

• *Restricted to the Use of Law Enforcement Officials*

# FBI

## *Law Enforcement*

# BULLETIN



1952

AUGUST

Vol. 21 No. 8

Federal Bureau of Investigation  
United States Department of Justice  
J. Edgar Hoover, Director

# FBI Law Enforcement Bulletin

AUGUST 1952

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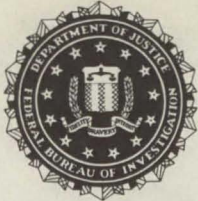
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The *FBI Law Enforcement Bulletin* is issued monthly to law enforcement agencies throughout the United States. Much of the data appearing herein is of a confidential nature and its circulation should be restricted to law enforcement officers; therefore, material contained in this Bulletin may not be reprinted without prior authorization by the Federal Bureau of Investigation.







United States Department of Justice  
Federal Bureau of Investigation  
Washington 25, D. C.

August 1, 1952

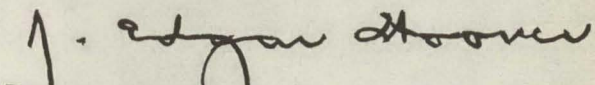
TO ALL LAW ENFORCEMENT OFFICIALS:

A significant by-product of the growing traffic problem is that manslaughter by negligence has become one of the nation's principal criminal violations. This offense took a toll of more than 5,500 lives last year, the majority of which were a result of accidents on our streets and highways.

Improved law enforcement procedures must provide the answer to the worst part of this traffic situation. Better engineering, safety campaigns and driver training programs will prevent many casualties but they do not provide the whole answer. Where the effectiveness of other methods ends, the only recourse is to maintain a system of strict and impartial law enforcement. As in the case of any other offense, we may easily demonstrate the folly of negligent driving to the intelligent citizen but there will always be a hard core of offenders who recognize no argument other than a heavy fine or a sentence in jail. For that type of driver, enforcement of the law is the only answer to the problem.

While it is true that most traffic offenses do not result in manslaughter, under present driving conditions every major violation carries the possibility of death or injury. Failure to enforce the law strictly is little better than gambling with human lives.

Very truly yours,

  
John Edgar Hoover  
Director





## FEATURE ARTICLE

# Summer Brings Tourist Problems to Law Enforcement

by LEWIS NORDBYE, *Chief of Police, Rapid City, S. Dak.*<sup>1</sup>

Operating an efficient police department in a city of 25,000 people is not a simple problem. Ordinarily the problem can be met, however, and plans can be effected to combat the questions which arise in law enforcement in a city of this size without too much complexity. Usually an excellent estimate of the conduct and law violation ratio can be established when the known factors of population are present, and, accordingly, steps can be taken to see that proper law enforcement methods are employed. But when 6,000 different strangers descend upon a city each night during 4 months of a year, the problem of estimating violations of the law and enforcing the law becomes more complex.

The police department of Rapid City, S. Dak., has this problem every summer. Rapid City is sit-

uated in the Black Hills of South Dakota and is the gateway to the Rocky Mountains. United States Highways Nos. 16 and 14 pass through the city. Many tourists traveling to Yellowstone National Park from the eastern part of the United States pass through Rapid City en route to this national shrine. A majority of the summer traffic traveling from Seattle and the great Pacific Northwest to the eastern part of the United States travels through Rapid City. The city is host to an average of from 6,000 to 7,000 people each night during the usual tourist season. There are sleeping and overnight accommodations for 7,000 persons at Rapid City, all of which are filled before 7 p. m. each evening during the summer months.

The problem of enforcing the law and serving as a police department to 7,000 different guests each night imposes various situations which have to be met. The first rule observed by the Rapid City Police Department is that of being of service to all tourists. In this connection, we have established, with the aid of the chamber of commerce, several information booths which are located at strategic points in Rapid City. At these information booths, tourists are supplied with road information, free maps, reports on the weather and other data of interest to them. They are also given recommendations concerning tours in the Black Hills area. In addition, these information booths supply reservations at hotels, motels, and tourist homes.

### Routing Traffic

Two distinct routes of traffic were drawn up to be followed by tourists and commercial vehicles. Tourists entering Rapid City find a well-marked



*Chief Lewis Nordbye.*

<sup>1</sup> Chief Nordbye was selected by the Junior Chamber of Commerce of Rapid City as the "Man of the Year" in recognition of the work done by his department in improving relationships with tourists and vacationers who visit Rapid City.



lane of travel with an indication that it is to be followed by them. On the other side of the town is a well-marked avenue of travel to be utilized by all commercial vehicles passing in and out of Rapid City. These clearly marked avenues of travel for the tourist speed him on his way and also route him through the scenic part of the city. Other avenues marked for commercial vehicles divert them from the busy section of town and thus aid in eliminating traffic congestion within the business section of Rapid City.

### Enforcing Traffic Laws

Tourists who violate traffic laws in Rapid City during the season are tagged with regularity.

**WELCOME . . .**

to

**RAPID CITY**

*We Are Glad You Came!*

This card is also to call your attention to the fact that you have violated the traffic regulations checked on the back.

**YOU NEED NOT REPORT TO THE POLICE STATION** but we would greatly appreciate it if you would obey traffic regulations while you are here.

*Enjoy The Black Hills.*

**Rapid City Police Department**

Violation .....

.....

.....

Meter No. .... Time .....

Location .....

Officer .....

When tourists bring tags or tickets for traffic violations to the police department to pay their fines, they are reminded there that the tag is a courtesy tag and not a ticket. The tag reads: "Welcome to Rapid City. We are glad you came! This card is also to call your attention to the fact that you have violated the traffic regulations checked on the back. *You need not report to the police station, but we would greatly appreciate it if you would obey traffic regulations while you are here. Enjoy the Black Hills.* (signed) Rapid City Police Department."

On the back of the courtesy ticket are a notation as to the nature of the traffic violation and a courteous request not to repeat it. On the average, about 3,000 of these courtesy tags are passed out

Date ..... 19 .....

License No. .... State .....

#### YOU HAVE VIOLATED THE FOLLOWING TRAFFIC REGULATIONS:

##### U TURN

- ..... 1. At intersection controlled by STOP and GO Signals.
- ..... 2. In middle of block.
- ..... No Muffler, or cut-out open.
- ..... Slow Driving.

##### YOU FAILED TO:

- ..... 1. Obey traffic lights.
- ..... 2. Come to a complete stop before making a right turn on red light.
- ..... 3. Stop at thru street.
- ..... 4. Stop before leaving an alley.
- ..... 5. Signal before turning.

##### PARKING VIOLATIONS:

- ..... 1. Meter Violation.
- ..... 2. Over time.
- ..... 3. Improperly.
- ..... 4. Double.
- ..... 5. In Alley.
- ..... 6. Prohibited Space.
- ..... 7. Too near Fire Hydrant.
- ..... 8. In front of Hotel.
- ..... 9. In front of Theatre.

Date ..... 19 .....

License No. .... State .....

Make of Vehicle .....

Remarks .....

Name of Driver or Owner .....

Address .....

*Front side of courtesy ticket.*

*Reverse side of courtesy ticket.*



during the summer months, and we have received many letters from tourists expressing appreciation for the kind treatment given to them by the Rapid City Police Department.

### **Emergencies**

Frequently during the summer months, in cases of death in the family or other emergencies, it becomes necessary to communicate with a tourist from another part of the United States, who is on vacation in the Black Hills area of South Dakota at an unknown address. This is a problem for the local police. In order to give efficient emergency service to the tourist, we have made some special arrangements.

The State police radio, which has State-wide coverage in South Dakota, broadcasts emergency information throughout the entire State of South Dakota, communicating it to all law-enforcement agencies. The emergency information is also furnished to radio stations KOTA and KOZY in Rapid City and they broadcast this emergency information every 30 minutes free of charge as a public service to the tourists in the Black Hills area. Further, the "Rapid City Daily Journal," the daily paper of Rapid City, cooperates to every extent and publishes all emergency notices to locate tourists on the front page of its daily newspaper.

With all these facilities at our fingertips, we have always been able to locate the tourists who are residing temporarily in the Black Hills area of South Dakota.

As in every case with tourists, there is always someone who forgets or leaves behind various articles during vacation in the area. Usually, they call the Rapid City Police Department first, and the police department renders effective service in procuring the article and forwarding it to the forgetful tourist. In some instances, the tourist cannot even recall the hotel or motel in which he resided; however, all transient facilities are listed with the police department and can be found with a little assistance from the tourist concerning the appearance of the hotel or motel.

We are proud of the assistance we have been able to render the tourists who visit Rapid City and of the many letters of appreciation we receive from those who have benefited from our services. I should like to extend to all brother law enforcement officers a very cordial invitation to visit Rapid City and the Black Hills of South Dakota.

## **Explanation of Selective Service Serial Numbers**

Selective Service regulations provide that every registrant shall be given a Selective Service number which shall identify him, the State within which he is registered, the local board with which he is registered, and the year of his birth. As of possible assistance to local officers there is set out below an explanation of the meaning and "break-down" of these numbers.

The Selective Service number is a composite number made up of the following four elements:

1. A number representing the State in which the registrant is registered. The numbers assigned to the several States, territories, and possessions are set out in the Selective Service Regulations in a table in which the States are numbered in alphabetical sequence from 1 to 48, beginning with Alabama (1) and ending with Wyoming (48), and the following additional numbers are assigned:

- 49 District of Columbia.
- 50 New York City.
- 51 Alaska.
- 52 Hawaii.
- 53 Puerto Rico.
- 54 Virgin Islands.
- 55 Guam.
- 56 Canal Zone.

2. The number of the registrant's local board within the State.

3. The last two digits of the year in which registrant was born.

4. The number assigned to the registrant by his local board among the other registrants of the board having the same year of birth.

Thus, for example, a young man born in 1926 who registers for the draft at Local Draft Board No. 39 in Massachusetts might have a Selective Service serial number which reads: 19 39 26 510.



### **NICKNAME FILE**

In view of the fact that many individuals with fingerprint records are known only by their nicknames the FBI Identification Division has for years maintained a card-index file containing, in alphabetical order, the nicknames appearing on fingerprint cards. When requesting a search of the nickname file it is desired that all possible descriptive data be furnished.



# ***FBI National Academy Graduates***

## ***Forty-ninth Class***

Graduation exercises for the 102 members of the forty-ninth session of the FBI National Academy, the largest group ever graduated from the Academy, were held June 6, 1952, in the auditorium of the National Gallery of Art at Washington, D. C. The class was composed of representatives from 40 States, the District of Columbia, Hawaii, Alaska, and Puerto Rico, bringing the total alumni of the FBI National Academy to 2,528.

Diplomas were presented to the group personally by FBI Director J. Edgar Hoover.

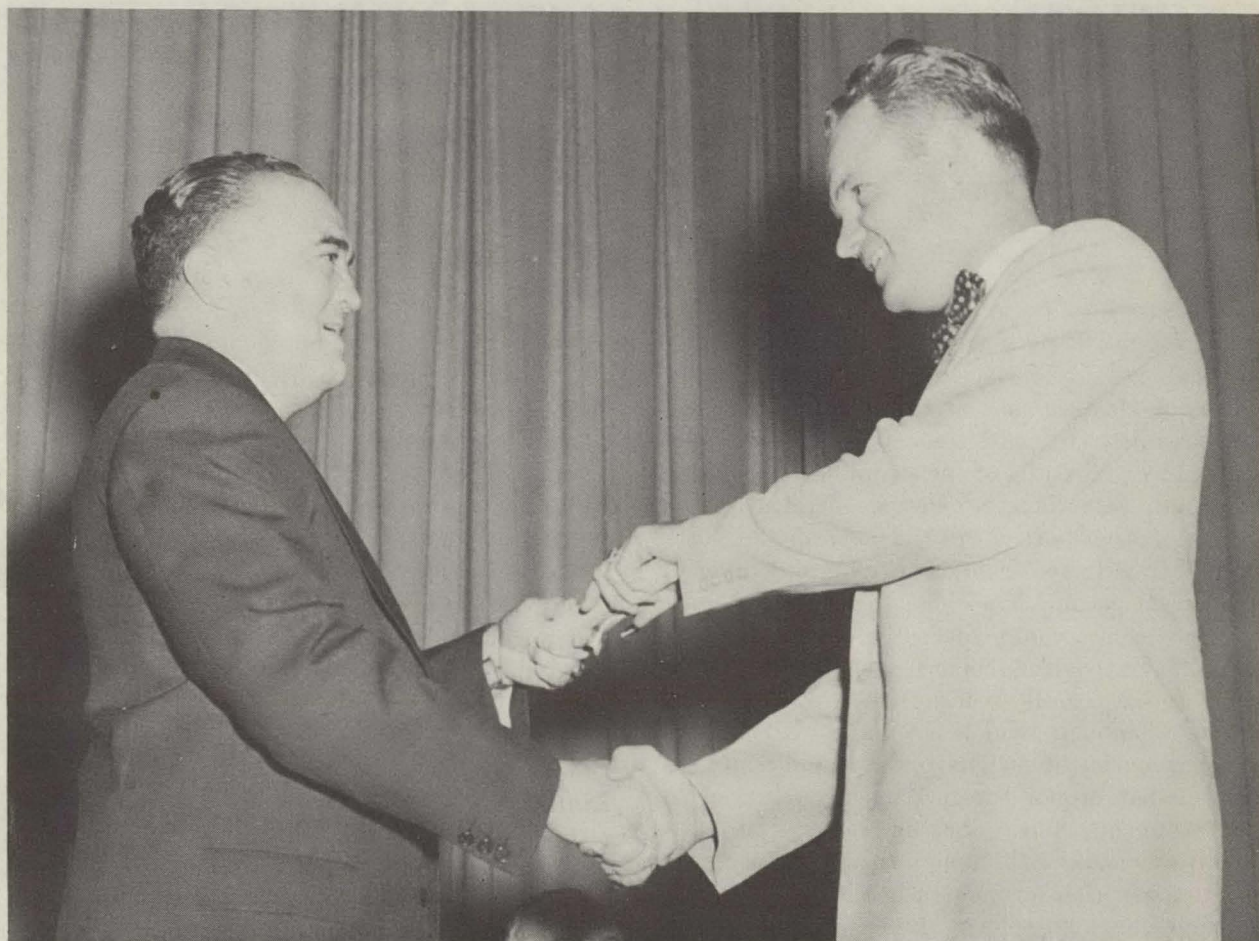
Mr. William Walton Pleasants, Durham, N. C., president of the class, spoke briefly. The charge to the graduating class was delivered by Assistant Director H. H. Clegg of the Federal Bureau of Investigation, and the invocation and benediction were given by Dr. Edward L. R. Elson, of the

National Presbyterian Church, Washington, D. C.

The highlight of the graduation exercises of the forty-ninth session was the designation of Chief Charles W. Rehmert, of the Mexico, Mo., Police Department, as the 2,500th graduate of the FBI National Academy since its inception in 1935.

Members of the forty-ninth session began their course of studies on March 17, 1952, and the 12-week course included all phases of law enforcement work with special emphasis on constitutional law, ethics in law enforcement, searches and seizures, evidence, and confessions. The members of the class pursued their studies at Washington and at the FBI Academy at Quantico, Va. Their training included over a hundred subjects, with many specialized courses in the field of police


*(Continued on page 19)*



*Charles W. Rehmert, Chief, Mexico, Mo., Police Department, the 2,500th graduate from the FBI National Academy, receives his diploma from Director J. Edgar Hoover.*



## *Don't Miss a Hair*



*A human hair  
magnified 900 diameters*

THE FBI LABORATORY

### Introduction

Hair evidence is present in a large percentage of criminal cases. The successful investigation of crimes of violence such as rape, murder, hit and run, assaults, etc., can frequently be materially assisted by the results of the examination of hairs. Hairs are very likely to become detached from the scalp, other portions of the body, or the clothing and transferred from one person to another in any violent encounter. Vicious assaults and murders are often accomplished by blows to the head area. Hairs readily become attached to the instrument used, especially where there are bloodstains on the weapon to which the hairs will adhere. An examination of such hairs will aid in establishing whether or not the instrument was used to perpetrate the crime. (See fig. 1.)

Hair evidence has been used to advantage in the solution of other crimes such as breaking and entering, burglary, robbery, kidnaping, etc., where the subject or victim has brushed against objects or has come in contact with animal furs.

The examination of hairs may prove of value in identifying both the living and the dead. It tends to identify the perpetrator of a crime by placing him at the scene of a crime or with the victim. (See fig. 2.) Hairs are very resistant to decomposition and putrefaction. They often remain as evidence of identification long after other means such as facial features and fingerprints have been destroyed.

There is an old superstition that hair grows after the death of an individual. This is not true, but the hair, especially the beard, may appear longer due to the shrinkage of the skin.

#### **Limitations**

Hair evidence is difficult to locate, and a search for it can hardly be too meticulous. For example, in a hit-and-run case it is suggested that if the investigation reveals a car was possibly involved in the case, the car be placed on a lift or over a



grease pit and searched thoroughly with an oblique light working from the underneath side to the top. (See fig. 3.)

If a hair examination is requested, all foreign fibrous debris is removed from the submitted specimens in the laboratory. The hairs are separated from the other debris and are prepared for examination.

If hairs are not fully developed or are fragmentary, they are not suitable for an adequate hair examination.

Except in rare instances, there are not enough individual characteristics in hair from which it can be positively determined that a hair of unknown source came from a particular person or animal to the exclusion of all other persons or all other animals of the same family.

### ***Examination of Hair Evidence***

A hair is an appendage of the skin and consists of a bulb or root end, the shaft, and a tip end. The shaft grows outward from the root end and is composed of the cuticle or outside covering, the cortex or the walls, and the medulla or core. The cuticle is formed by overlapping scales which always point toward the tip end of the hair. The cortex consists of flat, elongated cells which give pliability to the hair. The medulla or core is composed of various shaped cells. The pigment, when present, may be found in varying amounts distributed throughout the hair and is responsible for the shade or color tone of the hair.

It can be determined whether hair is human or animal in origin. Human hair has finer and more numerous cross striations, the medulla is usually narrower in breadth, when present, and the location and distribution of the pigment are different. Animal hairs usually consist of both heavy guard hair and finer fur hair whereas human hair does not.

Hairs of many different types of animals vary in structure to such an extent that the kind of animal can usually be determined. On the other hand, hairs from closely related animals, such as deer, moose or caribou, cannot be definitely distinguished without large samples of hair. Different breeds of the same animal family such as the dog family cannot be differentiated by an examination of a limited number of hairs. Animal hairs from an unknown source can be compared with a hair sample from a particular animal to determine if possibly the two samples could have come from

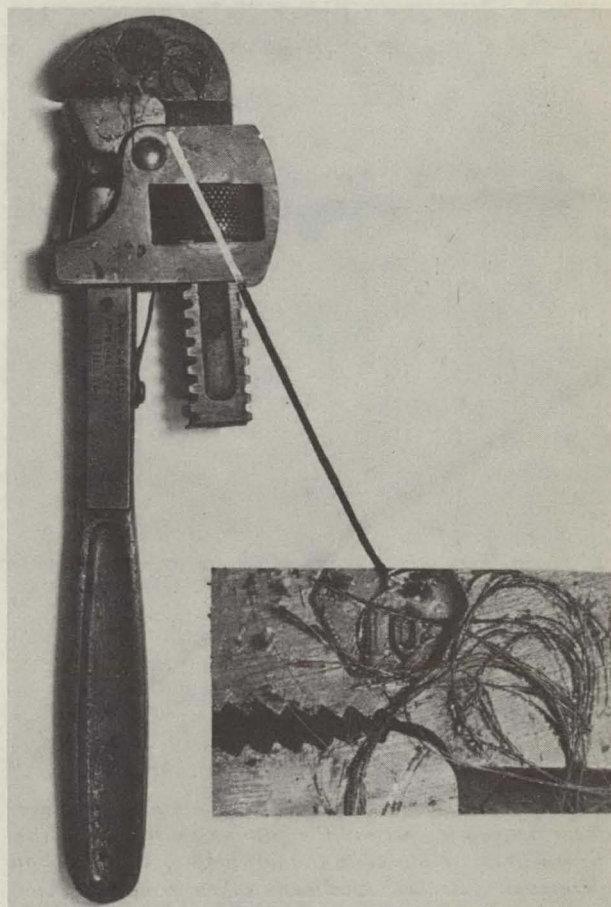
the same animal, but animal hair comparisons are not as conclusive as human hair comparisons due to the many variations found in the hair from the same animal.

In most instances it can be determined whether a human hair came from a member of the Negroid, Mongoloid, or Caucasian race.

### ***Characteristics by Race***

Hair from members of the Negroid race will contain heavy pigment distributed unevenly. A thin cross section of a hair from a member of the Negroid race will be flat to oval in shape (fig. 4). Negroid hair is usually kinky with marked variations in the diameter along the shaft.

Members of the Mongoloid race, which includes the American Indian, the Eskimo and the Oriental, have hair containing dense pigment distributed more evenly than in Negroid hair. Cross sections made of Mongoloid hair will be round to oval in shape. (See fig. 4.) Mongoloid hair is coarse and



**Figure 1.—Hairs and bloodstains on death weapon found in car of suspect.**

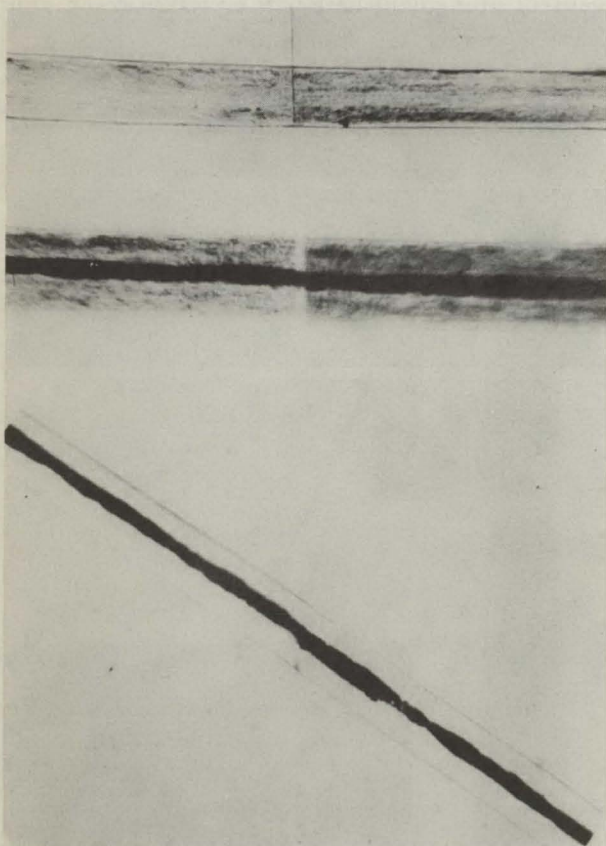


straight with very little variation in diameter along the shaft of the hair. It usually contains a heavy black medulla or core.

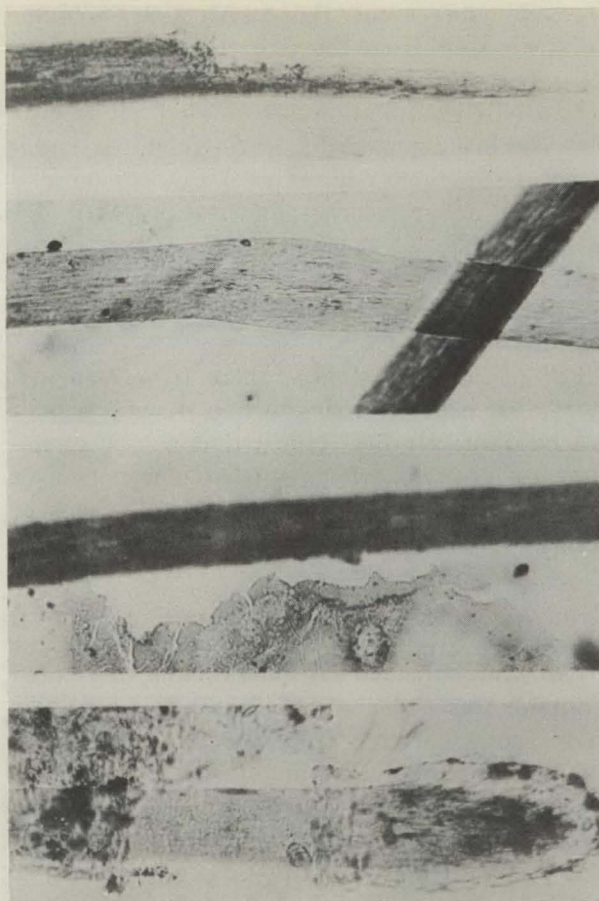
Hair from members of the Caucasian race will contain very fine to coarse pigment. The pigment will be more evenly distributed than is found in hair from a Negro or a Mongolian. Cross sections of hairs from Caucasians will be oval to round in shape. (See fig. 4.) Caucasian hair is usually straight or wavy and not kinky. It can vary in diameter along the shaft very little or to a moderate amount.

Hair from a person of mixed races will contain characteristics of the race that is prominent in the person's physical appearance.

The approximate age of an individual cannot be determined from a hair examination with any degree of certainty except with infant hair. Infant hairs are fine, short in length, have fine pigment, and are rudimentary in character.



**Figure 2.**—Caucasian type hairs from a murdered police officer were found around the button of a subject's shirt. These hairs were placed in the left field of a comparison microscope. Known specimens taken from the head of the deceased were placed in the right field. Note how the variations in the questioned specimens match those of the known specimens.



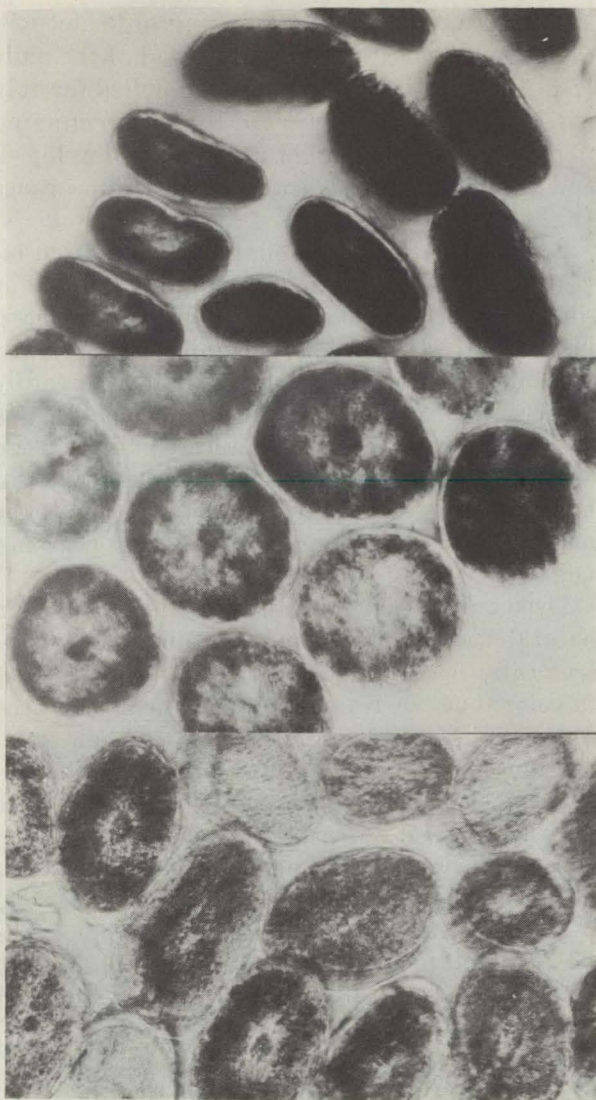
**Figure 3.**—Caucasian type scalp hairs found on the undercarriage of an automobile involved in a "hit and run" accident. Hair No. 1 (reading from top to bottom) was forcibly shattered. Hair No. 2 was crushed at the widened area. Hair No. 3 shows a stain of human blood. Hair No. 4 was forcibly removed from the scalp. The microscopic variations in the structure of these hairs were also present in the known samples obtained from the victim. The subject in this case was found guilty of manslaughter.

Children's hair through adolescence is generally finer and more immature than adult hair but cannot be definitely differentiated with certainty. If it is noted that the pigment is missing or starting to disappear in the hair, it can be stated that the hair is from an adult. It is not uncommon for a relatively young person to have prematurely grey or white head hair but not body hair. The root end (bulb) or hair from an aged person may show a distinctive degeneration.

### Characteristics by Sex

Sex cannot be definitely determined from a hair examination. Male hair is generally larger in diameter, shorter in length, more wiry in texture





**Figure 4.—Cross sections of scalp hair. Negroid, Mongoloid and Caucasian, reading from top to bottom.**

than that of a female, but numerous exceptions preclude conclusions of certainty. Male hair and female hair average approximately 1/350 and 1/450 of an inch in diameter, respectively. If a hair is as much as 6 inches in length and has a split tip end, these are good indications that the hair is from a female, though not positive proof. Pinning, curling, brushing, and combing the hair will cause the tip ends to split as illustrated in figure 5. Most males have their hair cut often enough to prevent having head hair with split tip ends.

The region of the body from which the human hair has been removed can be determined with considerable accuracy from the length, size, color, stiffness, curliness, and general gross appearance.

Scalp hairs can be identified as such by the fact that they are more mature than any other kind of human hair.

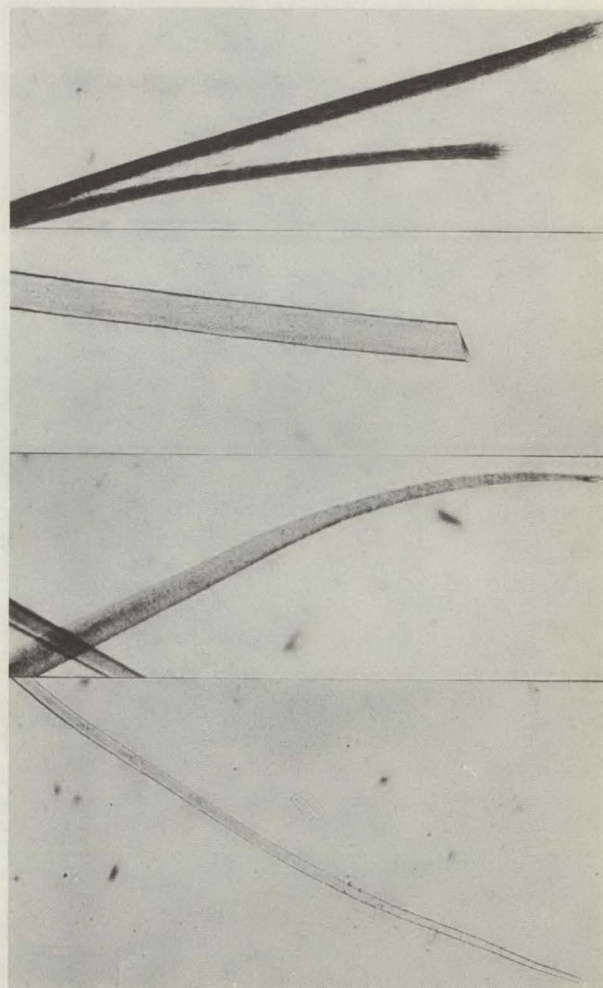
Beard hair is coarse, curved, and often triangular in cross section.

Hairs from the eyebrow, eyelid, nose or ear are short, stubby and have wide medullas. They taper rapidly to a fine point and can be distinguished by their general over-all appearance. (See fig. 5.)

Trunk hairs vary in thickness along the shaft and are immature but are somewhat similar to head hairs. They have fine, long tip ends.

Limb hairs are similar to trunk hairs but usually are not so long or so coarse and usually contain less pigment.

Axillary hairs are fairly long with unevenly distributed pigment. They vary considerably in



**Figure 5.—Hair No. 1 (reading from top to bottom) is a scalp hair with a split tip end. Hair No. 2 has been cut with a sharp instrument. Hair No. 3 is from the nostril. The tip end has not been cut. Hair No. 4 is from the scalp and the tip end has not been cut.**



diameter along the shaft and have frequently a bleached appearance. Axillary hairs have an irregular shape and structure.

Pubic hairs are similar to axillary hairs but are coarser and do not appear bleached. They also are more wiry, have more constrictions and twists, and usually have continuous broad medullas.

Foreign substances on the hair such as nicotine, ear wax, eyebrow pencil residue, mascara, food particles, etc., may give an indication as to the area of the body from which the hair has come.

It is not difficult to establish whether hair has fallen out or been pulled out forcibly, if the root end is present. Hairs which have fallen out from natural causes or diseases will have a bulb formation at the root end. This bulb will have a clean

appearance with nothing adhering to it and will often have a concavity at the root end of the bulb. (See fig. 6.) Hairs that have been pulled forcibly will usually have a portion of the sheath clinging to the bulb, the bulb might not be fully developed, and the bulb will have a mutilated appearance (fig. 6).

An examination of the shafts of hairs often reveals that the hairs have been forcibly crushed or shattered with a blunt object or cut with a sharp instrument. Under high magnification crushed or shattered areas of the hair shaft are readily observable. A sharp cutting instrument leaves the cortical cells of the shaft severed with a clean and smooth cut (fig. 5). A blunt instrument will leave the ends of the severed cortical cells of the hair shaft with a jagged or rough appearance (fig. 6).

Dyed or bleached hair can be distinguished from natural hair. Dyed hair when observed microscopically has a dull appearance and is constant in color tone whereas natural hair is not and the individual pigment granules in natural hair stand out more sharply (fig. 7). If there has been a subsequent growth of the hair since dyeing, the undyed root end portion will stand out markedly. Bleached hairs have a rough appearance, are more uniform in shade and contain less pigment depending on the amount of bleaching (fig. 7). The FBI Laboratory has developed a dye absorption and chemical test for the detection of bleached hair.

If hairs have been singed, the burned area will have a swelled and vacuolated end (fig. 6). Evidence of singed hairs has been of value in arson and firearms cases.

### *Origin of the Specimen*

The prime purpose of human hair examinations in the FBI Laboratory is to determine whether a human hair sample of unknown source, hereafter spoken of as a questioned specimen, could have originated from the same source as a known hair sample representing a particular person (fig. 2). Generally, hair samples from different individuals can be distinguished, microscopically, if the samples are representative of all the variations in the hair of the individuals. Tests in the laboratory have revealed that it was possible to determine from whom a questioned hair sample was taken by comparing it with hair samples from 100 known individuals, one of whom also

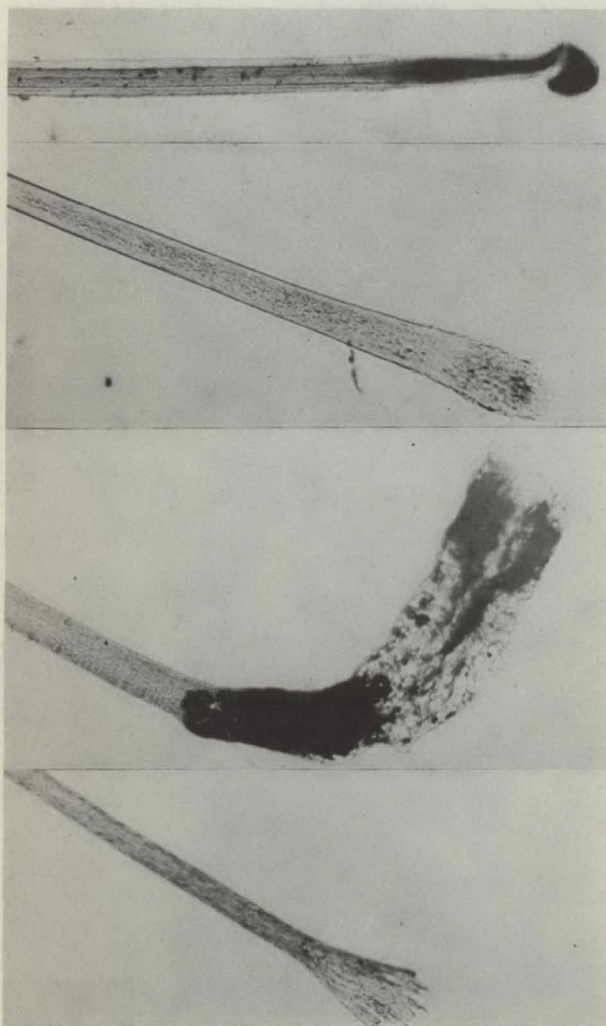


Figure 6.—Hair No. 1 (reading from top to bottom) has been forcibly removed. Hair No. 2 fell from the scalp from natural causes. Hair No. 3 shows a burned end. Hair No. 4 was severed by crushing.



furnished the questioned specimen. This cannot be done consistently, however, for there are hair samples from different individuals which cannot be distinguished microscopically. As pointed out previously, it is not possible except in very unusual cases to determine definitely that a questioned hair sample came from a particular person. It can be determined, however, that the hair of unknown source matches a known hair sample from a certain individual in all microscopic characteristics and, accordingly, could have originated from the same source or that it is dissimilar to the known hair sample and therefore is not from the same person.

In making hair comparisons, a comparison microscope is most essential so that the questioned hairs and the known hairs can be viewed at the same time. Any variations in the microscopic characteristics can thus be readily seen. Hair from any given area of the body, such as the scalp, will not be constant in its characteristics. Therefore, it is very important to have several hairs in the known specimen in order to determine if all the variations in the questioned sample are also present in the known sample.

### *Phases of the Examination*

The examination of hair should involve four different phases.

The hairs should first be observed microscopically in the condition that they were obtained. In this examination particular attention should be given to any foreign material that might be on the hair such as blood or dye. Any foreign material on the hair should be identified, if present in sufficient quantity for testing. The hairs should also be examined for evidence of natural or artificial curl and to determine how the hair was severed.

The hairs should be cleaned with a mixture of equal portions of alcohol and ether.

The scales forming the cuticle of the hairs should be examined. The scales can be observed by making a cast of the scales on the hairs by covering the hairs with a liquid substance such as collodion which solidifies rapidly when exposed to the air. When the substance has dried thoroughly the hair is removed from it and there should remain a cast of the scales. Another method to observe the scales on the hair is to partly cover the hairs with a mixture of water and glycerine while they are stretched out straight on a glass microscope slide. The size (relation of the width

to the length), the general shape, and the irregularity of the scales should be compared (fig. 8).

Longitudinal hair mountings in a permanent mounting medium should be prepared. The overall appearances of the hairs should be observed, paying particular attention to the color variations; the size, shape, shade, and distribution of the pigment; the general coarseness of the hair; the size, shape and type of medullary formation, if present; the characteristics of the root and tip ends; the character of the cortical cells; whether fusi (air pockets) are present and if all the variations in the hairs of a questioned source are present in the hair from a particular person (fig. 2).

Finally, cross sections of the hairs in both the questioned and known samples should be made with a microtome and compared, noting the general shape; the size, the appearance, and the distribution of the pigment; and the proportions of the parts of the hairs.

The examiner of hairs should have a ready reference file containing hair samples of human and animal hairs which should be used for comparative purposes to verify the identification of questioned hairs (fig. 9).

No opinion should be expressed as to the results of the examination of hairs unless the examiner has had wide experience in examining and identifying hairs.

### *Collecting and Submitting Evidence*

A complete search of the crime scene must be made at once. All of the hairs in the questioned specimens should be submitted, but do not mix hairs found at different places.

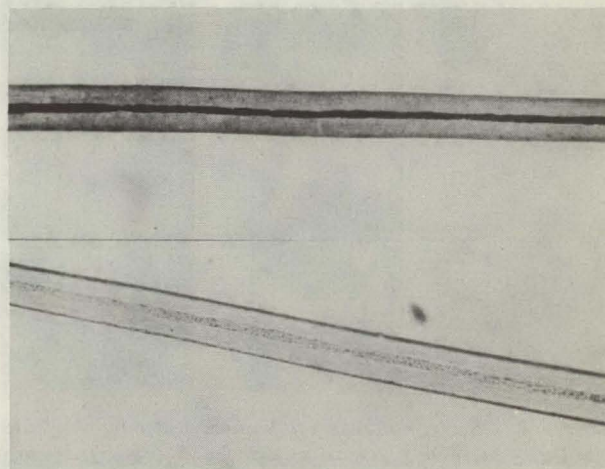


Figure 7.—The top hair is dyed and the bottom hair is bleached.



In vicious assault and murder cases, obtain the clothing of the victim from the hospital or morgue to avoid the loss of evidence by careless handling and to prevent the clothing from being destroyed.

Avoid placing the victim's clothing and the subject's clothing in the same part of an automobile; on the same objects, such as a table; or in the same container or package before each piece has been separately wrapped and sealed to insure against transfer of hairs or other evidence from one garment to another.

Representative samples of hair from the victim as well as the suspect should be obtained, if possible. To be a representative head hair sample from a particular individual it should consist of at



Figure 9.—Hair and fiber reference file. Known samples of different kinds of hairs and fibers are mounted on glass microscope slides.

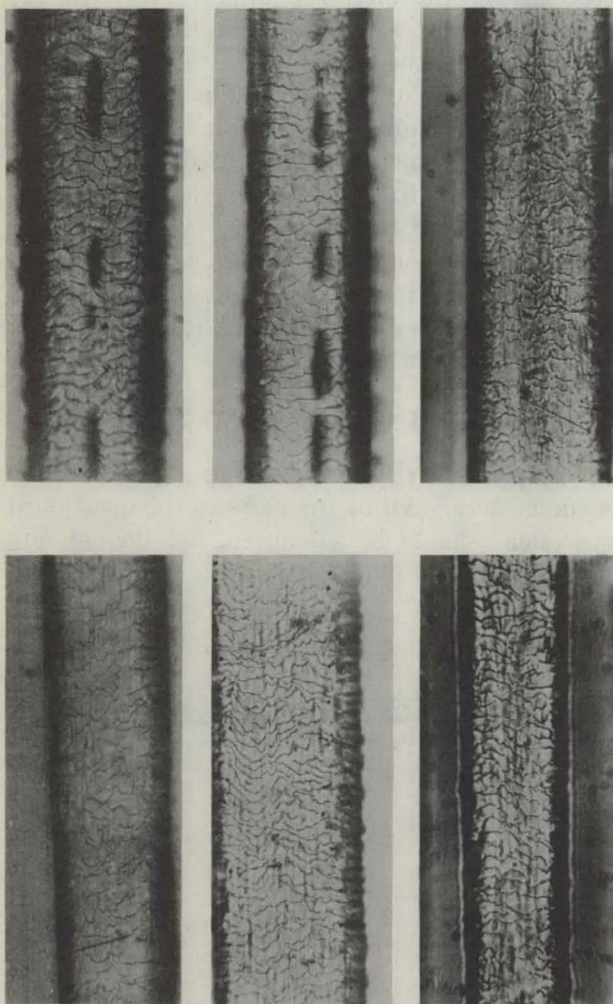


Figure 8.—Scale patterns on human scalp hair. Note similarity of scale patterns on hair No. 1 (read from top left to right and bottom left to right) and hair No. 2, which are from the same person. Each of the other hairs is from a different person. Note that they are dissimilar.

least a dozen hairs from different areas of the scalp and preferably full length hairs. If there has been an injury, the hair sample should be taken from the injured area. Do not mix known samples of hair from different parts of the body such as, for example, scalp and pubic hairs.

The hairs should be placed in a powder paper (folded paper) or in a pill box and the containers should be securely sealed with scotch tape.

Hairs should never be secured to a piece of paper or cardboard with scotch tape. The hairs will be damaged and any debris clinging to them may be lost.

Do not put hairs in an envelope. The corners of envelopes are not securely sealed and hairs will be lost.

Areas on an object containing hairs should be protected with cellophane or paper taped over the areas before wrapping the object for transmittal to the Laboratory. Hairs should be removed from objects too large to transmit; however, it is suggested that photographs of the hairs on the object should be made before removing the hairs.



# IDENTIFICATION

Previous issues of the *FBI Law Enforcement Bulletin* have discussed the various pattern types, the ridge counting of loops, and the tracing of whorls. This and subsequent issues will illustrate how these factors are utilized in determining the classification formula.

## The Primary

The primary, as the name indicates, is the initial subdivision in the sequencing and filing of prints and is determined by the number of whorls present and the position they occupy. Numerical values are assigned to each of the 10 finger blocks as shown in figure 1. The letter D in the odd-numbered finger blocks in the illustration indicates those fingers used in determining the denominator. The letter N in the even-numbered finger blocks indicates those fingers used in determining the numerator. If whorls appear in any of the odd-numbered finger blocks the summation of the numerical values of those finger blocks, plus 1, de-

## Using the Formula in Fingerprint Classification

termines the denominator. The summation of the numerical values of the even numbered finger blocks in which whorls appear, plus 1, determines the numerator.

The 1 which is arbitrarily added to the summation of the numerical values in those finger blocks in which whorls appear was instituted to prevent having a primary of 0 over 0 on those prints where no whorls are present and was necessarily added in all other cases for consistency.

## The Classification Formula

The following equation may be used in arriving at the proper primary:

Even-numbered finger blocks 2-4-6-8-10

$$\frac{\text{Values } 16-8-4-2-1+1 \text{ numerator}}{\text{Values } 16-8-4-2-1+1 \text{ denominator}}$$

Odd-numbered finger blocks 1-3-5-7-9

It must be remembered that the values are added together only when a whorl appears in the corresponding finger block.

Name _____ (Last name) (First name) (Middle name) (Initials)				
Alias _____				
No.	Color	Sex	Ref.	
<b>RIGHT HAND</b>				
1. Thumb	2. Index finger	3. Middle finger	4. Ring finger	5. Little finger
16	16	8	8	4
D	N	D	N	D
<b>LEFT HAND</b>				
6. Thumb	7. Index finger	8. Middle finger	9. Ring finger	10. Little finger
4	2	2	1	1
N	D	N	D	N
Impressions taken by: _____		Note annotations: _____		
Date: _____		Signature of person fingerprinted: _____		
Four fingers taken simultaneously		Four fingers taken simultaneously		
Left Hand		Right Hand		

DO NOT FOLD THIS CARD.

Figure 1.

Name _____ (Last name) (First name) (Middle name) (Initials)				
Alias _____				
No.	Color	Sex	Ref.	
<b>RIGHT HAND</b>				
1. Thumb	2. Index finger	3. Middle finger	4. Ring finger	5. Little finger
0	0	17	20	17
W	W	W	W	W
<b>LEFT HAND</b>				
6. Thumb	7. Index finger	8. Middle finger	9. Ring finger	10. Little finger
1	M	18	15	13
W	W	W	W	W
Impressions taken by: _____		Note annotations: _____		
Date: _____		Signature of person fingerprinted: _____		
Four fingers taken simultaneously		Four fingers taken simultaneously		
Left Hand		Right Hand		

Figure 2.



LEAVE THIS SPACE BLANK

Name: \_\_\_\_\_ Class: 1

Age: \_\_\_\_\_ (Print name or print initials)

No. \_\_\_\_\_ Color: \_\_\_\_\_ Sex: \_\_\_\_\_ Ref: \_\_\_\_\_

**RIGHT HAND**

1. Thumb 8 2. Index finger 10 3. Middle finger 10 4. Ring finger 12 5. Little finger 7

**LEFT HAND**

6. Thumb 7 7. Index finger 4 8. Middle finger 10 9. Ring finger 9 10. Little finger 10

Impressions taken by: \_\_\_\_\_ Note annotations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Deposition of individual taking prints)

Four fingers taken simultaneously

Left Hand \_\_\_\_\_ Right Hand \_\_\_\_\_

Figure 3.

In examining figure 2, whorls are found in finger blocks 1, 2, 6, and 7 and by referring to the equation,

$$\begin{array}{rcl} \text{Even} & 2-4-6-8-10 & \\ \text{Values} & 16+0+4+0+0+1 & = 21 \\ \text{Values} & 16+0+0+2+0+1 & = 19 \\ \text{Odd} & 1-3-5-7-9 & \end{array}$$

we arrive at a primary of 21 over 19.

In figure 3 there are no whorls present in any of the finger blocks but the arbitrary 1 is still added, which gives us a primary of 1 over 1.

In figure 4 there are whorls present in all the

LEAVE THIS SPACE BLANK

Name: \_\_\_\_\_ Class: 32

Age: \_\_\_\_\_ (Print name or print initials)

No. \_\_\_\_\_ Color: \_\_\_\_\_ Sex: \_\_\_\_\_ Ref: \_\_\_\_\_

**RIGHT HAND**

1. Thumb 0 2. Index finger 1 3. Middle finger 1 4. Ring finger 0 5. Little finger 0

**LEFT HAND**

6. Thumb 1 7. Index finger 0 8. Middle finger 1 9. Ring finger 1 10. Little finger 1

Impressions taken by: \_\_\_\_\_ Note annotations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Deposition of individual taking prints)

Four fingers taken simultaneously

Left Hand \_\_\_\_\_ Right Hand \_\_\_\_\_

Figure 4.

LEAVE THIS SPACE BLANK

Name: \_\_\_\_\_ Class: 19

Age: \_\_\_\_\_ (Print name or print initials)

No. \_\_\_\_\_ Color: \_\_\_\_\_ Sex: \_\_\_\_\_ Ref: \_\_\_\_\_

**RIGHT HAND**

1. Thumb 25 2. Index finger 17 3. Middle finger 17 4. Ring finger 19 5. Little finger 13

**LEFT HAND**

6. Thumb 19 7. Index finger 17 8. Middle finger 1 9. Ring finger 20 10. Little finger 13

Impressions taken by: \_\_\_\_\_ Note annotations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Deposition of individual taking prints)

Four fingers taken simultaneously

Left Hand \_\_\_\_\_ Right Hand \_\_\_\_\_

Figure 5.

odd numbered finger blocks and by adding the numerical values (16+8+4+2+1) plus 1 we have a denominator of 32. In the same way, since there are whorls in all the even numbered finger blocks, we have a numerator of 32 and a primary of 32 over 32.

By examining figure 5 we find whorls present only in the even numbered finger blocks and by adding the numerical values (16+2=18) plus 1 we have a numerator of 19 and a primary of 19 over 1.

Similarly in figure 6 there are whorls present

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Name: \_\_\_\_\_ Class: 5

Age: \_\_\_\_\_ (Print name or print initials)

No. \_\_\_\_\_ Color: \_\_\_\_\_ Sex: \_\_\_\_\_ Ref: \_\_\_\_\_

**RIGHT HAND**

1. Thumb 1 2. Index finger 12 3. Middle finger 4 4. Ring finger 6 5. Little finger 19

**LEFT HAND**

6. Thumb 1 7. Index finger 9 8. Middle finger 12 9. Ring finger 9 10. Little finger 14

Impressions taken by: \_\_\_\_\_ Note annotations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Deposition of individual taking prints)

Four fingers taken simultaneously

Left Hand \_\_\_\_\_ Right Hand \_\_\_\_\_

Figure 6.













LEAVE THIS SPACE BLANK

Name \_\_\_\_\_ Class **31/16**

Notes \_\_\_\_\_

No. \_\_\_\_\_ Color \_\_\_\_\_ Sex \_\_\_\_\_ Ref. \_\_\_\_\_

RIGHT HAND				
1. Thumb	2. Index finger	3. Middle finger	4. Ring finger	5. Little finger
				
15	1	1	0	0
W	W	W	W	W

LEFT HAND				
6. Thumb	7. Index finger	8. Middle finger	9. Ring finger	10. Little finger
				
1	1	1	1	14
W	W	W	W	W

Impressions taken by: \_\_\_\_\_ Note amputations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Depositor of individual taking prints)

Four fingers taken simultaneously


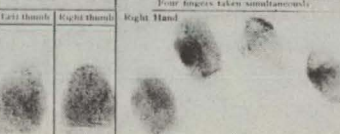
Left Hand	Left thumb	Right thumb	Right Hand
			

Figure 7.

in 1 and 6 finger blocks and by referring to figure 1 we arrive at a primary of 5 over 17. The numerator is determined by adding the numerical value of No. 6 finger block (4) and the arbitrary 1 and the denominator by adding the value of No. 1 finger block (16) and the arbitrary 1.






In those instances where the majority of the finger blocks contains whorls, as in figure 7, more speed can be obtained by subtracting the numerical value of those fingers where whorls do not appear from the total. For example, in figure 7 all the odd numbered finger blocks contain whorls except No. 1. By subtracting the numerical value of






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Name \_\_\_\_\_ Class **1**

Notes \_\_\_\_\_

No. \_\_\_\_\_ Color \_\_\_\_\_ Sex \_\_\_\_\_ Ref. \_\_\_\_\_

RIGHT HAND				
1. Thumb	2. Index finger	3. Middle finger	4. Ring finger	5. Little finger
				
19	12	12	12	12
W	W	W	W	W

LEFT HAND				
6. Thumb	7. Index finger	8. Middle finger	9. Ring finger	10. Little finger
				
15	7	7	7	10
W	W	W	W	W

Impressions taken by: \_\_\_\_\_ Note amputations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Depositor of individual taking prints)

Four fingers taken simultaneously



Left Hand	Left thumb	Right thumb	Right Hand
			






Figure 8.






LEAVE THIS SPACE BLANK

Name \_\_\_\_\_ Class **28/24**

Notes \_\_\_\_\_

No. \_\_\_\_\_ Color \_\_\_\_\_ Sex \_\_\_\_\_ Ref. \_\_\_\_\_

RIGHT HAND				
1. Thumb	2. Index finger	3. Middle finger	4. Ring finger	5. Little finger
				
0	1	12	0	M
W	W	W	W	W

LEFT HAND				
6. Thumb	7. Index finger	8. Middle finger	9. Ring finger	10. Little finger
				
7	0	M	1	I
W	W	W	W	W

Impressions taken by: \_\_\_\_\_ Note amputations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Depositor of individual taking prints)

Four fingers taken simultaneously



Left Hand	Left thumb	Right thumb	Right Hand
			

Figure 9.

this finger block (16) from the total (32) we arrive at a denominator of 16. In the same manner the only even numbered finger block that does not contain a whorl is No. 10 and by subtracting the numerical value of this finger block (1) from the total (32) we have a numerator of 31 and a primary of 31 over 16.

### Combinations

The primary alone contains 1,024 different combinations but does not provide an even distribu-






(Continued on page 19)






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Name \_\_\_\_\_ Class **1/4**

Notes \_\_\_\_\_

No. \_\_\_\_\_ Color \_\_\_\_\_ Sex \_\_\_\_\_ Ref. \_\_\_\_\_

RIGHT HAND				
1. Thumb	2. Index finger	3. Middle finger	4. Ring finger	5. Little finger
				
8	13	I	18	0
W	R	W	W	W

LEFT HAND				
6. Thumb	7. Index finger	8. Middle finger	9. Ring finger	10. Little finger
				
2	7	I	17	1
W	W	W	W	W

Impressions taken by: \_\_\_\_\_ Note amputations: \_\_\_\_\_ Signature: \_\_\_\_\_

(Depositor of individual taking prints)

Four fingers taken simultaneously



Left Hand	Left thumb	Right thumb	Right Hand
			

Figure 10.



## TRAFFIC

# Midland Rewards the Safety Patrol and Service Squad

by R. W. ROGERS, *Chief of Police* and DOUGLAS F. CRAIG, *Lieutenant, Midland, Mich.*

Our present program of juvenile safety activities in Midland, Mich., started when the American Automobile Association contacted school officials some 22 years ago and proposed what is now known as the Midland Safety Patrol and Service Squad.

In the infancy of this organization there were 5 schools and 75 youngsters participating. Today it has grown into a smooth, efficient safety program of 750 boys and girls protecting thousands of school children daily.

The safety patrol, consisting of 376 boys from the fourth, fifth, sixth, and seventh grades, shoulders the task of keeping the school area intersections free from accidents and injuries. Their job is a big one, for these children must make hundreds of decisions daily. They are not allowed to stop automobiles, but are required to select the safe and proper time to send the children across the street between the flow of traffic.

The service squad consists of girls from the same grades and is composed of about the same number who take the responsibility for safeguard-

ing the students in their travel in the halls and on the playground.

### Liaison Officer

In 1947 the police department was given the support of the city council and school board in appointing a liaison officer to work between the schools and the police department. The functions of this officer are: (1) To support and encourage the safety patrol and service squad activities, (2) to be the enforcement voice whenever needed, (3) to instill in the children the character, leadership, and integrity which the position demands.

This association of police and student has many advantages. It gives the officer an opportunity to better understand and assist the children. It also tends to defeat the "cop-is-going-to-get-you-if-you're-not-good" barrier, and creates a good feeling between the home and the police department.

Many safety-minded organizations have endeavored over the past years to honor our group. First, there was an excursion planned to Detroit, Mich., to see a big league baseball game. The problem of cold or rainy weather, transportation, meals, and the ever increasing personnel of the program in the school eliminated the project. Then there were the many dinners held in honor of these children, each individual school taking care of its own. They were all successful, but a city-wide program seemed necessary.

The Midland Lions Club, a men's service group, was the first to attack the problem on a city-wide basis. All members of the safety patrol received an invitation to a picnic. The site was excellent, Emerson Park, located on the Tittabawassee River in the northeast section of the city. The turnout was tremendous, with about 400 boys and girls attending. The program included games, races, and treasure hunts, with hot dogs and ice cream to follow. It was at one of these picnics that the idea of the present-day program was born.



Chief Rogers (left) and Lieutenant Craig.



The difficulty with those special events in 1947 was that a service club was trying its level best to give a full year's reward of appreciation in two very short hours. A suggestion was made that this club join forces with other safety-minded organizations. What were the most logical organizations? Who were the children helping day after day? The parent, the teacher, and the police department.

After a few contacts, the representatives of the Parent-Teachers Association and the police department went to the Lions Club. A conference was held, with the result that the Midland Lions Club, the Parent-Teachers Association, and the police department agreed to sponsor the first annual safety patrol and service squad field day on June 5, 1948.

### *The Problems*

It sounded good, but the work had just begun. What would it cost? Where would the supervision of the events come from? How would the money be raised? These were big problems, but the challenge was there. First, we decided that we could eliminate the cost and supervision of the picnic because the Lions, through their previous efforts and experience, could handle this problem. Our planning was then aimed at the field day itself. It was decided that the PTA and the police department would raise the money for the field day activities.

A safety representative of each school and representatives from the police department attended a meeting. What would the program cost? A quick survey revealed there would be about 550 children in the program. Means of raising money was the number one problem. Suggestions of bake sales, carnivals, home solicitations and benefit games were made. A benefit basketball game received the majority vote. We had two locally sponsored basketball teams which had a large following and were very popular in basketball circles. A game between them would give the whole community an opportunity to support the fund.

The next problem was supervision for the field day activities. The solution here was found in the Dow Chemical Co. athletic program personnel. These were men who had supervised children for years. They could do the job. With these plans in mind, the meeting was adjourned and the leg work began.

The two locally sponsored basketball teams were contacted and the picture was presented to them. They said they would be pleased to participate. The Dow Chemical officials also welcomed the opportunity to support this worthy cause by overseeing the recreation of the day. Our two greatest problems had been solved.

But many more problems were to follow. Would the school officials consent to dismiss the safety patrol and service squad one-half day from their classes? This was necessary because Emerson Park is a public park and extensively used by the younger people of Midland. If we were to have sufficient room for 550 children we would have to hold our field day while other children were in school. The school officials were contacted and they decided that if the children participating were up in their class work, the absences could be arranged. The students became aware of the decision and assured the teachers that their lessons would be complete.

Another meeting of the sponsors was held. The reports of work done toward the field day were given and our efforts were then turned to the promotion of the benefit game. It was decided to schedule the game in February. Each representative present at the meeting was to go back to his respective school and select a committee for the promotion of the program and the sale of tickets. With the field-day-fund goal set at \$600 the meeting ended.

Two weeks later the sponsors called another meeting. How were plans progressing? Reports



*Batter up!*





*The way to a man's heart.*

been raised and, with the Lions Club standing by with their picnic funds and personnel, the field day was assured.

### **Prizes**

The next sponsors' meeting was to decide what sort of prizes should be given. Should we purchase individual gifts, something each child could call his own? The decision was that each boy or girl would receive a white knitted T-shirt with "Midland Safety Patrol" or "Midland Service Squad" printed on the front in blue letters. It was agreed by the committee that this would tend to keep safety alive during the summer months and assist in controlling the day at the park. It was also agreed that additional prizes would go to the winners of the day's events.

The safety patrol and service squad contacts were the next steps to follow. When asked what they would like for their field day program, the answer was games, races, treasure hunts, amateur shows, and a picnic followed by a fast ball game between the Dow Chemical Co.'s Athletic Club and the Joe Louis Punchers of Flint, Mich. The idea of the T-shirts was then presented to the boys and girls. Since the shirts would involve a large share of the field day expense, they had to be the children's choice. Samples were shown and the over-all feeling was unanimous—the T-shirts were just the ticket!

At this point it may appear as a tough assignment to have such a program, but as the weeks rolled by the tempo increased. Merchants were coming out with bargain prices for field-day needs. The city recreation department was trimming the park, the field-day supervisors were setting up a program and the chamber of commerce, together with merchants, was rounding up rolls of colored film for the filming of the field-day activities. A local film studio and photographer were ready with cameras.

Finally the day came—and with it came rain, a cold miserable rain. It was the same problem you could experience on an excursion to a ball game or a day of fishing at the lake. It looked to some as if all were lost, but to the safety patrol and service squad it was just another opportunity to demonstrate their closely organized program. The radio station announced that the field day would be postponed for one week. This brought a sudden rush on the telephone company, but the

indicated that the tickets were a near sell-out. Publicity through newspapers and public conversation had sold the idea to the people. The community had backed the program 100 percent.

When game time arrived, the house was packed. Art Cleaners versus American Legion, two local clubs of equal talent, put on an exhibition well worth the price of admission.

The few days following were busy ones. The local newspaper was printing the results of the benefit game. The people were interested. Would our safety patrol and service squad get the field day? The answer was pleasant. The \$600 had



*Safe on third!*



children passed the word around with very few wet feet resulting.

The next week passed slowly for the safety patrol and service squad. Everyone was anxious to see what the first field day would bring—and it was perfect. The temperature was in the high eighties and the sky was a rich blue. It was a splendid day for fun and laughter. The boys and girls entered the park at 1 p. m. and the activities began. They ran, played, had a picnic, and watched a ball game. In all, they had a wonderful time. The public came in large numbers to watch the show.

### ***An Annual Event***

From then on, it was mostly routine work for the community to show its appreciation to the safety patrol and service squad. The 1949, 1950, and 1951 field days were equally successful. We found, too, that sponsoring organizations used the field-day movies in color to acquaint or refresh the community by showing them to PTA, service and civic groups, and the school children.

In summary, this program has accomplished several purposes:

1. It gives the youngsters some reward for their year's services.
2. It has convinced the community of the value of the safety patrol and service squad program.
3. It has furnished the opportunity for many people and organizations to work together on a good community project.
4. It gives the police department a favorable contact with the grade-school children.
5. It offers the opportunity to do a public relations job with many individuals who would not otherwise have contact with the police department.

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## **USE OF FORMULAS**

*(Continued from page 15)*

tion of prints throughout. The 1 over 1 primary alone contains over 25 percent of the total number of prints on file in the Identification Division. Other large groups are those with a denominator of 17, 18, or 19. Primaries 31 over 28, 31 over 32 and 32 over 32 also contain a large percentage of prints.

Further subdivisions of the classification formula will be discussed in subsequent issues of the *FBI Law Enforcement Bulletin*.

## **HANDLING OF FINGERPRINT CARDS**

In order that the FBI Identification Division can provide efficient service to all law enforcement agencies, the inked prints must be clear and distinct, and all information concerning name and descriptive data must be indicated on the fingerprint card. A survey made of arrest fingerprint cards recently received in the FBI disclosed a tendency on the part of some law enforcement agencies to hold these cards for several days until a group had accumulated before submission to the FBI for processing.

If fingerprints are not submitted promptly, or are incomplete or illegible, a fugitive may be released before the agency wanting him can be notified.

If, at the time the fingerprints are to be submitted to the FBI Identification Division for processing, the photograph is available, such photograph should be pasted to the fingerprint card in the proper space. In those cases in which a photograph has been taken but has not been processed and is not available to forward with the fingerprints, it is recommended that a notation "Photograph available" be placed in the space reserved for the picture. In this instance, it is not necessary for the law enforcement agency to forward a copy of the photograph and such photograph is then maintained in the local law enforcement agency's file.

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## **FBI NATIONAL ACADEMY**

*(Continued from page 5)*

organization and administration, police records, selection of personnel, preparation of police manuals, teaching methods and public speaking and other problems particularly related to the work of a police executive.

Each officer attending the FBI National Academy is specifically recommended by the head of his own agency and is accepted at the Academy only after FBI investigation. The Academy aims at producing men trained in the science of law enforcement and depends upon these men to carry back and make available to their own departments the benefits of the training they have received.

The 2,528 police officers graduated from the FBI National Academy to date represent every State in the United States and the District of Columbia, as well as law enforcement agencies in such foreign countries as Canada, Cuba, Egypt, England, Mexico, the Netherlands West Indies, and the Philippines.



## POLICE PERSONALITIES

Sharing the limelight with five other Clevelanders selected by the city's working newspapermen as outstanding in their fields in 1951, Detective James A. Benasek, of the Cleveland Police Department's Bureau of Identification, was named by local reporters as their policeman of the year. These discerning gentlemen call him a "walking file cabinet" of information and acknowledge his national reputation as a fingerprint expert. Also receiving the accolade of the press were a Cleveland Indian pitcher, in the field of sports, and four other citizens who have distinguished themselves in art, literature, science, and public service. All were honored in the "page 1" yearbook for 1951, a publication of the Cleveland Press Club and the Newspaper Guild which casts a backward glance at the high spots of the year from the newspaperman's point of view.

Law enforcement officers in the Cleveland area, many of whom have benefited from "Jim's" prodigious memory and encyclopedic store of knowledge regarding hoodlums, their habits, techniques and associates, agree that the designation "walking file cabinet" has been well-earned. He is regarded as the "modus operandi" expert extraordinary. After entrance on duty with the Cleveland Police Department on April 1, 1928, he pounded a beat for a year prior to assignment to the Bureau of Identification, where he was frequently detailed to examine crime scenes for the purpose of obtaining all available evidence. It was at this time that he initiated the procedure of collecting and correlating information regarding safemen, armed robbers, racketeers and other criminals which he has continued to the present. Over the years he has supplemented his knowledge by attending all possible lineups and trials, and by personal contact and conversation with subjects while fingerprinting them.

Files of the Cleveland Police Department afford numerous examples of cases solved solely as the result of Detective Benasek's immense knowledge of local criminals. In one instance, while recording the descriptions of two men awaiting grand jury

## ***Benasek Named as Policeman of 1951 in Cleveland, Ohio***

action on a strong-arm robbery charge, Benasek noted that they resembled two unidentified gunmen who had robbed a number of stores in previous months. Upon viewing photographs of the suspects, store employees identified them as the robbers in six separate holdups.

In 1950 a suspect in the nighttime bombing of a residence of a northern Ohio city was identified by Benasek through descriptions of the suspect and his associates furnished by local officers. This individual, an alien illegally in the United States who had already served time in San Quentin for murder, was apprehended, tried, convicted of the bombing, and sentenced from 1 to 20 years at the Ohio State penitentiary.

Out-of-State police agencies have also benefited from Detective Benasek's unique talents. During 1949 West Virginia authorities advised the Cleveland Police Department that a suspect in numerous safe burglaries in West Virginia and other States was known to them only by a false name, but on one occasion had claimed birth at West View, Ohio. Recalling two topnotch safemen born in West View, Benasek forwarded photographs to West Virginia, one of which was identified with the suspect. With this information on hand, Benasek was able to furnish West Virginia police with the identity of the suspect's known associates, and as a result several of his accomplices were apprehended and successfully prosecuted, although the original suspect has not yet been located.

Detective Benasek's work in the various phases of fingerprint identification has been equally spectacular. He was one of the experts who pointed out in 1938 that the fingerprints of Auguste and Elfriede Sejvel, Austrian "identical" twins, were not in fact identical as had been claimed in extensive news comment.<sup>1</sup> In 1941 he was successful in establishing that an unidentified

<sup>1</sup> Proof that the fingerprints of the Sejvel twins are not identical also appeared in the January 1938 issue of the *FBI Law Enforcement Bulletin*.



corpse which had lain for 6 months in a medical laboratory awaiting dissection was the body of a veteran of World War I. The deceased was subsequently buried in a military cemetery. He has identified numerous bodies recovered after long immersion in Lake Erie in such a badly deteriorated condition that identifiable fingerprints could not be obtained from the exterior skin surface. In this situation he has frequently secured fingerprints suitable for comparison by removing the epidermis from the hands and photographing the interior surface. It was also through his persistence and ingenuity that the last of the so-called "torso murder" victims was identified in August of 1950. After over 200 unsuccessful efforts to obtain prints from the fingers of this badly decomposed body, Detective Benasek secured prints of three fingers suitable for identification purposes by placing tourniquets around the base of the fingers and injecting water into the tips, thus loosening up the skin and to some extent restoring the characteristic pattern. For these and other difficult identifications, and for techniques developed by Benasek in obtaining identifiable fingerprints under unfavorable conditions, he has received national recognition.

During World War II, Detective Benasek served as Director of Fingerprinting for the Cuyahoga County Civilian Defense Council, supervising 30 record centers throughout the county, and after examination channeling all fingerprints received to the Identification Division, FBI, Washington, D. C. His program entailed training over 500 civilians in fingerprinting procedures, including numerous representatives of facilities and industries vital to the national defense. In connection with the Civilian Defense program over 100,000 persons were fingerprinted, among whom were all members of the area Civil Air Patrol, civilian aircraft pilots under the Civil Aeronautics Administration, nurses assigned to the Army and Navy through the American Red Cross, volunteer workers handling stamps and bonds with the War Savings Staff of Ohio, and thousands of members of the Civilian Defense Corps.

Because of Detective Benasek's comprehensive knowledge of criminals and crime conditions in Cleveland he was assigned to the Senate Crime Investigating Committee for the hearings held by the committee in Cleveland during January 1951. He is now serving the Civilian Defense Council



*Detective James A. Benasek.*

in an advisory capacity. But in the course of his regular duties at the Bureau of Identification, on a daily basis he proves anew to his colleagues, other law enforcement officers, and the newspapermen who have honored him that he is truly a "walking file cabinet."



## GLASS FRACTURES

The Laboratory is equipped to do numerous types of examinations in the field of glass. One of the most frequent types is the analysis of broken headlight lenses found at the scene of hit-and-run accidents. The Laboratory has a file of information on automobile lenses used in cars made after 1930. In many cases the make and model of the car can be determined by examining a few relatively small fragments. It should be noted, however, that since the introduction of sealed beam headlamps, the majority of car lenses are identical. The examination of broken glass in other types of cases frequently produces information on the direction of a blow or a bullet. For example, it may become necessary to determine whether a pane of glass was struck from the inside of an automobile or from the outside. Articles on glass fractures appeared in the January 1952, September 1947, and the December 1940, issues of the *FBI Law Enforcement Bulletin*.





## OTHER TOPICS

What local or State event draws people of all ages and walks of life in large numbers? A State or county fair. And what would present a better opportunity to acquaint the public with its law enforcement agencies?

The Imperial County, Calif., sheriff's office recommends its public relations program to all law enforcement agencies. Sheriff-Coroner Robert W. Ware and his deputies set up a booth at the California Midwinter Fair, Imperial, Calif., which ran from February 23 to March 2, 1952. This booth, made up of a number of interesting exhibits concerning law enforcement, was viewed by approximately 45,000 visitors to the fair, including nearly 10,000 students.

### ***Exhibits***

One exhibit, loaned by the United States Secret Service, consisted of large photographs of genuine and counterfeit bills, as well as normal sized genuine bills displayed beside the imitations, which had been passed in trade. Literature from the Secret Service describing how to recognize such counterfeit money was available in the booth.

A display of narcotics and narcotics paraphernalia, furnished in part by the California State Bureau of Narcotics Enforcement, was explained by deputies who told of the dangers of its use.

The firearms exhibits consisted of a display case filled with illegal weapons confiscated by officers of the sheriff's department and another featuring weapons and equipment used by law enforcement officers in connection with routine and emergency police work.

Featured along the walls of the booth were charts and photographs prepared by the State Division of Criminal Identification and Investigation showing some of the work their laboratory had done to assist law enforcement agencies throughout the State. Ballistics, paint matching techniques, hit and run, and arson investigations

## ***Sheriff Uses Fair Booth To Publicize Law Enforcement***

were depicted by these charts. The sheriff's office also set up a radio transmitter and receiver so the visitors could listen in on police and sheriff's office radio calls.

### ***Literature***

Pamphlets available to the public at the booth contained a message from the sheriff's office, setting forth the availability of that department to the people in the county, as well as cooperative measures whereby the public can best discharge its duties and aid law enforcement. Several of the pertinent items included in this pamphlet are set out below:

### ***Protecting Your Life and Property***

The Imperial County Sheriff's Department is always ready to protect you, your family and your property. Capable deputies with modern equipment are always at your disposal, but the effectiveness of the Department in crime prevention is limited unless it has the cooperation of every person in the county. Preventing a crime is quite as important as solving one after it has been committed. Moreover, it saves the taxpayer's money and protects persons from becoming victims of crimes that bring with them distress, pain, grief and loss.

An effective help in preventing crime is an alert public, aware of its responsibilities and eager to cooperate with all law enforcement officers.

There are many ways in which the public can best discharge its duties and aid law enforcement.

### ***How You Can Cooperate . . .***

When observing suspicious persons or happenings, do not attempt a personal investigation. Telephone your sheriff's office immediately, phone El Centro 363, 364 or 1758 if in an unincorporated area, or your police department if in a city. If you do not remember the number ask for the office by name. When connected, tell quickly and distinctly:

1. Your name, address and telephone number.
2. Location where officers are needed.
3. Brief account of what happened.
4. Descriptions of persons involved.
5. License numbers and description of automobiles involved.



If you witness an accident or crime, do not take it for granted that officers have been called. Phone for an officer.

Your Sheriff's Department feels that it is better to investigate a hundred reports than to have a single offense occur which could have been prevented.

### ***Cooperate if Stopped by Officers . . .***

Do not be offended if questioned as to your identity and business by an officer. He doesn't know everyone, and will have a good reason which he may have to keep confidential.

### ***Be on Guard Against Charity Rackets and Fake Promotions . . .***

Beware of promoters who solicit by phone, mail, or in person requesting contributions toward a charity unless fully identified and sponsored by a legitimate organization.

### ***Keep a List of Your Valuables . . .***

Keep a record of numbers, monograms, initials, and jeweler's scratch marks on your valuables. Have accurate descriptions available. List serial numbers of watches, firearms, motors, pumps, and machinery parts such as magnetos that are often stolen.

### ***Rural Dwellers . . .***

Among the large numbers of pedestrians passing through the country seeking work are some who turn thieves when

a farmhouse is found unguarded. If the house must be left unprotected, a good watch dog and floodlights are a great help.

Thieves in cars strip tires and parts from farm machinery and carry away tools and gasoline. Whenever possible machinery should be left near the house. When a thief is noted, the scene should be protected until officers have searched for tire tracks, footprints, and fingerprints which may later identify the thief.

Owners of haystacks should post signs showing ownership so that truckers do not take from the wrong stack. Much time has been spent investigating loss reported as theft which was only taken by mistake.

### ***Your Children . . .***

Record bicycle serial numbers which are on the bottom of the frame. Have your children lock their bikes at school and at the theater.

Don't let your teen-age boy or girl drive without a license. Recklessness and unsound judgment have resulted in serious accidents. Anyone allowing his child to operate a car without a driver's license is subject to criminal charges.

### ***Warn Children Against Sex Offenders . . .***

Tell them not to be friendly with strangers, and to shun any advances that may be made toward them. Both boys and girls should be warned never to accept rides from strangers under any circumstances. No young person should walk through a lonely, sparsely populated area

*(Continued on inside back cover)*



*Sheriff Ware (just left of Imperial County sign) showing some of his exhibits to visitors.*



## WANTED BY THE FBI

**MAX HEIMOVITZ**, with aliases: Karl Bennett, Edward Gordon, Edwin Gordon, Max Heimivitz, Max Hemowitz, Max Herman, Maxie Herman, Max Meimovitz, Karl Sennett.

### *Unlawful Flight to Avoid Prosecution (Murder)*



*Max Heimovitz.*

On the night of August 23, 1946, two men met Max Heimovitz at his home, allegedly to arrange for Heimovitz to "finger" a truckload of alcohol near an intersection in Philadelphia, Pa. In a car owned by one of the visitors, the three men drove to a specified place. Here Heimovitz left the car, leaving his two friends to wait there for a few moments. When Heimovitz returned to the car he allegedly fired several shots at the two men, who were still seated in the car, and both were struck; but they were able to drive away.

On arrival at the nearest hospital one man collapsed from loss of blood and was given several transfusions. He claimed that he did not know who did the shooting. His companion was dead on arrival at the hospital.

Investigation by the Philadelphia police revealed that the two visitors allegedly were being sought by various hoodlums in that area.

It was alleged also by some that the meeting between Heimovitz and the two visitors was held so arrangements could be made for Heimovitz to buy back some jewelry which had been stolen from him two weeks previously by one of the men.

On August 23, 1946, after the shooting, Heimovitz drove to Atlantic City, N. J., to join his wife. Under the name of Edward Gordon, he entered a hospital in New York for treatment. On October 10, 1946, while still using the name of Gordon,

Heimovitz allegedly married a New York nurse in the State of Maryland. On October 18, 1946, Heimovitz, with his new wife, drove to a hotel in Trenton, N. J., to meet a friend. Upon his arrival in Trenton, Heimovitz approached his friend's car, talked to him and another man, and then after a short time got into the friend's car and rode off.

On March 15, 1951, an indictment was returned by a Federal grand jury at Philadelphia, Pa., charging Heimovitz with a violation of Title 18, United States Code, section 1073, in that he fled from the State of Pennsylvania to avoid prosecution for the crime of murder.

**Heimovitz may be armed and should be considered dangerous. Extreme caution should be exercised in effecting his apprehension.**

The fugitive is described as follows.

Age-----	37, born Feb. 15, 1915, at Philadelphia, Pa. (not verified).
Height-----	5 feet, 6 inches.
Weight-----	170 pounds.
Build-----	Stocky.
Hair-----	Dark brown.
Eyes-----	Blue.
Complexion-----	Dark.
Race-----	White.
Nationality-----	American.
Education-----	Ninth grade.
Occupations-----	Laborer, diamond setter, jewelry salesman.
Scars and marks-----	Dagger tatto on front of left thigh, 2-inch scar over left eyebrow.
Remarks-----	Sometimes wears mustache.
FBI No-----	1,858,939.
Fingerprint classification-----	19 O 28 W III L 32 W MMI

### *Notify FBI*

Any person having information which may assist in locating this individual is requested to immediately notify the Director of the Federal Bureau of Investigation, United States Department of Justice, Washington 25, D. C., or the special agent in charge of the Division of the Federal Bureau of Investigation nearest his city.



### **INTERSTATE TRANSPORTATION OF OBSCENE MATTER**

The FBI has jurisdiction over the interstate transportation via common carrier or express of obscene matter. Investigations of obscene matter transmitted through the mails are handled by postal inspectors.



## **Toolmark Examination Aids Police**

At about 8 a. m. on May 19, 1951, the Maysville, Ky., Police Department received a telephonic request to remove a bag of wool from one of Maysville's main streets. Shortly thereafter a second call was received reporting the theft of a quantity of wool from a local warehouse on the preceding evening or early that morning.

An immediate investigation was conducted and all possible witnesses were interviewed. One witness reported having seen an unknown individual near the entrance to the warehouse who was attempting to load a bulky bag of unknown contents into the trunk of a maroon Buick bearing Michigan license. He further stated that this individual finally attached the bag to the rear bumper of the car and drove down an alley behind the warehouse.

Further investigation reflected that access to the warehouse had been gained by means of a window near the entrance. Two 4-inch spikes were found and identified by the warehouse owner as having come from the warehouse window. These spikes were bent and appeared to have been pulled from the window by pliers or similar tools.

An individual driving a maroon Buick bearing Michigan license was picked up later that day by Kentucky State Police on a traffic violation. Maysville police interviewed this man who denied any connection with the breaking and entering of the warehouse. A search of his automobile, however, reflected what appeared to be strands of wool adhering to one of the bumpers of the car. A pair of combination pliers was found in the glove compartment of the car.

The suspect admitted ownership of the pliers, but he had an explanation for the wool adhering to the bumper of his car. He had had an accident driving down one of the main streets of Maysville that morning when, traveling at a high rate of speed, he had been unable to avoid running into a bag of wool lying in the street.

The Maysville police forwarded the pliers and the two 4-inch spikes to the FBI Laboratory at Washington, D. C., for a toolmark examination. The Laboratory examination determined that one of the spikes had been marked by the pliers.

The suspect was brought to trial, found guilty and sentenced to a jail term of 12 months.

## **Magnetic Chart for Preserving Evidence**

Officers who were interested in the article *Magnetic Chart Records Accidents*, which appeared in the February 1952, issue of the *FBI Law Enforcement Bulletin*, may wish to consider an additional suggestion made by Mr. B. W. Linden, Assistant Superintendent of the Bureau of Identification in the Sioux City, Iowa, Police Department. Mr. Linden states that his department uses a similar chart with an additional feature for court use.

A plywood board approximately 3 by 4 feet in over-all dimensions is covered with tin on one side. Small plastic automobiles with magnets underneath simulate the vehicles involved in the accident. Pedestrians are represented by small round balls with magnets attached.

The special feature provides for preservation of evidence presented in court. When a case is to be presented by use of this board, the tin side is covered with thin sign paper which is stapled to the wood side of the board in the rear. A diagram of the streets, intersections or whatever is to be shown is then drawn on the paper with India ink and the magnetized autos and pedestrians are placed as required by the evidence.

When presentation of evidence is concluded, the paper can be taken off and filed for later use if needed. Thus the evidence is not destroyed as when a blackboard is erased for use in another case.

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### **FAIR BOOTH**

*(Continued from page 23)*

alone either day or night. Emphasize to your children the importance of taking the license number and description of the car and person of anyone whose actions are suspicious.

Sheriff Ware and the members of his department will consider the exhibit a success if it has in any way enlightened the public or if through prompt and accurate reporting a life is saved or a crime prevented. The sheriff believes that the thousands of people who visited this exhibit have been brought up to date on modern law enforcement, and that a personal interest and a feeling of closer relationship and understanding have been aroused in these people. Sheriff Ware feels this exhibit is a form of public relations, the nature of which all law enforcement agencies are endeavoring constantly to achieve, and he recommends it to all departments.



## *Questionable Pattern*

# FINGERPRINTS



The fingerprint pattern printed above illustrates the appendage rule used in the Identification Division of the Federal Bureau of Investigation in loop type patterns. In order for a recurve to be considered sufficient, it must be free of any appendage abutting upon the outside of the recurve at a right

angle. The appendage labeled A spoils the recurve in this pattern because it abuts upon it at a right angle. Inasmuch as the only recurve in this impression is spoiled, the pattern would be classified as a tented arch and a reference search would be conducted as a loop.