrared sensitive plate, discloses unquestionably the original serial numbers appearing on the coupons.

## B. CHEMICAL METHODS OF DETECTION AND RESTORATION

### 1. Silver Nitrate

By this method the questioned area is treated with a 3% to 4% silver nitrate solution, dried, and exposed to a strong light. This treatment "develops" any chloride patterns which may exist in the paper, and inasmuch as many inks contain chloride as a constituent, the original writing outline is reproduced.

Experiments conducted in the Technical Laboratory of the Federal Bureau of Investigation with a view to effecting restoration of mechanically erased ink writing containing chlorides in some form, indicate that excellent results may be obtained by this technique, as will be noted from the photographs on pages 20 and 21. (Figure 9, page 20, illustrates the areas containing obliterated writing and Figure 10, page 21, the restored writing.) The efficacy of the silver nitrate process warrants its extensive use in the Laboratory wherever it may be conveniently employed; it appears generally more effective than any simple technique and due to the presence of chlorides in many inks, has a wider application to problems of this type.

### 2. Silver Nitrate Plus Ultraviolet Light

This is a modification of the silver nitrate method outlined under paragraph 1 above, in which ultraviolet light has been introduced as the

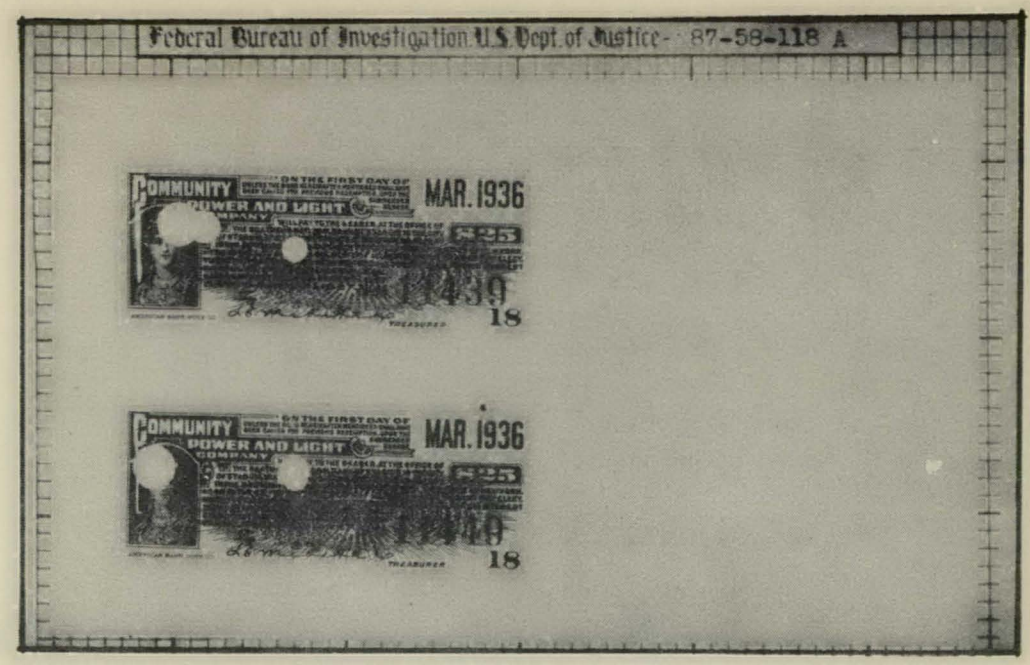



**Figure 7**

**Ordinary Photograph Showing Altered Numbers 11439 and 11449 As Seen with the Naked Eye.**

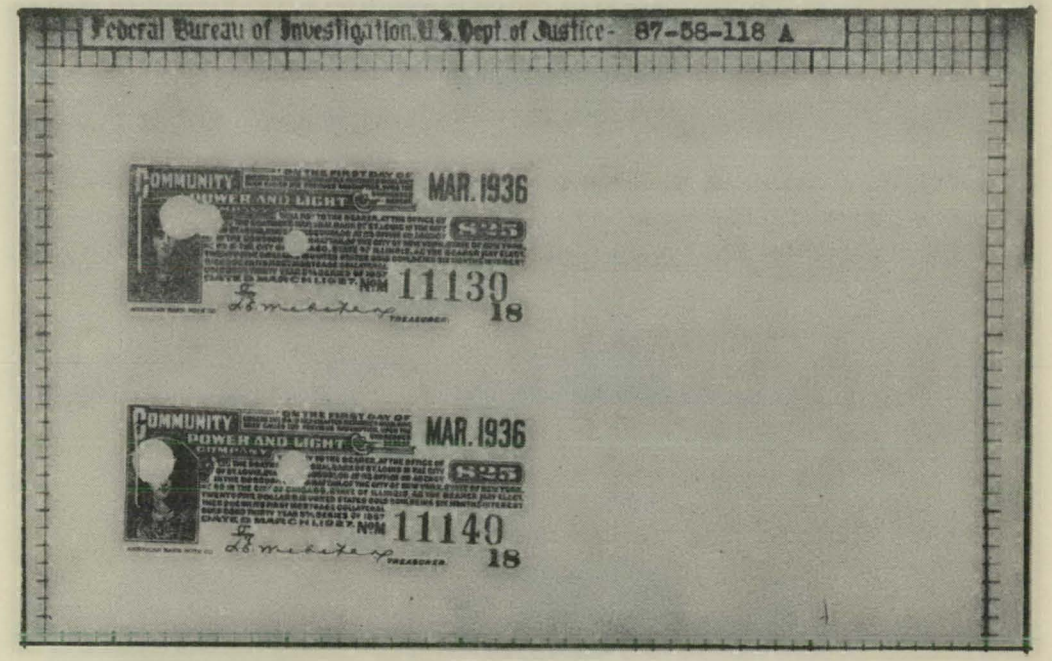



**Figure 8**

**Infrared Photographs of Same Coupons Shown in Figure 7 Revealing the Correct Coupon Numbers as 11130 and 11140 Prior to Alteration.**

#1-A

this was written 4/15/36.

Ink: Parker's Violet Quink.
Date Erased: April 15, 1936.
Type Erasure: Mechanical.
Treated for Restoration:

Method: Ag NO3 - Ultra Violet.

#3-A

This was written 4/15/36.

Ink: Parker's Violet Quink.
Date Erased: April 15, 1936.
Type Erasure: Mechanical.
Treated for Restoration:

Method: Ag NO3 - Ultra Violet.

#2-A

This was written 4/15/36.

Ink: Parker's Violet Quink.
Date Erased: April 15, 1936.
Type Erasure: Mechanical.
Treated for Restoration:

Method: Ag NO3 - Ultra Violet.

Figure 9

For Explanation See Page 18.

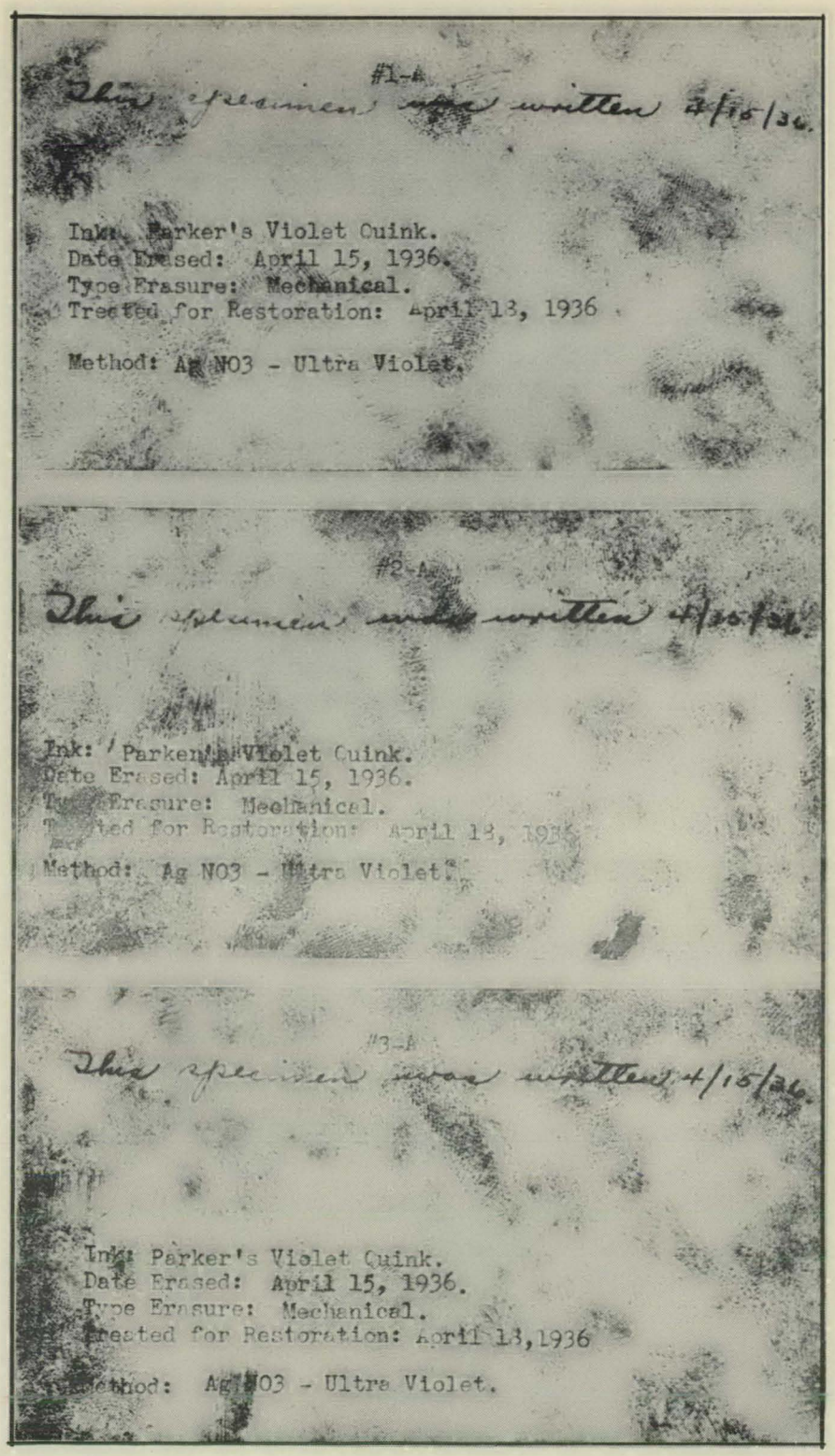



**Figure 10**

**For Explanation See Page 18.**

reducing factor. The ultraviolet light merely hastens the formation of the reduced silver, whereas this was previously effected through ordinary daylight. The chemistry of the reaction, however, has in no way changed and the principle remains the same throughout the entire process.

3. Fuming with Ammonium Polysulphide Vapors

The use of the so-called fuming processes is also advisable in many instances. Here the paper should be first steamed or otherwise moistened and then fumed with the vapors of ammonium polysulphide, the fumes reacting with any embedded iron deposits to form the corresponding sulphide which is either brown or black depending on the quantity.

The color change is fugitive, however, and any evidence submitted should be photographed before and after treatment. In addition, due to the offensive odors emitted, the necessary arrangements should be made for confining the fumes until the completion of the process. As a final precaution, it is suggested the following be taken cognizance of -- "A disadvantage of any chemical treatment is that iron is to be found in practically everything. Paper and dust contain it, and if the document has been much handled, it will have a surface coating, containing iron, that comes from dirty hands. The chemicals that are applied for the purpose of restoring the writing are not selective, but also act upon the iron from other sources, so that when the job of restoration is done, the writing will appear as dark lines upon a less dark, and probably unevenly colored, background." (11)

Nevertheless, as will be subsequently shown, the technique has been found to be highly effective, and moreover, it is suitable both for writing that has been chemically removed, either with the common ink eradicators or similar bleaching solutions, or that which has been physically altered, i.e., by means of abrasives. In the latter instance, however, if results are to be expected, the surface erasure should be more or less superficial.

A practical application of the above principle was made use of by the Technical Laboratory of the

11. "Restoration of Faded Writing," United States Bureau of Standards. Reprinted in July, 1933, issue of the Fugitive Bulletin.

Federal Bureau of Investigation during the course of an investigation involving a violation of the National Stolen Property Act. In this connection, certain stolen stock certificates, allegedly endorsed to "Adams & Peck" as payee, were transmitted to the Laboratory for examination, it being believed that the thieves completely removed the endorsement "Adams & Peck" on the back of these instruments and then negotiated the instruments by handling them under blank endorsement signed by Rush & Company, the original holder.

It was requested that an effort be made to determine whether any evidence of the original endorsement to "Adams & Peck" could be found on the certificates. By utilizing ultraviolet light and subsequently treating with ammonium polysulphide, it was possible for the Laboratory expert not only to restore the original writing, "Adams & Peck," but to obtain an excellent photograph of the same. The two photographs amply illustrate this fact. The first, (Figure 11, page 24) is a picture of the reverse side of the certificate as it was received in the Laboratory with no visible indication of either the original writing or any signs of alteration whatsoever. The second photograph (Figure 12, page 25) was made after the original writing, "Adams & Peck," had been restored by the chemical process indicated in the preceding paragraph.

4. Direct Application Ammonium Sulphide and Polysulphide

In such cases where the fumes of ammonium sulphide and ammonium polysulphide do not bring results, the direct application of the liquid is often advisable. For this purpose, the use of a cotton swab is recommended with which the solution is rubbed gently over the disputed area. This method is, however, more likely to result in general staining than the fuming mentioned immediately above.

5. Tests with Iodine

Tests with iodine, either in the form of vapor or a dilute solution of the tincture, will sometimes affect visibility of mechanically

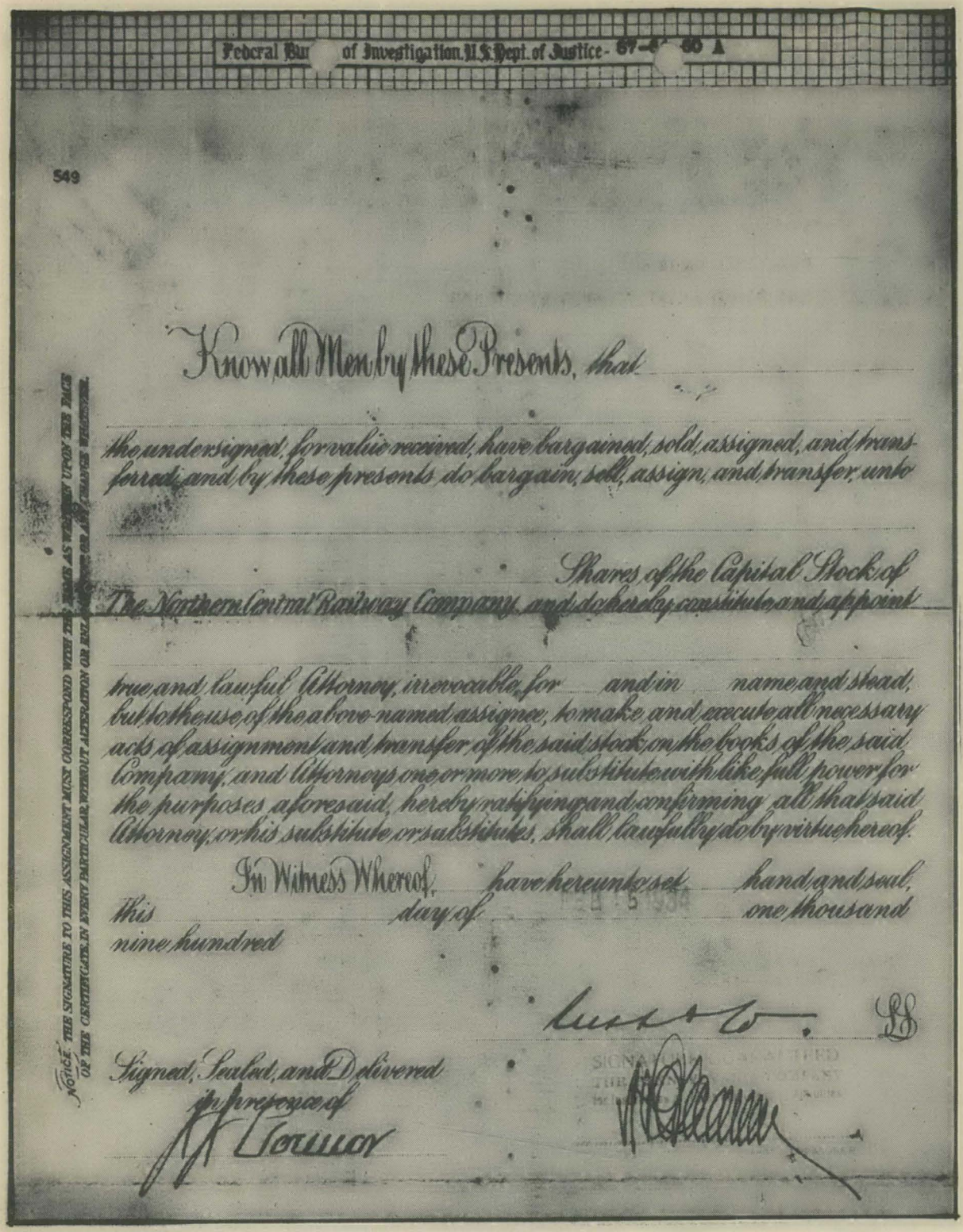
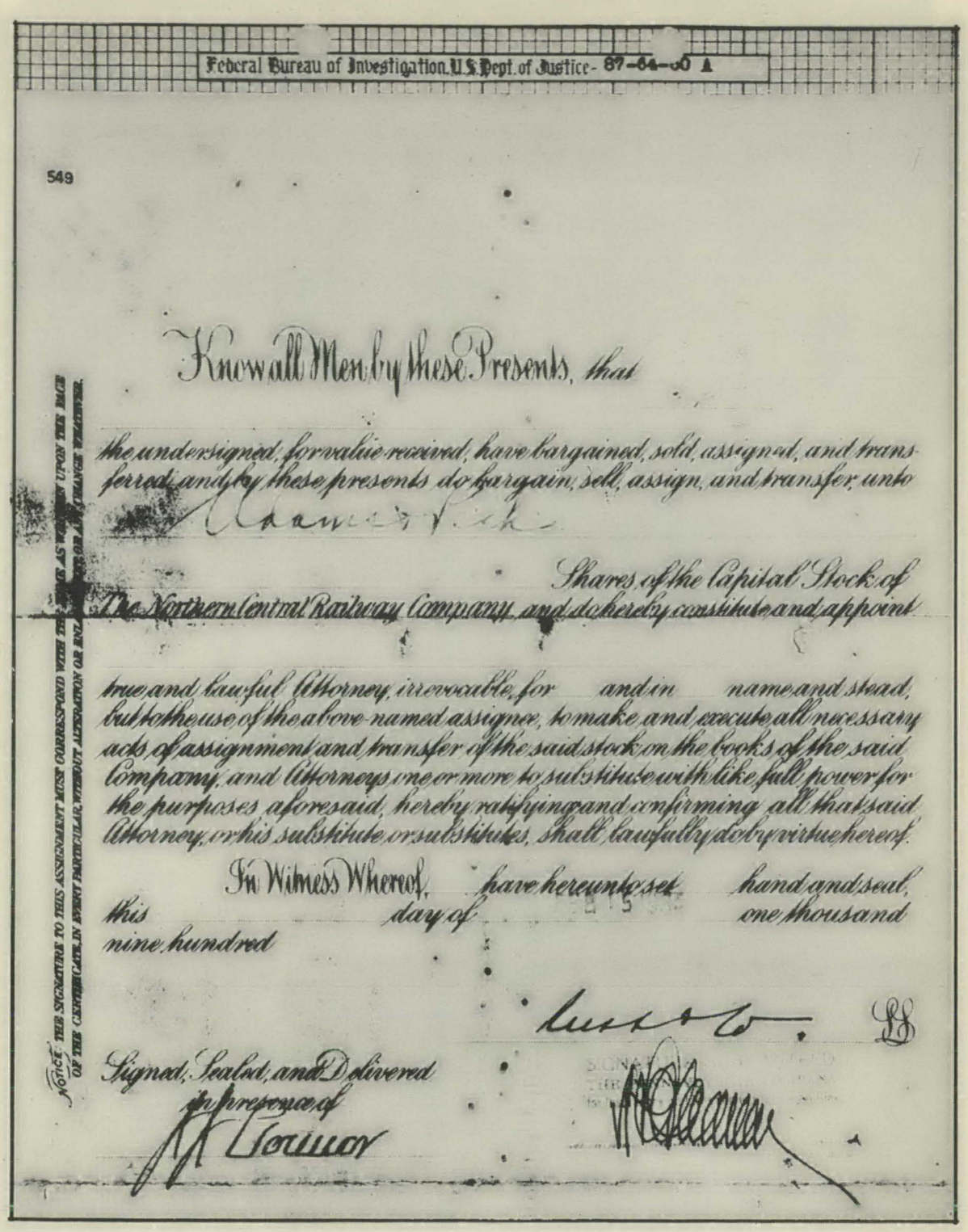



**Figure 11**

**Photographs of Stolen Stock Certificate Showing that the Original Endorsement of "Adams & Peck" had been Erased by the Thieves.**



549

Know all Men by these Presents, that

the undersigned, for value received, have bargained, sold, assigned, and transferred, and by these presents do bargain, sell, assign, and transfer unto

Adams & Peck

Shares of the Capital Stock of The Northern Central Railway Company, and do hereby constitute and appoint

true and lawful Attorney, irrevocable, for and in name and stead, but to the use of the above-named assignee, to make and execute all necessary acts of assignment and transfer of the said stock on the books of the said Company, and Attorneys one or more to substitute with like full power for the purposes aforesaid, hereby ratifying and confirming all that said Attorney, or his substitute or substitutes, shall lawfully do by virtue hereof.

In Witness Whereof, I have hereunto set my hand and seal, this day of one thousand nine hundred 15

Signed, Sealed, and Delivered in presence of

NOTICE: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE, IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT, OR ANY CHANGE WHATEVER.

**Figure 12**

**Photograph of Same Certificate Shown in Figure 11, Revealing the Endorsement "Adams & Peck" which had been Restored by Chemical Process Explained on Page 23.**

erased writing, either of pencil or ink.(12) In some instances, however, where the original is not restored this treatment will reveal the fact that an erasure has been made and here the abraded portion will usually develop in the form of a dark stain.

As a note of warning, it is important to remember that iodine is extremely volatile and for this reason any writing restored should be immediately photographed. Its effects on moist paper should also be taken into consideration, particularly if the sizing contains starch as an ingredient.

6. Tannic Acid

Applicable particularly to iron inks is the use of a two or three per cent solution of tannic acid. "The treatment with these solutions is best accomplished in a letter press, by placing cloths or pieces of white blotting paper moistened with the solution in contact with the faded" (or otherwise obliterated) "writing, and keeping the whole under pressure for a few minutes." (13)

The principle involved depends upon the fact that ferrous sulphate, an ingredient of the original ink, penetrates the fibers of the paper and becomes embedded to such an extent that its removal is exceedingly difficult. The tannic acid, in turn, reacts with the deposits of the iron salts and "reconstructs" the writing through the resultant formation of black iron tannate. According to Mitchell, (14) restorative treatment by this means is extremely old and "was described in the book of Canneparius in 1660."

7. Fuming with Ammonia

Another alternative in the case of iron inks is to expose the effaced writing to the fumes of

12. For a discussion concerning the application of iodine to the development of secret writings see reprint "Sympathetic Inks," Federal Bureau of Investigation Fugitive Bulletin, January, 1934, issue.

13. As cited in release "Restoration of Faded Writing," United States Bureau of Standards, reprinted from the July, 1933, issue of the FBI Fugitive Bulletin.

14. C. A. Mitchell, "Inks, Their Composition and Manufacture," 4th Edition, page 196.

ammonia, or, as recommended by others, to paint it with ammonium hydroxide thereby reproducing the original writing as iron hydroxide.

8. Use of Various Reagents Producing Specific Color Reactions with Inks.

Another technique of considerable importance in any attempt to restore obliterated writing depends upon the use of various chemical reagents that in turn produce specific color reactions with inks. This procedure, however, is applicable mainly to chemically erased ink writing. Briefly, the principle depends upon the analysis of the residue of unaltered writing with a view to determining its nature and the subsequent applications of appropriate chemicals to counteract the effects of the original bleaching agent.

"The following table abridged from that of Robertson and Hofmann, gives particulars of the test solutions used....

1. A 3% aqueous solution of Oxalic Acid.
2. A 10% aqueous solution of Citric Acid.
3. A 2% aqueous solution of Potassium Chloride.
4. Aqueous solution containing 8% Stannous Chloride and 8% Hydrochloric Acid.
5. A 15% aqueous solution of Sulphuric Acid.
6. A 10% aqueous solution of Hydrochloric Acid.
7. A 20% aqueous solution of Nitric Acid.
8. Saturated aqueous solution of Sulphurous Acid.
9. A 4% aqueous solution of Gold Chloride.
10. Aqueous solution containing 8% Potassium Ferrocyanide and 8% Hydrochloric Acid.
11. Aqueous solution containing 8% 'hypo' (Sodium Thiosulphate) and 8% Ammonia.
12. A 4% aqueous solution of Sodium Hydrate." (15)

15. A J Quirke, "Forged, Anonymous and Suspect Documents," p. 177.

The following chart (16) indicates specific reactions obtained with the various types of inks through a use of the above test solutions or reagents:

| I | II | III | IV | V |
|---|---|---|---|---|
| Reagent | Ferrous and Blue-Black Inks | Logwood and Potassium Chromate Inks | Logwood and Copper Sulphate Inks | Aniline Inks |
| 1. | Disappears (a) | Violet | Orange Yellow | No Change |
| 2. | Fades | Violet | Orange Yellow | Dark Blue |
| 3. | Disappears (a) | Disappears | Fades to Faint Yellow | No Change |
| 4. | Disappears (a) | Red | Fuschia Red | No Change |
| 5. | Disappears (a) | Red | Cardinal Red | No Change |
| 6. | Disappears Leaving Yellow Trace (a) | Cardinal Red | Blood Red | No Change |
| 7. | Disappears (a) | Red | Cardinal Red | Smudges |
| 8. | Fades (a) | Pale Violet | Red | No Change |
| 9. | Fades Slightly (a) | Umber | Brown | No Change |
| 10. | Blue | Red | Brick Red | No Change |
| 11. | Crimson (b) | No Change | Dark Blue | Violet with Smudges |
| 12. | Crimson (b) | Brown | Crimson with Smudges | No Change |

16. Taken from A. J. Quirke, "Forged, Anonymous and Suspect Documents," page 178.

(a). Certain of the Inks of Column II (i.e., the Blue-Black Inks) do not disappear. The ferrous element is bleached, leaving the Indigo untouched. In such cases the reaction will be "Indigo Blue."

(b). For Blue-Black Inks read "Purple."

Suppose, for example, we now make a preliminary test on the unaltered portion and obtain reactions indicative of a logwood ink. The subsequent application then of either solution 4, 5 or 6 to the area in dispute will often "reconstruct" the erased writing; that is, its restoration will be effected through the production of a specific color reaction, -- in this case red.

By a similar method of reasoning the principle may be extended to other types of ink listed thereon.

## V. RESTORATION OF FADED AND ILLEGIBLE WRITING

The common methods employed for the restoration of faded and illegible writing are all outlined and treated in detail in the preceding pages, as will be apparent from consideration of the fact that in faded writing, the problem will be analagous to that encountered in erased writing, except that in general, more of the original ink will be available for restoration purposes where fading only has occurred. However, the remarks of Lucas are significant. He states, in dealing with the particular subject under discussion, "....The possibility of restoring faded writing depends upon the composition of the ink and the conditions that produced the fading, inks containing iron offering the best prospects of restoration, while aniline inks as a rule cannot be restored. The former may be restored in a number of ways, including exposure to sulphuretted hydrogen or to the vapour of ammonium sulphide or by brushing over with a dilute solution of tannic acid or of ammonium sulphide.... Illegible writing frequently shows up well when exposed to ultraviolet rays or in certain cases when photographed with infrared sensitive plates and these methods therefore constitute tests that should never be neglected...."(17) In the latter instances, i.e., where a source of ultraviolet or infrared light is available, such treatment should always precede any application of chemicals.

17. A. Lucas, "Forensic Chemistry and Scientific Criminal Investigation," 3rd. Edition, p. 111; see also mimeographed release, reprinted from July, 1933, issue of Fugitive Bulletin, "Restoration of Faded Writing" by United States Bureau of Standards.

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## SPECIAL NOTICE

### PACKAGES CONTAINING FILM MUST BE MARKED APPROPRIATELY

It is absolutely essential to appropriately mark all packages containing undeveloped film on the outside of the package to show that the contents are "Undeveloped Films" in order to preclude the possibility of ruining the film through the accidental opening of such packages in a lighted area. The words "UNDEVELOPED FILM" should be conspicuously placed on all sides of the package to warn the receiver of the contents of the package and thereby assure the transmitting agency that the package will be opened in a dark room where no injurious light rays may spoil the submitted film.

FBI
HEADQUARTERS OF THE FBI, DEPARTMENT OF JUSTICE BUILDING, WASHINGTON, D.C.
FBI TRAINING CENTER AT QUANTICO
NATIONAL POLICE ACADEMY

## LATENT FINGERPRINT TRAPS BURGLAR

by
Archie J. Richardson, NPA Associate
Director of Training
King County, Washington, Sheriff's Office

On November 19, 1939, an unknown burglar gained entrance to a Seattle, Washington, apartment through a small service closet door which led from the hallway into the apartment. When Dexter M. Hall, a twenty-nine-year-old suspect, was arrested by two detectives of the Seattle Police Department and charged with the crime he stoutly maintained his innocence and complete ignorance of the offense.

Seattle Police Department detectives during the investigation at the scene of the crime decided to bring the service closet door to Police Headquarters for thorough scrutiny by fingerprint experts. The Superintendent in charge of the Identification Bureau quickly "dusted" the door and found a lone thumb print which was photographed by the police photographer. Checking the latent fingerprint against the finger impressions of the suspect, Hall, resulted in a positive identification.

Prosecuting officials decided to place their sole reliance upon fingerprint evidence in the trial of Hall for the burglary. He was tried by a jury in the Superior Court of King County, on January 22, 1940. The Superintendent of the Identification Bureau in the Sheriff's Office prepared and presented in Court, upon the request of the officials, enlarged photographic copies of the latent fingerprint found on the door and the corresponding print from the arrest card of Hall on file in the King County Bureau.

The investigating officers and police photographer of the Seattle Police Department were the other witnesses. Hall was convicted of second degree burglary and on February 10, 1940, sentenced to serve not more than fifteen years in the State Penitentiary. A lone tell-tale thumb print convicted the culprit.

Law enforcement cooperation, plus scientific crime detection methods once again proved -- "You Can't Get Away With It!"

Photographic reproductions of the latent print and the suspect's print will be found on the next page.

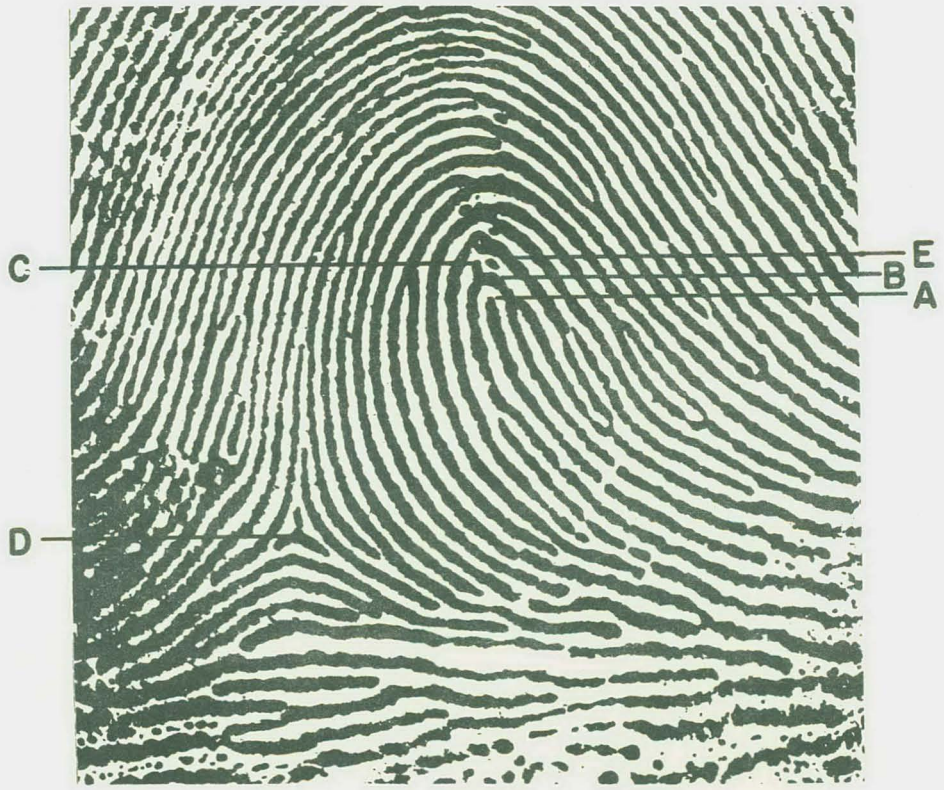

**Photographic copy of latent print found on service closet door. "Characteristic points of identification," technical phrase for points of comparison between the two prints shown here, are emphasized by lines drawn from the points of comparison to numbers on the outer borders.**


**Photographic copy of the thumb print of Maxwell M. Hall as it appears on the fingerprint arrest card on file in the King County Identification Bureau.**

IDENTIFICATION
FEDERAL BUREAU OF INVESTIGATION

## A QUESTIONABLE PATTERN

Accurate ridge counting is of vital importance in arriving at the correct classification, especially in those primary groups which contain many loops. It is necessary that the rules for locating deltas and cores be strictly followed to insure the accuracy of the ridge count.




In the loop shown above, no difficulty is encountered in locating the delta, D. There is a decided tendency, however, on the part of many, to locate the core on the end of ridge A. This is incorrect, however, as ridge A does not rise as high as the shoulder line of the innermost recurving ridge. Ridge B cannot be considered the innermost recurving ridge because the recurve is spoiled by an appendage abutting upon it at right angles. Therefore, ridge E becomes the innermost recurving ridge, and the core is placed on the end of the appendage, C.

In the Bureau's Technical Section, this loop would be given a ridge count of ten.

# WANTED BY THE FBI

**JOSEPH R. VATCHER, alias**

**Joseph Edward Campbell**

**For**

**EMBEZZLEMENT**

Detailed descriptive data concerning this individual appear on pages 36 and 37.

## WANTED BY THE FBI
### Joseph R. Vatcher, alias Joseph Edward Campbell

On February 6, 1933, National Bank Examiners, making an examination of the Manufacturer's National Bank of Lynn, Lynn, Massachusetts, found irregularities in the cashier's check account.

Joseph R. Vatcher, an assistant cashier of the Bank, was questioned on the following day concerning these irregularities. During the course of the questioning Vatcher excused himself stating he was going out for a moment and would be back soon.

Upon leaving the office where he was being questioned Vatcher went into the lobby of the bank and was seen walking about the lobby. He was later seen in the bank's vault where the cash was kept by the teller in charge of that vault. The teller was busy at the time and gave no thought to seeing Vatcher in the vault until later in the day when it had been determined that Vatcher had disappeared. The teller then checked the cash in the vault and found it was short $2,000.00.

Vatcher not only failed to return to the bank but completely vanished from sight. The only information at all that has been ascertained concerning his whereabouts since his mysterious disappearance on February 7, 1933, is an arrest in Colorado. On March 14, 1933, he was arrested by officers of the Denver Police Department and had three pints of liquor in his possession. He was held for investigation and fingerprinted but released by the Denver authorities before they learned of his fugitive status. He has not been heard from or seen since that time by persons who know him as far as can be determined.

Upon completing the examination of the accounts of the above-named bank it was determined that Vatcher had absconded with funds of the bank to the extent of approximately $3,236.92.

On May 27, 1933, a United States Commissioner's Warrant was issued for Joseph R. Vatcher, charging him with the embezzlement of approximately $2,000.00 from the Manufacturer's National Bank of Lynn while acting in the capacity of Assistant Cashier.

An indictment was returned against him on the above-mentioned charge by the Federal Grand Jury at Boston, Massachusetts, on September 20, 1935.

Joseph R. Vatcher was born in Newfoundland, September 15, 1891. He came to the United States with his family in 1899. His family settled in Lynn, Massachusetts. Vatcher received his education in Lynn and Boston and was first employed by a newspaper in Lynn. He was employed by the Manufacturer's National Bank of Lynn in 1912 and worked there until July, 1917, at which time he left to serve overseas, with the 102nd Machine Gun Battalion. During his service he was made a Lieutenant and was given an honorable discharge on April 29, 1919, at Camp Devans, Ayer, Massachusetts.

He returned to the Bank on June 2, 1919, and continued to work there until February 7, 1933.

Vatcher was highly regarded in the vicinity of Lynn prior to the discovery of the irregularities in the bank and as far as it is known he has no arrest record except the arrest mentioned above in Denver, Colorado, in 1933.

On October 20, 1935, the FBI issued an Identification Order on this individual, number 1317.

His physical description follows:

| | |
|---|---|
| Name | Joseph R. Vatcher, alias Joseph Edward Campbell |
| Age | 49 years |
| Date of birth | September 15, 1891 |
| Place of birth | Newfoundland, Canada |
| Height | 5' 6" |
| Weight | 170 pounds |
| Build | Stout |
| Hair | Dark brown |
| Eyes | Grey or light blue |
| Complexion | Sallow to medium |
| Nationality | Canadian |
| Occupation | Banker - Salesman |

In the event any information is obtained concerning Joseph R. Vatcher, it is requested that the nearest office of the Federal Bureau of Investigation be contacted, or immediately advise the Director, Federal Bureau of Investigation, United States Department of Justice, Washington, D. C.

## AUTOMOBILE LICENSE PLATES INFORMATION 1941

In view of past response relative to automobile license plates information which for the last few years has been published in the January issue of the FBI Law Enforcement Bulletin, there is set out in the following pages this information as to the various States, Territories and Possessions of the United States and the Provinces of Canada.

| State | Color of Numbers | Color of Background | Date 1940 License Plates Expire | Days Grace or Last Date 1940 License Plates Can be Used | Number of Plates Issued |
|---|---|---|---|---|---|
| Alabama | Black | Yellow | Nov 15 1940 | None | 2 |
| Arizona | Black | Copper | Dec 31 1940 | Feb 1 1941 | 2 |
| Arkansas | Green | Aluminum | Dec 31 1940 | 30 days, Governor's Discretion | 2 |
| California | Orange | Black | Dec 31 1940 | Feb 5 1941 | 2 |
| Colorado | Yellow | Black | Dec 31 1940 | Feb 1 1941 | 2 |
| Connecticut | Black | Aluminum | Feb 28 1941 | None | 2 |
| Delaware | Yellow | Blue | Mar 31 1941 | None | 2 |
| District of Columbia | Orange | Black | Mar 31 1941 | None | 2 |
| Florida | Red | White | Dec 31 1940 | Jan 15 1941 | 1 |
| Georgia | Orange-Yellow | Dark Blue | Jan 1 1941 | Feb 1 1941, unless Governor issues a proclamation extending time | 2 |
| Idaho | Black | Canary Yellow | Mar 31 1941 | None | 2 |
| Illinois | Black | Yellow | Dec 31 1940 | Feb 10 1941 | 2 |

| | | | | | |
|---|---|---|---|---|---|
| Indiana | White | Blue | Dec 31 1940 | None | 2 |
| Iowa | Black | White | Jan 1 1941 | Feb 1 1941 | 2 |
| Kansas | Gold | Red | Dec 31 1940 | Feb 1 1941 | 2 |
| Kentucky | Black | Aluminum | Mar 1 1941 | None | 2 |
| Louisiana | Black | White | Dec 31 1940 | Feb 5 1941 | 2 |
| Maine | Red | Aluminum | Dec 31 1940 | Feb 28 1941 | 2 |
| Maryland | Black | Aluminum | Mar 31 1941 | None | 2 |
| Massachusetts | White | Green | Dec 31 1940 | None | 2 |
| Michigan | White | Maroon | Feb 28 1941 | None | 2 |
| Minnesota | Black | Aluminum | Dec 31 1940 | Feb 15 1941 | 2 |
| Mississippi | White | Black | Oct 31 1940 | None | 1 |
| Missouri | White | Black | Dec 31 1940 | Date of extension of grace period not yet fixed | 2 |
| Montana | Blue | White | Dec 31 1940 | Feb 1 1941 | 2 |
| Nebraska | Dark Blue | Orange | Dec 31 1940 | Jan 31 1941 | 2 |
| Nevada | Blue | Silver | Dec 31 1940 | Jan 31 1941 | 2 |
| New Hampshire | Green | White | Mar 31 1941 | None | 2 |
| New Jersey | White | Black | Mar 31 1941 | None | 2 |
| New Mexico | Red | Yellow | Dec 31 1940 | Mar 1 1941 | 2 |
| New York | Black | Orange | Dec 31 1940 | Jan 31 1941 | 2 |
| North Carolina | Gold | Black | Dec 31 1940 | None | 2 |
| North Dakota | Black | Yellow | Dec 31 1940 | Jan 1 1941. However, penalty does not apply until May 15, 1941 | 2 |
| Ohio | White | Maroon | Mar 31 1941 | None | 2 |

| | | | | | |
|---|---|---|---|---|---|
| Oklahoma | White | Black | Dec 31 1940 | Apr 1 1941 | 2 |
| Oregon | White | Green | Dec 31 1940 | None | 2 |
| Pennsylvania | Golden-Yellow | Ultra-marine Blue | Mar 31 1941 | None | 2 |
| Rhode Island | Black | White | Mar 31 1941 | None | 2 |
| South Carolina | Black | Yellow | Oct 31 1940 | Approximately 20 days | 2 |
| South Dakota | Yellow | Black | Dec 31 1940 | Mar 31 1941 | 2 |
| Tennessee | White | Black | Apr 1 1941 | None | 2 |
| Texas | Gold | Black | Mar 31 1941 | None | 2 |
| Utah | White | Black | Dec 31 1940 | Feb 28 1941 | 2 |
| Vermont | White | Dark Blue | Mar 31 1941 | None | 2 |
| Virginia | White | Black | Mar 31 1941 | Apr 15 1941 | 2 |
| Washington | White | Green | Dec 31 1940 | None | 2 |
| West Virginia | Black<br>Yellow* | Yellow<br>Black (1941-42) | June 30 1941 | None | 2 |
| Wisconsin | Black | Yellow | Dec 31 1940 | Apr 1 1941 | 2 |
| Wyoming | Red | White | Dec 31 1940 | Mar 1 1941 | 2 |
| | | U. S. Territories and Possessions | | | |
| Alaska | White | Green | Dec 31 1940 | None | 2 |
| Hawaii | Cardinal Red | Rustic Grey | Dec 31 1940 | Feb 28 1941 | 2 |
| Panama Canal Zone | Black | Orange | Dec 31 1940 | None | 1 |
| Puerto Rico | Green | White | June 30 1941 | None | 2 |
| Virgin Islands | | | | | |
| St. Croix | Blue | White | Dec 31 1940 | Jan 10 1941 | 2 |
| St. Thomas | Blue | White | Dec 31 1940 | None | 2 |

* This represents plates to be issued after June 30 1941.

Provinces of Canada*

| | | | | | |
|---|---|---|---|---|---|
| Alberta | White | Black | Mar 31 1941 | Apr 15 1941 | 2 |
| British Columbia | Blue | White | Feb 28 1941 | None | 2 |
| Manitoba | Black | Yellow | Dec 31 1940 | None | 2 |
| New Brunswick | Cream | Coffee Brown | Dec 31 1940 | ** | 2 |
| Nova Scotia | Black | Dark Ivory | Dec 31 1940 | Apr 30 1941 | 2 |
| Ontario | Green | White | Dec 31 1940 | Not Determined | 2 |
| Prince Edward Island | Navy Blue | Orange | Feb 28 1941 | None | 2 |
| Quebec | White | Green | Feb 28 1941 | None | 2 |
| Saskatchewan | White | Vermilion | Feb 28 1941 | None | 2 |

* The information relative to automobile tags in the Provinces of Canada was obtained through the courtesy of the American Automobile Association, Washington, D. C.

** Motor Vehicle Act gives Minister of Public Works authority to extend yearly license plates' operation for four months.

## NAMES OF MOTOR VEHICLE OFFICIALS IN STATES, UNITED STATES TERRITORIES AND POSSESSIONS, AND PROVINCES OF CANADA

Past experience has shown that on numerous occasions law enforcement agencies throughout the United States often desire to obtain complete information regarding the registration of motor vehicles, fees charged, licenses required of operators, and other vital information concerning the operation of motor vehicles.

The FBI has, therefore, obtained through its various Field Offices the names of the proper persons who might be contacted by law enforcement officers to obtain this information in the several States.

This information has further been substantiated through the courtesy of the American Association of Motor Vehicle Administrators, 839-841 Woodward Building, Washington, D. C., from their booklet entitled "Personnel Motor Vehicle Administrators and State Traffic Enforcement Officials."

ALABAMA

Rogers, L. E. - Chief, Motor Vehicle Division, State Department of Revenue, 306 Dexter Avenue, Montgomery, Alabama.

ARIZONA

McAhren, B. H. - Superintendent of Motor Vehicles, Arizona State Highway Department, 1701 West Jackson Street, Phoenix, Arizona.

ARKANSAS

McCarroll, Z. M. - Commissioner of Revenue, State Capitol Building, Little Rock, Arkansas.

CALIFORNIA

Carter, James M. - Director of Motor Vehicles, Room 402, Department of Motor Vehicles, 12th and N Streets, Sacramento, California.

COLORADO

Gunn, Charles H. - Supervisor, State Motor Vehicle Department, Denver, Colorado.

CONNECTICUT

Connor, Michael A. - Commissioner of Motor Vehicles, Department of Motor Vehicles, Hartford, Connecticut.

DELAWARE

Denny, William D. - Commissioner of Motor Vehicles, Dover, Delaware.

DISTRICT OF COLUMBIA

Van Duzer, W. A. - Director of Traffic, Department of Vehicles and Traffic, 451 Pennsylvania Avenue, Northwest, Washington, D. C.

FLORIDA

Finley, D. W. - Motor Vehicle Commissioner, Department of Public Safety, Tallahassee, Florida.

GEORGIA

Head, T. Grady - Commissioner of the State Department of Revenue, State Capitol, Atlanta, Georgia.

IDAHO

Rayner, Harry M. - Commissioner, Department of Law Enforcement, Boise, Idaho.

ILLINOIS

Hughes, Edward J. - Secretary of State, Springfield, Illinois.

INDIANA

Finney, Frank - Commissioner of Motor Vehicles, Bureau of Motor Vehicles, Room 107, State House, Indianapolis, Indiana.

IOWA

Fischer, Karl W. - Commissioner, Department of Public Safety, Des Moines, Iowa.

KANSAS

Voelker, C. M. - Superintendent, Vehicle Department, State Highway Commission, Topeka, Kansas.

KENTUCKY

McFarland, Roy L. - Director, Division of Local Relations, Department of Revenue, Capitol Building, Frankfort, Kentucky.

LOUISIANA

Fontenot, Rufus W. - Director of Revenue, Baton Rouge, Louisiana.

MAINE

Robie, Frederick - Secretary of State, State House, Augusta, Maine.

MARYLAND

Elgin, W. Lee - Commissioner of Motor Vehicles, Guilford Avenue and 21st Street, Baltimore, Maryland.

MASSACHUSETTS

Goodwin, Frank A. - Registrar of Motor Vehicles, Department of Public Works, 100 Nashua Street, Boston, Massachusetts.

MICHIGAN

Kelly, Harry F. - Secretary of State, State Capitol Building, Lansing, Michigan.

MINNESOTA

Holm, Mike - Secretary of State, St. Paul, Minnesota.

MISSISSIPPI

Mize, Frank F. - Motor Vehicle Commissioner, Mississippi Fire Insurance Building, Jackson, Mississippi.

MISSOURI

Brown, Dwight H. - Secretary of State, Jefferson City, Missouri.

MONTANA

Bergstrom, Theodore R. - Registrar of Motor Vehicles, Deer Lodge, Montana.

NEBRASKA

Culwell, R. W. - Chief, Motor Vehicle Division, Department of Roads and Irrigation, State Capitol Building, Lincoln, Nebraska.

NEVADA

McEachin, Malcolm - Commissioner, Division of Motor Vehicles, Department of State, Carson City, Nevada.

NEW HAMPSHIRE

Griffin, John G. - Commissioner of Motor Vehicles, State House Annex, Concord, New Hampshire.

NEW JERSEY

Magee, Arthur W. - Commissioner, Department of Motor Vehicles, State of New Jersey, Trenton, New Jersey.

NEW MEXICO

Garcia, J. O. - Commissioner, Motor Vehicle Department, Bureau of Revenue, State of New Mexico, Santa Fe, New Mexico.

NEW YORK

Mealey, Carroll E. - Commissioner of Motor Vehicles, Department of Taxation and Finance, Albany, New York

NORTH CAROLINA

McLaughlin, R. R. - Director, Motor Vehicle Bureau, Department of Revenue, Raleigh, North Carolina.

NORTH DAKOTA

Robinson, B. E. - Motor Vehicle Registrar, Bismarck, North Dakota.

OHIO

Wallace, Cylon W. - Registrar, Bureau of Motor Vehicles, 1533 Wyandot Road, Columbus, Ohio.

OKLAHOMA

Connors, M. C. - Director, Motor Vehicle Division, Oklahoma State Tax Division, State Capitol, Oklahoma City, Oklahoma.

OREGON

Snell, Earl - Secretary of State, Salem, Oregon.

PENNSYLVANIA

Stuart, W. Searight - Director, Bureau of Motor Vehicles, Department of Revenue, Harrisburg, Pennsylvania.

RHODE ISLAND

Beane, George R. - Registrar, Registry of Motor Vehicles, State Office Building, Providence, Rhode Island.

SOUTH CAROLINA

Bohlen, A. W. - Director, Motor Vehicle Division, State Highway Department, Post Office Box 1498, Columbia, South Carolina.

SOUTH DAKOTA

Simonson, B. J. - Motor Director, Office of the Secretary of State, Pierre, South Dakota.

TENNESSEE

McCanless, George F. - Commissioner, Department of Finance and Taxation, Nashville, Tennessee.

TEXAS

Garrison, Colonel Homer, Jr., - Director, State Department of Public Safety, Camp Mabry, Austin, Texas.

UTAH

Foxley, Edward G. - Director, Motor Vehicle Department, Utah State Tax Commission, 118 State Capitol Building, Salt Lake City, Utah.

VERMONT

Campbell, Colonel Murdock A. - Commissioner of Motor Vehicles, Motor Vehicle Department, Montpelier, Vermont.

VIRGINIA

Battle, Colonel M. S. - Director, Division of Motor Vehicles, Main and Twelfth Streets, Richmond, Virginia.

WASHINGTON

Cohn, Dave S. - Director, Department of Licenses, Olympia, Washington.

WEST VIRGINIA

Simpson, Burr H. - State Road Commissioner, State Road Commission, Charleston, West Virginia.

WISCONSIN

Jones, Hugh M. - Acting Commissioner of Motor Vehicles, State Office Building, 1 West Wilson Street, Madison, Wisconsin.

WYOMING

Hunt, Lester C. - Secretary of State, Cheyenne, Wyoming.

U. S. TERRITORIES AND POSSESSIONS

ALASKA

Olson, Oscar - Territorial Treasurer, Juneau, Alaska.

HAWAII

Conkling, David L. - Treasurer, City and County of Honolulu, Honolulu, Oahu, Hawaii.

PANAMA CANAL ZONE

Calhoun, C. H. - Chief, Division of Civil Affairs, The Panama Canal, 309 Administration Building, Balboa Heights, Canal Zone.

PUERTO RICO

Molina, J. M. L. - Chief of the Automobile Division of the Department of the Interior, San Juan, Puerto Rico.

## VIRGIN ISLANDS

Lovett, Honorable Robert M. - Government Secretary, Charlotte Amalie, St. Thomas, Virgin Islands. (Correspondence in connection with motor vehicle matters for both St. Croix and St. Thomas Islands should be directed to Honorable Robert M. Lovett.)

## PROVINCES OF CANADA

### ALBERTA

Trowbridge, E. - Deputy Provincial Secretary, Edmonton, Alberta.

### BRITISH COLUMBIA

Parsons, Thomas W. S. - Commissioner, British Columbia Provincial Police, Department of Attorney General, Victoria, British Columbia.

### MANITOBA

Cousley, G. L. - Commissioner of Taxation, Winnipeg, Manitoba.

### NEW BRUNSWICK

Pinder, G. A. - Superintendent, Motor Vehicles Division, Department of Public Works, Fredericton, New Brunswick.

### NOVA SCOTIA

Campbell, Elliot S. - Registrar, Motor Vehicle Branch, Department of Highways and Public Works, Halifax, Nova Scotia.

### ONTARIO

Bickell, J. P. - Registrar of Motor Vehicles, Parliament Buildings, Toronto, Ontario.

### PRINCE EDWARD ISLAND

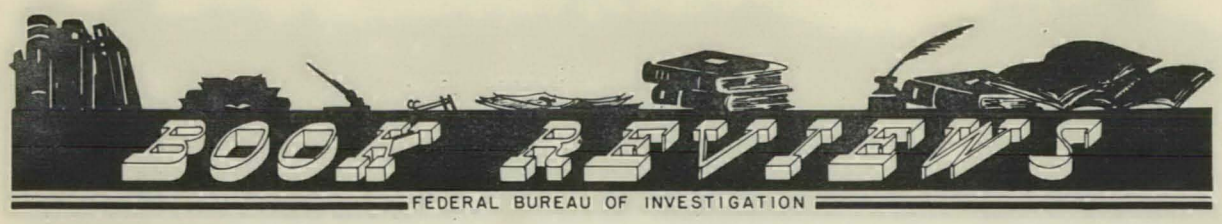
Campbell, O. W. - Acting Deputy Provincial Secretary, Charlottetown, Prince Edward Island.

### QUEBEC

Joncas, Major E. T. - Director, Motor Vehicle Bureau, Provincial Revenue Offices, Treasury Department, Quebec, Quebec.

### SASKATCHEWAN

MacDonald, J. R. - Chairman, Highway Traffic Board, Provincial Tax Commission, Revenue Building, Regina, Saskatchewan.




**AIR CORPS BASIC PHOTOGRAPHY TRAINING MANUAL,** No. 2170-5, 354 pp. Compiled by the War Department, March 1, 1930, and published by the Government Printing Office, Washington, D. C. .50 Cents

The demand for this book has been so great since it was originally published that it has been reprinted numerous times. It is, in its field, the finest book of its kind yet published. It is practical, comprehensive, and clear. The arrangement of the subject matter and the manner in which the exercises are presented and outlined make it easy for a beginner in the field of photography to obtain a clear understanding of the subject matter and, with study, become adept in handling the equipment mentioned therein.

This manual was designed originally for the initial photographic training of officers and enlisted men. It prescribes standard laboratory methods and practices in basic photography. The operation of ground photographic equipment used by the United States Army is adequately explained in this book.

Anyone interested in photography fully realizes the radical changes that have taken place and the phenomenal advances made in the photographic industry since the publication of this book in 1930. Therefore, for descriptions and usage of the various types of equipment on the market today the reader must look elsewhere than in this manual. Notwithstanding the strides gained in the photographic field in the past decade the basic principles of photography have not changed and therein lies the true value of this very fine manual.

It still serves a specific need in the photographic teaching field by presenting to the reader in clear understandable language various photographic principles, errors in photographic practice, formulae and procedure. The excellent discussions contained in this volume prove beyond any doubt its true value as a text book to be used directly with practical experience and not just another book of photographic theories compiled for the enjoyment of a camera fan.

It is felt that the main topics are covered in a manner which will serve as a guide to the data therein and are, therefore, being mentioned. The section entitled "General" provides the necessary approach in that it explains by analogy and illustration the necessity for certain apparatus and techniques in recording material on a photographic paper. Following this are the elementary principles of photography, ground cameras, photographic optics, view camera work, Graflex, Speed Graphic and Kodak Camera

work, photographic chemistry, negative making, contact printing, photographic finishing, enlarging and reducing, lantern slide making, copying and photographic filters.

One of the greatest values that can be placed on this manual is that its authors do not presume the results in carrying out the instructions will be perfect; they admit a person might make errors, such as too long or too short exposure or development. They indicate this by dealing with errors in procedure, as well as imperfections in equipment, and instruct the student in the art of properly recognizing these situations and furnish an outline of the technique of minimizing or eliminating their effect upon the finished print. In dealing with corrections for imperfect negatives, this manual forcefully indicates its value as a practical treatise to be used directly with specific training practices.

## ITEMS OF INTEREST

The bell-mouthed weapon known as a "blunderbuss" was originally named by its Dutch inventor, the "Dunder-buss" or Thunder gun. However, despite its huge charge and deafening noise, it was inaccurate and inefficient, and British sailors scornfully called it the "Blunder-buss," a nickname which stuck.

No metal has ever been made so pure that the spectroscope could not find impurities in it. Even the superfine extra-pure 1000-proof gold which is the basis of the currencies of many countries is found to contain much atomic dirt under the revealing eye which sees through atoms.

The gun known as the "snaphance" was the forerunner of the flintlock and was invented toward the latter part of the sixteenth century. Some authorities claim that this weapon derived its name from the Dutch word "snaaphaans" which means "chicken thieves." It is claimed that the name originated from the fact that such gentry were responsible for its development due to the fact that the wheel lock gun was too expensive and the match lock too betraying to their nocturnal operations.

The .45 caliber Colt automatic pistol used by the United States Army during the World War was also made in .455 caliber for use by Canadian troops.


ARIZONA

Mr. Lou Holtzendorff who recently resigned as Chief of Police at Phoenix, Arizona, has been reinstated to that post.

CALIFORNIA

Mr. Neil T. MacCollom, formerly with the Fresno, California, Police Department, has been appointed Chief of Police at Corona, California, succeeding Mr. Eli Garner.

Mr. V. J. Davenport has succeeded Mr. E. B. Long as Chief of Police at Mt. Shasta, California.

Mr. Ralph H. Wise, formerly Chief of Detectives of the Fresno, California, Police Department, has been appointed Chief of Police at Tracy, California.

GEORGIA

Mr. J. G. Newberry has been appointed Chief of Police at Columbus, Georgia, succeeding the late Homer W. Cornett.

ILLINOIS

Mr. Howard A. Becker has succeeded the late Ernest H. Drexler as Chief of Police at DesPlaines, Illinois.

MASSACHUSETTS

Mr. Norman D. Shurtleff has assumed the duties of Chief of Police of the Fairhaven, Massachusetts, Police Department.

Mr. Thomas H. Welch has been appointed Chief of Police at Needham, Massachusetts, succeeding Mr. Arthur P. Bliss.

MICHIGAN

Mr. Roy Butcher is now Chief of Police at Ferndale, Michigan.

Mr. Walter J. Goulette has succeeded Mr. John F. Hansen as Chief of Police at Grosse Pointe Woods, Michigan.

Mr. Joseph T. Kuberacki has assumed the duties of Chief of Police at Hamtramck, Michigan.

## NEBRASKA

Mr. Roy Stanton has succeeded Mr. Victor Johnson as Chief of Police at Blair, Nebraska.

Mr. Lloyd Smith has been appointed Chief of Police at Lexington, Nebraska, to succeed Mr. O. M. Williver.

## NEVADA

Mr. Harold Brooks has been named Sheriff of Ormsby County, Carson City, Nevada, succeeding Mr. W. H. Austin.

## NEW YORK

Mr. Henry C. Raab has been appointed Chief of Police at Ardsley, New York.

Mr. William A. Kruppenbacher recently assumed the duties of Chief of Police at Yonkers, New York, succeeding the late Edward Quirk.

## NORTH CAROLINA

Mr. Harry M. Joyner has succeeded Mr. E. J. Nolan as Chief of Police of the Charlotte, North Carolina, Police Department.

Mr. H. A. House is now Sheriff of Halifax County, Halifax, North Carolina, succeeding Mr. Joe L. Reddick.

Mr. Lee Erwin has been appointed Chief of Police at Marion, North Carolina, succeeding Mr. R. S. Clay.

Mr. H. F. Dees has recently been appointed Chief of Police at Pinehurst, North Carolina, to succeed Mr. F. T. Currie.

## OKLAHOMA

Mr. Albert P. Storer has assumed the duties of Chief of Police at Buffalo, Oklahoma.

Mr. R. R. Sharp has succeeded Mr. Jim Skelton as Chief of Police at Duncan, Oklahoma.

## UTAH

Mr. Reed E. Vetterli has been appointed Chief of Police of the Salt Lake City, Utah, Police Department.

Communications may be addressed to the Field Office covering the territory in which you are located by forwarding your letter or telegram to the Special Agent in Charge at the address listed below. Telephone and teletype numbers are also listed if you have occasion to telephone or teletype the Field Office.

| CITY | AGENT IN CHARGE | TELEPHONE NUMBER | BUILDING ADDRESS (Letters or Telegrams) |
|---|---|---|---|
| Albany, New York | Clegg, J. E. | 5-4595 | 707 National Savings Bank |
| Atlanta, Georgia | Danner, R. G. | Walnut 3698 | 501 Healey |
| Baltimore, Md. | Soucy, E. A. | Plaza 6776 | 800 Court Square |
| Birmingham, Alabama | Guinane, E. P. | 4-1877 | 320 Federal |
| Boston, Massachusetts | Peterson, V. W. | Liberty 8470 | 10 Post Office Square, Room 1016 |
| Buffalo, New York | O'Connor, H. T. | Cleveland 2030 | 400 U. S. Court House |
| Butte, Montana | Banister, W. G. | 2-2304 | 302 Federal |
| Charlotte, N. C. | Scheidt, E. | 3-4127 | 914 Johnston |
| Chicago, Illinois | Devereaux, W. S. | Randolph 6226 | 1900 Bankers' |
| | Johnson, A. H. (Assistant) | | |
| Cincinnati, Ohio | Suran, R. C. | Cherry 7127 | 637 U. S. Post Office & Court House |
| Cleveland, Ohio | Listerman, W. L. | Prospect 2456 | 1448 Standard |
| Dallas, Texas | Kitchin, A. P. | 2-9086 | 1200 Tower Petroleum |
| Denver, Colorado | Gebben, E. J. | Main 6241 | 518 Railway Exchange |
| Des Moines, Iowa | Dalton, J. L. | 3-8998 | 739 Insurance Exchange |
| Detroit, Michigan | Bugas, J. S. | Cadillac 2832 | 911 Federal |
| El Paso, Texas | Newsom, L. A. | Main 1711 | 202 U. S. Court House |
| Grand Rapids, Mich. | Richmond, L. H. | G-5337 | 715 Grand Rapids Nat'l. Bank |
| Honolulu, Hawaii | Shivers, R. L. | 4621 | 302 Dillingham |
| Houston, Texas | Richmond, E. L. | Capitol 9717 | 2706 Gulf |
| Huntington, W. Va. | Cook, L. K. | 8928 | 700 West Virginia |
| Indianapolis, Indiana | Wynn, E. J. | Riley 5416 | 323 Federal |
| Juneau, Alaska | Vogel, R. C. | 618 | 515 Federal and Territorial |
| Kansas City, Missouri | Brantley, D. | Victor 3113 | 707 U. S. Court House |
| Knoxville, Tenn. | Fierstone, C. K. | 3-7928 | 407 Hamilton National Bank |
| Little Rock, Arkansas | Hallford, F. | 2-3158 | 500 Rector |
| Los Angeles, Calif. | Hood, R. B. | Michigan 1161 | 900 Security |
| | Vincent, J. W. (Assistant) | | |
| Louisville, Kentucky | Moss, H. K. | Jackson 5139 | 633 Federal |
| Memphis, Tennessee | Fletcher, H. B. | 8-4236 | 2401 Sterick |
| Miami, Florida | Wyly, P. | 3-5558 | 1300 Biscayne |
| Milwaukee, Wisconsin | Boardman, L. V. | Daly 3431 | 1501 Bankers' |
| Newark, New Jersey | Conroy, E. E. | Market 2-5511 | 1836 Raymond-Commerce |
| New Haven, Conn. | McGuire, J. J. | 7-1217 | 510 The Trust Company |
| New Orleans, La. | Rutzen, A. C. | Raymond 9354 | 1308 Masonic Temple |
| New York, New York | Sackett, B. E. | Rector 2-3520 | 607 U. S. Court House, Foley Square |
| | Guerin, R. A. (Assistant) | | |
| Oklahoma City, Okla. | Andersen, H. E. | 2-8186 | 940 First National |
| Omaha, Nebraska | Stein, C. W. | Atlantic 8644 | 629 First National Bank |
| Philadelphia, Pa. | Sears, J. F. | Walnut 0555 | 4060 U. S. Court House |
| Phoenix, Arizona | Abbaticchio, R. J. | 4-5766 | 307 W. C. Ellis |
| Pittsburgh, Pa. | McKee, S. K. | Grant 0800 | 620 New Federal |
| Portland, Oregon | Swenson, J. D. | Atwater 6171 | 411 U. S. Court House |
| Richmond, Virginia | Hennrich, C. E. | 3-0169 | 601 Richmond Trust |
| Saint Louis, Mo. | Norris, G. B. | Central 4115 | 423 U. S. Court House & Custom House |
| Saint Paul, Minn. | Berens, A. G. | Garfield 7509 | 404 New York |
| Salt Lake City, Utah | Newman, J. C. | 4-4338 | 301 Continental Bank |
| San Antonio, Texas | Jones, G. T. | Fannin 8052 | 478 Federal |
| San Diego, Calif. | Duffey, H. R. | Main 3044 | 728 San Diego Trust & Savings Bank |
| San Francisco, Calif. | Pieper, N. J. L. | Exbrook 2679 | One Eleven Sutter, Room 1729 |
| San Juan, Puerto Rico | McCormack, D. L. | 1971 | 504 Banco Popular |
| Savannah, Georgia | | 3-3054 | 305 Realty |
| Seattle, Washington | Cornelius, A. | Main 0460 | 800 Joseph Vance |
| Sioux Falls, S. D. | Hanni, W. | 2885 | 400 Northwest Security National Bank |
| Springfield, Illinois | Thornton, J. E. | 2-9675 | 1107 Illinois |
| Washington, D. C. | Hottel, G. | Republic 7100 | 2266 U. S. Department of Justice |

The teletypewriter number for each Field Office, including the Bureau at Washington, is 0711, except the New York City Office which is 1-0711.

Communications concerning fingerprint identification or crime statistics matters should be addressed to:-

**Director**
**Federal Bureau of Investigation**
**United States Department of Justice**
**Pennsylvania Avenue at 9th Street, N. W.**
**Washington, D. C.**

The office of the Director is open twenty-four hours each day.

**TELEPHONE NUMBER: REPUBLIC 7100**
**EMERGENCY (KIDNAPING) NATIONAL 7117**

# WANTED BY THE FBI. . . .


## Joseph R. Vatcher,

**alias Joseph Edward Campbell**

**For**

## Embezzlement

Detailed descriptive data on this individual appear on pages 86 and 87.