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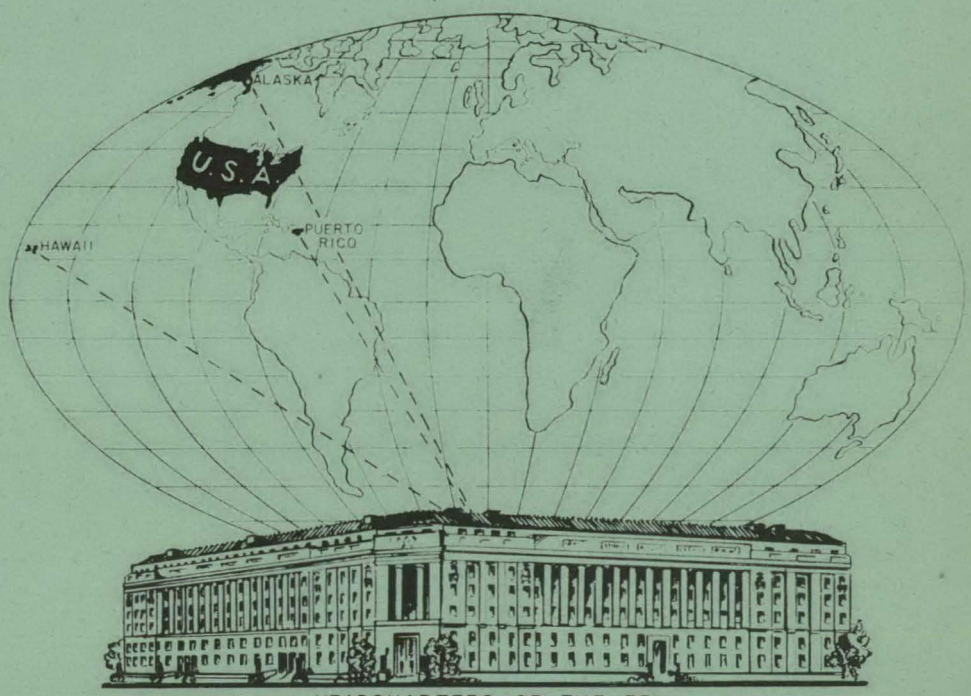
FBI LAW ENFORCEMENT BULLETIN



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DEPARTMENT OF JUSTICE BUILDING,
WASHINGTON, D.C.

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FEDERAL BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE
J. Edgar Hoover, Director

DIRECTOR

Federal Bureau of Investigation
United States Department of Justice
Washington, D. C.
September 1, 1947

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

TO ALL LAW ENFORCEMENT OFFICIALS:

There are two general fingerprint files in the FBI's Identification Division. One - the smaller of the two, incidentally - catches the public imagination to such an extent that it dwarfs the importance of the other. Because of its very nature it is the criminal file which is thought of most often when fingerprints come to the attention of the layman. This is unfortunate. Fingerprints as a means of civil identification have never achieved their proper place in public thought.

In the three-month period of January, February and March, 1947, a total of 1,858 fingerprint cards was received in the Identification Division for deceased persons, known and unknown, and for individuals classified as amnesia victims. Of the 1,482 fingerprint cards of individuals apparently known at the time of their death, identifications were effected against non-criminal records already in the files for 838 or 56.54 per cent of the cases. Identifications were made of 300 of the 376 deceased persons unknown to the contributor. This figure represents 79.78 per cent. Seven known and fifteen unknown amnesia victims were identified with records on file.

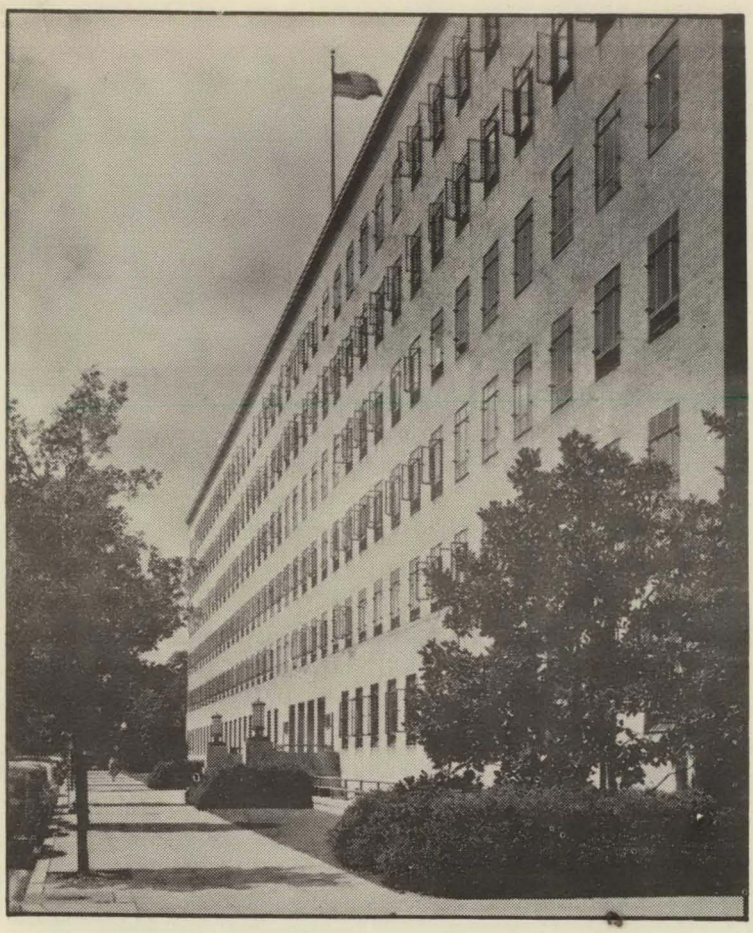
Out of the first 33 fingerprint cards received by the FBI in connection with unknown individuals killed in the tragic Texas City explosion and fire disaster, 26 identifications were made. Of that number, 24 were based on the civil identification files. Out of a total of 92 fingerprints which have been submitted to the FBI in connection with the Texas City disaster, identifications have been made in 58 cases. Six identifications were made with the assistance of the list of missing persons supplied by the authorities in Texas City. Of this group one identification was made where only the right hand had been fingerprinted.

The value of fingerprints, entirely apart from the role they play in criminal identification, has been underestimated. Only recently, as a result of identifications of missing persons, unknown civilian and war dead and amnesia victims, has the stigma surrounding the science begun to be dispelled. A wider knowledge of the benefits accruing to society through its use will tend to dispell it still further.

Very truly yours,

J. Edgar Hoover

John Edgar Hoover
Director



FBI IDENTIFICATION DIVISION
WASHINGTON, D. C.

CIVIL FINGERPRINT IDENTIFICATION

Approximately 65,000,000 people are represented by the more than 104,000,000 fingerprint cards filed in the Identification Division of the Federal Bureau of Investigation. The difference in number is a result of duplications. Apart from the criminal file where each new card reflects an additional arrest, there are numerous duplications in the huge civil identification file. If, for instance, a man formerly employed by the United States Government enters the armed forces, his fingerprints, in both cases, are placed in the noncriminal file. Obviously, many individuals will have numerous duplicate fingerprint cards. Only the clearest set is kept in the main files. The duplications are filed in a separate jacket.

Man's desire for a positive means of identification is centuries old. Thousands of years ago the citizens of ancient China certified the authenticity of a document with the impression of a finger. Other and more recent groups have recognized the possibilities in the use of fingerprints for identification, but it has remained for twentieth century man to begin the utilization of fingerprints on a full and scientific scale.

The fingerprint files of the FBI are based on the Henry system. Many modifications and changes have been made and the present system and organization accommodate a huge volume of cards.

The noncriminal file of the Federal Bureau of Investigation contains the fingerprints of members of the armed forces, government employees, persons who were fingerprinted while applying for jobs in important national defense plants and persons who voluntarily have their fingerprints recorded as a permanent means of identification. This latter group includes private citizens, club members, Boy Scouts and others interested in the science of fingerprinting.

The noncriminal file contributed materially to the identification of injured and unknown deceased members of the armed forces during World War II.

In one instance an unknown American was killed in Troina, Italy, in 1943 and no identification could be effected since his dog tags were missing. Only five fingers remained, and though fingerprint cards are filed on the basis of a classification derived from all ten fingers, an estimate was made as to an approximate classification for the missing fingers and a search was conducted. As a result of the search a positive identification was made on the basis of the prints of five fingers furnished by Army authorities. The soldier's name and serial number were definitely established.

The fingerprints of an unidentified man killed by gunshot and buried in the United States Army cemetery on Leyte in the Philippines were searched through the war casualty file of the FBI without identification being effected. However, comparison with the civil file revealed the name of the victim and the fact that he had enlisted in the Navy in 1943.

Again and again the civil identification file has cleared the cloud of uncertainty surrounding cases of unknown deceased in the armed services. Just as often, it removes the curtain of anonymity from many unknown civilian deceased.

On one occasion the Sheriff's Office, Santa Ana, California submitted the fingerprints of an unknown deceased on August 30, 1937. The man apparently had committed suicide by slashing his wrists. The FBI files disclosed no previous record and the man was buried without being identified.

For nine years his fingerprint card was dormant in the files as a deceased person. On August 8, 1946, a letter was received by the FBI from the Veterans' Administration requesting assistance in the adjudication of a widow's claim for a death pension. She assumed that her veteran husband was dead inasmuch as she had not heard from him in approximately nine years. It was indicated that the man had served in the United States Army from March 8, 1910, to March 7, 1913. His description was supplied.

A search was made in the Army Identification Files and the fingerprint card of one Horace Green who enlisted in the Army on March 8, 1910, was located. His card was among those of World War I veterans transferred in 1941 from the War Department to the FBI and filed in a special section for veterans. The physical description set forth on Green's fingerprint card fitted the description given by the Veterans' Administration. Fingerprint experts searched Green's World War I fingerprint impressions through the Technical Section's Dead Files and identified them with the fingerprint impressions of the unknown deceased sent in by the sheriff at Santa Ana, California, on August 30, 1937.

In another case, an unknown deceased woman was found in a Chicago hotel room on August 8, 1946. She had registered the previous night and had given Chicago as her home address. The cause of death was listed as heart failure and alcoholic poisoning.

The Chicago Police Department investigated. Two men were located who identified the deceased as a former acquaintance. Both were extremely positive in their identification. One stated that he recognized the features, hairdo and clothes of the woman whom he had known very well.

Because of the positiveness of the identification, the body was forwarded to Cedar Rapids, Iowa, where the parents of the woman named by

A PORTION OF THE FINGERPRINT CLASSIFYING UNIT

the witnesses lived. The family identified the body as being that of their daughter and burial took place on August 10, 1946.

Fifteen days later the amazed witnesses noted the "corpse" whom they had identified, walk into a Chicago tavern. They advised her of their error in identification and suggested that she notify her parents. She promptly proceeded to Cedar Rapids.

An investigation by the Deputy Sheriff of Linn County, Iowa, resulted in the exhumation of the body, on October 29, 1946, in order to obtain fingerprints. It was possible to secure impressions of the fingers of the right hand only. However, the ridge detail of three of the fingers of the left hand was photographed and all of the evidence obtained was submitted to the Identification Division of the FBI. Search of the files resulted in the identification of the fingerprints as those of an individual for whom three fingerprint cards were in file.

This information was transmitted to the interested authorities who were enabled to properly bury the body under the correct identity.

In January, 1947, the mutilated body of a young woman was found in a vacant lot in Los Angeles, California. Fingerprints were submitted by means of wire photo to the FBI where the murder victim was identified

as Elizabeth Short, known to her friends as the "Black Dahlia." One fingerprint card indicated an arrest for violating the Juvenile Delinquency law. However, had Miss Short never been arrested, identification would have been possible inasmuch as the civil identification file contained a fingerprint card reflecting an application for work.

This noncriminal file also plays an important part in one of the service functions performed by the Bureau and made possible only through fingerprints. This has to do with assisting parents and other relatives in locating members of their families who are listed as missing persons.

In one instance an Iowa couple requested aid in locating the whereabouts of their daughter who had left home four months earlier. A search of the files reflected that the girl had been fingerprinted three times in connection with securing employment. This information was supplied to the parents but as it proved to be of no assistance, a missing persons notice was placed against her fingerprint record. Later, in an additional effort to assist the parents, a missing persons notice carrying the girl's description and one fingerprint was published in the FBI Law Enforcement Bulletin. One month later the police in Denver, Colorado, advised the FBI that one fingerprint of a young girl arrested in that city on a minor charge was identical with the fingerprint pattern published in the FBI Law En-

GENERAL VIEW OF THE NONCRIMINAL CARD INDEX SECTION

forcement Bulletin. Police advised that they would hold the girl until word was received from her family. The parents advised the FBI that arrangements were being made to bring their daughter home.

The letter of a grateful father to Director Hoover tells the story of the location of another missing person. "Dear Sir: Words can't express how thankful I am to you in helping me find my son. What a relief to my mind when the mail man brought your letter today, giving his address, and I knew that my son was still alive. Once again I want to say 'Thanks a million to you, Mr. Hoover.'"

In still a third instance an elderly man who had not heard from his two sons and daughter since 1903 sought assistance in locating his children from the police department in Los Angeles, California. He appeared to be sincere and earnest and the department wrote to the FBI for him, setting forth his name, the names of his sons believed to have served in World War I, and the name of the daughter. A lengthy search of the civil identification file revealed a quantity of information on individuals believed to be identical with the missing persons. Five sets of noncriminal fingerprints were on file under the name of one son; two sets under the name of the other. Recent addresses believed to be those of the missing sons were

MACHINE SEARCHING UNIT

forwarded to California. Approximately three months later the Police Department in Los Angeles advised the FBI by letter that the aged man had located one of his sons and through him had been able to locate the missing daughter. The other son had not been heard from by either of the two children for approximately two years. The mother of the children, whose address was also unknown, had been located residing in Canada.

The letter stated: "You have helped make this old man's last few years, or whatever time he has left, a pleasant time. And while he only came into our office by mistake and I helped him contact you, I too wish to thank you for your assistance...For him I offer thanks. He came down to our office in the Civic Center to ask me to write you for him, as I had told him to let me know the outcome. He is very grateful for this and apparently the information you supplied 'closes' another case to the satisfaction of all concerned."

The place of the civil identification file in case of fire, floods, plane crashes, tornadoes, and disasters such as the Texas City holocaust cannot be overestimated.

In the June 14, 1947, crash of an airliner near Leesburg, Virginia, a small identification bureau was established near the scene of the wreck. Twelve bodies were identified by fingerprints.

Fingerprints, as a means of identifying individuals classified as amnesia victims, are used constantly.

In one such case a young man walked into a Wilmington, Delaware, police station and stated that he had lost his memory. Attempts to identify the man locally failed. His fingerprints were taken, classified and the classification was telephoned to the FBI in Washington, D. C.

Within forty-five minutes after the call was received, the FBI Identification Division telephonically delivered a message that the amnesia victim had been identified tentatively as a twenty-three-year-old veteran of the Battle of the Bulge. The man, who had seen 199 consecutive days of action while fighting in Europe, was identified through fingerprints taken when he entered the Army.

The civil identification file, unpublicized but constantly increasing, is daily proving its value.

ACTIVITIES OCCURRING IN THE COURSE OF THE RECENTLY INAUGURATED POLICE TRAINING SCHOOL FOR NEW RECRUITS AT HAMMOND, INDIANA

NEW OFFICERS OF THE MOUNT VERNON, NEW YORK, POLICE DEPARTMENT, UPON COMPLETION OF THEIR SIX MONTHS' PROBATIONARY PERIOD. ALL MEMBERS OF THIS GROUP COMPLETED A SPECIAL ONE-MONTH IN-TRAINING COURSE SPONSORED BY THE DEPARTMENT IN COOPERATION WITH THE FBI.

THE SWEARING IN CEREMONIES FOR NEW OFFICERS

LAW ENFORCEMENT CONFERENCE
BEAR MOUNTAIN, NEW YORK

1. Patrolman Harold Voelbel of the New York City Police Department wins first prize in the firearms competition - a Detective Special Revolver. Patrolman Voelbel won with a score of 298 on the Army "L" Course. SAC Scheidt of the New York Office, FBI, presented the prize.
2. Chief John C. Hergenhan, North Castle Police Department, gazes at his fishing rod - broken in a tussle with a twelve-pounder that got away.
3. Representatives of the Yonkers, Mount Vernon, Bronxville, New York City and Ardsley Police Departments and the FBI enjoy a luncheon in the course of the conference at Bear Mountain Inn, Palisades Interstate Park, on May 8, 1947.

Scientific Aids

GLASS FRACTURE EXAMINATION

Important evidence of value to investigation and prosecution may be obtained at times from an examination of glass which was broken during the commission of a crime. The glass may be fragments of a headlight lens found at the scene of a hit-and-run accident, window glass from a burglary, glass through which a bullet or other projectile has passed, or glass fragments from any other source. It is important, therefore, to collect and preserve all glass fragments, regardless of their size, when they may be material to the investigation of a criminal case.

It may be possible to determine the make and model of the car involved in a hit-and-run accident from the fragments of a headlight lens broken at the scene. A comparison of the lens prism arrangement, edge characteristics and shape with standard lenses from the various makes and models of automobiles and trucks will indicate the type of lens and the make and model of the vehicle involved, provided the vehicle is not equipped with Sealed Beam headlamp units. Sealed Beam lamps are interchangeable on all vehicles so equipped.

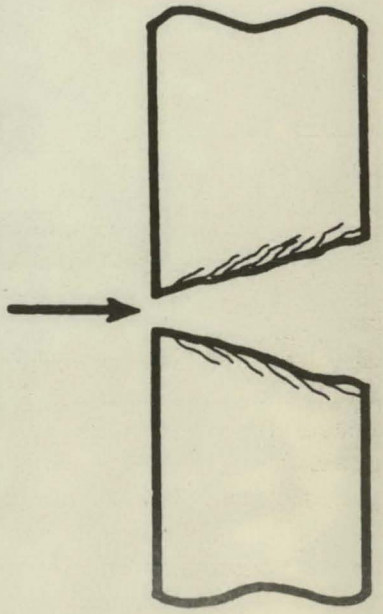


FIGURE 1
SIDE VIEW OF GLASS SHOWING SHAPE OF APERTURE AND SIDE FROM WHICH THE BLOW CAME

Of particular value in hit-and-run and burglary cases are microscopic, spectrographic, physical and other comparisons of fragments from the scene with specimens from a suspect's car, gloves, trouser cuffs, et cetera. A microscopic comparison of the minute cracks found on the broken edges of all glass fragments may show two very small fragments to have originally been one piece. Should adjacent pieces not be available a spectrographic analysis will determine whether the two specimens are composed of the same elements and could have come from the same source. Further evidence of a common source for two pieces of glass may result from a comparison of the refractive indices of the two pieces. Since the refractive index of glass varies with the changes in the elements as well as the percentages of the elements present, identical indices for two pieces of glass are strong circumstantial evidence of a common source.

Examination of window fragments in burglary cases is important when there is a question as to whether the glass was broken from the outside

or inside. To determine the side from which a pane of glass was broken it is necessary to collect and piece together as much of the glass as possible in order to study the pattern of the cracks and to be able to orient the pieces in their original positions.

If the glass was broken as a result of a blow or pressure on one surface, the side of the glass on which the pressure was applied can be determined from the distinctive characteristics of the broken edges. Usually

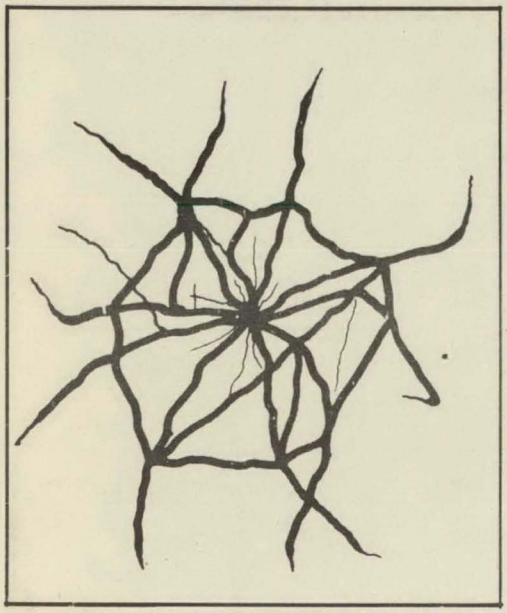


FIGURE 2
RADIAL CRACKS AND TYPICAL TRIANGULAR FORM OF SEGMENTS OF A RECONTRUCTED PANE

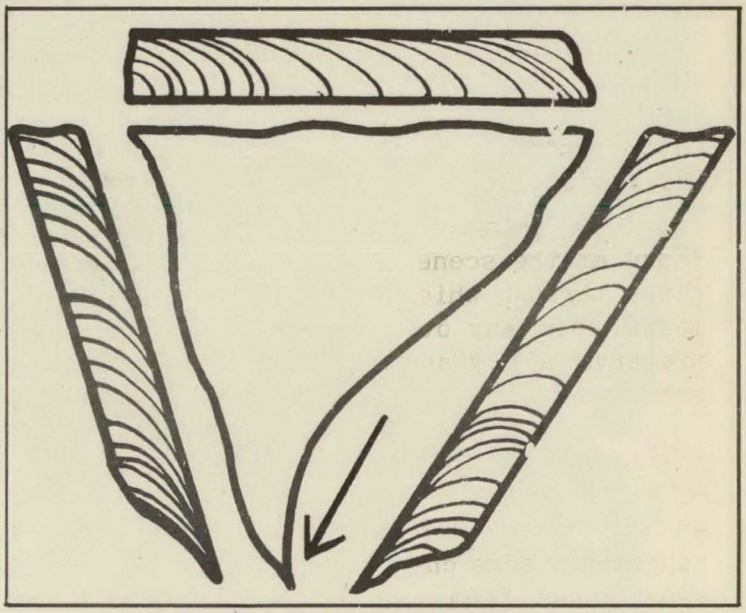


FIGURE 3
FRONT AND EDGE VIEWS OF A TYPICAL SEGMENT WITH CURVED LINES ON EDGES INDICATING BLOW WAS STRUCK AT ARROW POINT AND FROM THE UPPER SIDE

the pattern of the cracks in the glass will resemble the spokes of a wheel radiating outwards from the point of impact. Other cracks, having the appearance of circles around the point of impact and connecting one radiating crack to the next, will also be present, thus forming triangular pieces of glass. The formation of the cracks in the glass is the result of "stretching" of the glass on the side opposite that on which the pressure is applied and a "compression" on the other side. The breaking of the triangular pieces leaves stress lines on the edges which may be seen with the naked eye. The lines on the broken edges will be observed to curve from one side of the edge to the other (Figure 3). They will be found to be approaching a position parallel to one side and at right angles to the other. If the side of the pane which is struck is called the "front" it will be found, when examining the triangular pieces mentioned above, that the lines of the edges are almost parallel to the "front" side of the two edges formed by the radiating or spoke-like cracks. On the third edge, the pattern is reversed in that the lines are almost at right angles to the "front" surface. The reason for this difference is that the break along the third edge, being away from the point of impact, is caused by a "stretching" of the glass on the "front" surface rather than on the rear surface as in the case of the radiating or "spoke-like" cracks. Figure 3 illustrates the marks left on all

three edges.

Bullets and other projectiles leave, in addition to the marks on the edges of the triangular pieces of glass, a characteristic hole. From an examination of this hole the direction the projectile was moving can be determined since the projectile pushes out the glass ahead of it. The glass on the entrance side is supported by the glass behind it and consequently the entrance hole will be more or less clean cut. As the projectile goes out the glass around the exit hole, being unprotected by any material behind, chips around the hole leaving a saucer-shaped depression considerably larger than the diameter of the bullet and of the entrance hole. Figure 1 illustrates this typical funnel-shaped hole. When the shape of the hole is of an elongated type there may be an indication as to the direction in which the projectile was travelling.

Projectiles produce different types of holes depending mainly upon the size and speed of the projectile. Generally speaking, the higher the speed the finer and more numerous are the cracks around the hole. Likewise, the higher the speed the smaller the hole, up to a certain limit. A caliber .22 long rifle bullet, for example, will usually make a larger hole than a caliber .30'06 bullet.

When, during the course of an investigation, it becomes important to prove the manner in which a pane of glass was broken all pieces should be collected. The edges can then be examined and the pieces put together, in so far as possible, to replace the pane in its original form before drawing any conclusions from the characteristics of the break.

* * * * *

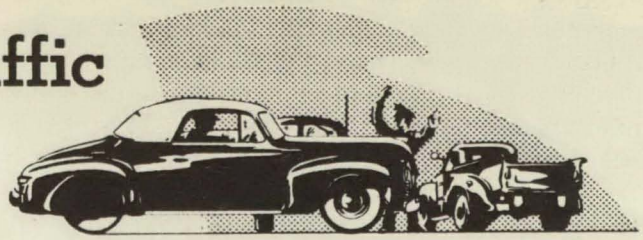
F B I

N umbering hundreds from Key West to Nome,
A vigilant army protecting our home;
T rustworthy vanguard whose intrepid way
I mpresses invincibly crime does not pay;
O nward and upward through knowledge and skill,
N ever relenting its war against ill;
A lert to the dangers besetting our land,
L oyal preceptor of lawful command.

A dvancing the premise of justice for all,
C ommanding respect from the great and the small;
A ugmenting its splendor with every new name,
D eaf to the siren of self-seeking fame;
E ndeavoring ever its standard to raise,
M eeting each challenge with unflinching gaze,
Y ielding its harvest to swell heaven's praise.

---Edward J. Allen
Police Department
Erie, Pennsylvania

Traffic



INFLUENCE OF PARKING ON ACCIDENTS*

Wilbur S. Smith
Technical Advisor, Eno Foundation

(Continued from August Issue)

STALLED AND STOPPED VEHICLES

Because of mechanical failures or for other reasons, many vehicles stall or must be stopped in the traveled portion of the roadway; often the stop is of an emergency character. A number of collisions take place with these vehicles and driver actions aimed at averting collisions often result in other types of accidents. These conditions are usually at their worst in rural areas where speeds are higher and transverse maneuvering areas are restricted. Short sight distances and a lack of appreciation or concern on the part of the driver for his own and others' safety add to the seriousness and frequency of this common type of accident.

Collisions with vehicles stalled or stopped in the roadway are apt to be more numerous and more severe during hours of darkness. Frequently vehicles are not properly lighted and no advance warning is given.

In 1945, about two-thirds of the deaths involving interstate commerce vehicles resulted from such vehicles stopped in, or along, the roadway,[18] because of mechanical defects. One-fourth of all mechanical defect accidents were due to collisions in which one of the vehicles was disabled. Two and seven-tenths per cent of all interstate motor carrier accidents involved mechanically faulty vehicles stopped on the roadway.

RUNAWAY VEHICLES

A surprising number of accidents involve vehicles which break loose from parking places on grades. Brake failures and carelessness are usually the causes. Such accidents result in severe damage to the "runaway" vehicle and are great danger to other vehicles, persons and property.

A 1945 Interstate Commerce Commission study of mechanical defect accidents of motor carriers shows that 24 of 31 accidents involving parking were due to brake failures. Some occurred while the vehicles were parked on grades, others when engines failed going up-hill. In both cases, "runaway" conditions were created.

*Reprinted with permission from the "Traffic Quarterly," April, 1947

[18] "Analysis of Mechanical Defect Accidents of Motor Carriers - 1945," U. S. Interstate Commerce Commission, August 1946, p.4.

Unattended cars left with motors running have been known to create "runaway" problems. When cars are parked with motors running, another hazard develops from the likelihood of carbon monoxide poisoning. Insurance companies report accidents resulting from persons becoming affected by carbon monoxide under these conditions, who, failing to realize their "groggy" condition, became involved in collisions upon putting their cars in motion.

PARKING VIOLATIONS AND INADEQUATE CONTROL CAUSE ACCIDENTS

Double parking, parking on the wrong side of the street, parking too close to corners, parking in prohibited zones, parking too far from curb, parking improperly as to space layout, and other such violations add to the hazards created by parked cars. One case is known of a city which legalized double parking on downtown streets--and soon regretted it!

In 1945, in Seattle, Washington, 7.15 per cent of the vision obscurements causing accidents were created by parked cars.[19]

Irregular parking at the curb and on an 84 foot median strip on a highway in Michigan[20] created a serious accident problem. Strict regulation aided by erection of a fence around the median strip to control exits and entrances, brought an 87 per cent reduction in accidents involving parked cars.

PEDESTRIAN ACCIDENTS AFFECTED BY PARKING

Many pedestrians, entering the roadway from behind parked cars, are struck by motor vehicles. While these unfortunate accidents may not be entirely the fault of parking, it is apparent that if there were no parking there would be no visual obstruction to create this danger. A recent study in Seattle, Washington, revealed that about 7 per cent of the pedestrian accidents were affected by parked cars. Most correctives will likely come from control of both pedestrians and parked vehicles. The question of improving the visibility between motorists and pedestrians is sufficient cause to justify further restrictions on the use of curb for parking.

Persons getting out of parked cars and cabs on the street side is another cause of pedestrian casualties. In some cities this practice is legally prohibited.

TRANSIT VEHICLES IN PARKING ACCIDENTS

Buses and street cars, because of their size and necessary operating conditions, are often involved in collisions with stopped vehicles or with those parking or unparking. Transit vehicles are often delayed by improper parking and stopping practices. Running times of buses and street cars have been greatly reduced by changing from angle to parallel parking, by prohibiting parking during rush hours, and by other parking measures.

The effect on transit accidents of prohibiting curb parking in downtown districts is shown in Table II. As motorists, truckers and transit

[19] Example from Mr. Arch Bollong, Traffic Engineer, Seattle, Washington.

[20] "Getting Results," No. 3, National Conservation Bureau, Data submitted by Mr. J. L. Wehmeyer, Traffic Engineer, Wayne County, Michigan.

vehicle operators became accustomed to the new regulations, large reductions in accidents followed.

Parking in bus stops, particularly during peak hours, is especially hazardous because of the congestion developed and because of exposures to traffic of persons using buses.

Where buses operate on roadways without curbs, hazards involving stops could be eliminated by the provision of improved turn-outs and strict enforcement of their use. Unfortunately, this is not common practice.

During the first eight months of 1946, ten per cent of all street car accidents and 18.9 per cent of all bus accidents in New Orleans[21] involved parked cars.

"Squeezing in" another parking space near the intersection, especially where meters are used, creates traffic accidents. A case from San Antonio, Texas,[22] is typical. Buses making a right turn were involved in 5 accidents in a four-months period at an intersection in the business district. Delay and congestion were developed by buses in negotiating the turn. One parking space was eliminated at the intersection and no accidents of the above type have occurred in two years.

Table II

TRANSIT COLLISION AND PASSENGER ACCIDENTS
WITHIN THE PHILADELPHIA CENTRAL BUSINESS DISTRICT[23]

Date	*Accidents*	*Per Cent Decline*
PRIOR TO PARKING BAN:		
Weekly Average: 11/28/45—12/25/45	51	–
AFTER PARKING BAN:		
Week ending January 8, 1946	38	7
January 15, 1946	39	5
January 22, 1946	34	17
January 29, 1946	33	19
February 5, 1946	26	37

Prohibition of parking opposite street car loading zones and on the approaches to these zones reduces accidents. The sign on the end of a loading zone in the District of Columbia[24] was knocked down 22 times in a thirteen month period. The throat on the right side of the platform was opened by removing three parking spaces preceding the approach to the zone. Accidents were all but eliminated. In nine months, only one was reported.

[21] Furnished through the American Transit Assoc., by Mr. J. C. Baine, Jr., General Superintendent, St. R. R. Dept., New Orleans Public Service Co., Inc.

[22] Furnished through American Transit Assoc., by Mr. H. A. Briggs, Safety Dir., San Antonio Transit Co.

[23] "Parking Ban Improves Mid-City Service." OFF-PEAK--Philadelphia Transit Company, March, 1946, p.4.

[24] Information from Insp. A. E. Miller, Metropolitan Police Dept., Washington, D. C.

During an approximate two-year period, two street car lines operating over narrow streets in the business section of New Orleans[25] had 708 accidents. Five hundred, 71 per cent, occurred on a section of the line which represents only 25 per cent of the round-trip circuit. Of these 500 accidents, 30 per cent were collisions with illegally parked cars.

PROHIBITION OF PARKING OFTEN NECESSARY

Where traffic densities are heavy, congestion and accidents may be greatly reduced by prohibiting parking at the curb and by rigidly controlling loading and unloading operations. Results of such actions are shown by many experiences. Due to one-way streets with center car tracks and left-side parking, congestion was great and accidents were numerous in mid-town Philadelphia[26] in 1946. By a general prohibition of parking, by permitting loading and unloading only on the right side, and by allowing loading of heavy materials on the left side only with special permits, average speeds were practically doubled and accidents were reduced 15 per cent to 20 per cent in the affected area. During this same period, city-wide accidents increased 45 per cent.

On a street in Washington, D. C.,[27] parking at the curb was prohibited for a distance of about 2 miles. The street is 42 feet wide, with a double street car track. After a year, with the same volume of traffic, there was a 27 per cent reduction in accidents.

Buses operating on a two-block section of a narrow street in New Orleans, were involved in 27 collisions with parked vehicles in seven months. Parking was eliminated on one side of the street in one block and only commercial loading was allowed on the same side of the other block. After more than a year, no collisions were reported on the first block and only four occurred on the other block.

When parking is prohibited, care is necessary to see that stopping and standing are also prohibited. One-truck parked on a street creates a bottleneck and reduces the efficiency of the street. Many side-swipe accidents are caused by cars pulling out and around parked trucks. Any stopping or standing, even momentarily, seriously impedes the flow of traffic on heavily traveled streets. Streets on which parking is not allowed in Washington, D. C., have had their capacity increased 15 per cent by adding "No Stopping" regulations during rush hours.

A reservoir for vehicles on the approach to a signalized intersection can be created by prohibiting parking for a distance of 50 feet to 150 feet from the intersection. Such action results in efficient intersection performance and signal operation. When street widths change at intersections, parking prohibition on the narrow street reduces the bottleneck

[25] Data obtained through the American Transit Assoc., from Mr. J. C. Baine, Jr., General Supt., St. R. R. Dept., New Orleans Public Service, Inc.

[26] "Getting Results," No. 76, National Conservation Bureau. Example submitted by Mr. R. A. Mitchell, Chief, Bureau of Traffic Engineering, Philadelphia, Pa. Information also furnished by Philadelphia Transportation Co., through the American Transit Assn.

[27] Information furnished by Insp. A. E. Miller, Metropolitan Police Department, Washington, D. C.

effect and eliminates collisions.

Prohibiting parking during rush hours is becoming a common practice to alleviate congestion and reduce accidents. On an important artery in Washington, D. C.,[28] 60 feet wide, occupied by a heavily used street car line, parking was prohibited on one side from 7:00 to 9:30 A.M. accommodating the home to office rush, and on the other side from 4:00 to 6:00 P.M. A check-back after three months revealed a 70 per cent reduction in accidents, with a marked increase in speed and traffic volume.

Prohibitions of parking in the congested area of Dallas, Texas, during the afternoon from 4:30 to 6:00 P.M. reduced accidents and delays[29] and increased average speeds 27 per cent. A "before" and "after" check of accidents for three months showed 15 accidents (6 property damage) before the change and 11 accidents (all property damage) after the change; a 21.6 per cent reduction in all accidents and elimination of personal injury accidents. Figure 1 shows the general improvement effected by prohibiting parking during the rush hours.

By prohibiting parking during peak hours of the afternoon--4:30 to 6:00 P.M.--accidents were practically eliminated over a four-block area of New Haven.[30] "Before" and "after" studies reveal an 88 per cent reduction in all accidents with parking at the curb prohibited. The same measures on two blocks of another street show the same excellent results.

Eliminating parking in congested areas need not seriously affect business; however, complete elimination of parking without comparable off-street facilities can reduce the use of streets. An analysis of the curb capacity available to each business establishment on most business streets, will reveal that business houses would seldom average more than one full parking space per place of business.

Conditions on a congested business street in St. Paul[31] were greatly improved by eliminating parking, resurfacing, installing new curbs and sidewalks, and eliminating all trolley poles, ornamental lights and advertising signs which extended more than 12 inches from store fronts. Deliveries are limited to the period 9:00 to 11:00 A.M. The street has been "opened up" without widening, traffic is greatly expedited, accidents are reduced, and business has been increased from 20 to 40 per cent.

INFLUENCE OF ROAD DESIGN ON PARKING ACCIDENTS

There are many phases of design in both rural and urban roadways which have a direct bearing on parked car accidents. Curb heights, sudden transitions in street widths and inadequate widths to accommodate both moving traffic and parking are perhaps the most common design factors contributing to parking accidents on city streets. In the first case, vehicles

[28] Information furnished by Capital Transit Co., through American Transit Assn.

[29] From information supplied by Mr. W. C. Brandes, Traffic Engineer, Department of Traffic Control, Dallas, Texas.

[30] Data procured from Mr. H. P. Clark, Chief of Police, Department of Public Service, New Haven, Conn.

[31] Facts obtained from Mr. J. E. P. Darrell, Asst. Traffic Engr., Minn. Dept. of Hwys.

cannot be properly parked and occupants cannot properly leave them because of the interference of high curbs with the opening of doors. Lack of adequate curbs may encourage improper placing of parked vehicles so as to obstruct sidewalks. Bottlenecks and inadequate widths of traffic lanes necessitate changes in space arrangements, expensive widening, and rigid regulations which are often difficult to enforce.

Widened streets and special curb cut-backs may allow parking and remove interference with moving traffic. In some cities, land owners have consented to bear the expense of such measures rather than risk the enactment of parking prohibitions. Control of the design, construction and use of such special curb cut-backs are essential. Minimum depths of 18 feet or 20 feet, pavement markers requiring parking at not greater than 45 degrees to the line of the roadway, and adequate sight distances at intersections are among the needs suggested.

Rural and suburban areas present a number of additional design factors which bear directly on parking hazards. Inadequate shoulders make it difficult or impossible for vehicles to park off the travel portion of the roadway. Some of the newest highways fail to provide sufficient shoulders for parking.

The removal of vehicles from the traveled surface is made difficult by the construction of curbs along rural highways.

Bus turn-outs created by widening and surfacing shoulders on rural and suburban roads have reduced accidents in many localities. The danger of collision with school buses is alleviated by providing adequate space on the shoulders for bus stops.

The lack of provisions for parking and emergency storage spaces on long fills and on the approaches to bridges on rural roads create additional accident hazards involving parked or stalled cars.

Failure to provide adequate turn-outs and parking areas at points of scenic interest, and elsewhere where stops are commonly made by motorists, creates parking hazards and increases accidents.

Some four-lane undivided roadways are constructed without providing sufficient pavement width for parking. Even an occasional parked car during peak periods reduces the travelway by one lane. Unless sufficient width is provided for curb parking, the effective street width is reduced and congestion and hazards are created, again bringing the parking problem squarely into road design. This whole question is closely related to the problem of the slow moving vehicle on high speed, heavily traveled roads.

RELATION OF ACCESS CONTROL TO PARKING

Along many roadways through suburban areas, access control is a difficult problem. Where uncontrolled entrances and exits are permitted, many accidents invariably occur. A common scene of accidents is at the roadside stand which generates traffic and frequently, because of its nature, creates careless and reckless attitudes.

The influence of parking on traffic accidents has not been sufficiently considered in studies on congestion and insufficient storage space and their relation to accident causes. Most motorists are daily confronted with the latter elements of the parking problem while parking accidents affect only those directly involved. Accidents and hazards related to parking,

however, should be considered in all studies of parking. Data pertaining to them are valuable in determining correctives and can be a major factor in having changes adopted. Several suggestions have been made, and examples shown, of utilization of accident facts in dealing with curb parking problems.

As with other traffic situations, problems developed by curb parking are often difficult to solve. Often the needs and answers are known, but local conditions and opinions prevent their application or adoption. Each parking situation must be considered separately and its peculiar conditions analyzed. However, there are certain common factors which are found in practically all parking problems. Some of the common elements which need to be considered in developing and putting correctives for curb parking hazards into effect may be summarized as follows:

1. Traffic surveys of which accident studies should be a part.
2. Proper regulations.
3. Strict, continuous and impartial enforcement.
4. Official and business cooperation.
5. Control of moving traffic and pedestrians.
6. Off-street parking facilities to supplement curb spaces.

* * * * *

NOTICE OF SURPLUS PROPERTY

The San Francisco regional office of War Assets Administration has the following stocks on hand for sale only to bona fide law enforcement agencies: 360 Colt "Commando," and 575 Smith and Wesson revolvers. Both types are six-shot, .38 caliber, four-inch barrel, solid frame, double action, side ejector, dull finish weapons and all are unused. The Colts have plastic stocks; the Smith and Wesson have hardwood stocks with swivel in the butt. All weapons are $27 each.

The WAA San Francisco office also has available 750 pairs of adjustable leg irons made of case-hardened, high polished steel with fourteen-inch welded link chain and two keys. Each is stamped "USMC Inspected." These irons are priced at $5 per pair.

Orders may be mailed to: War Assets Administration, Hardware Section, 30 Van Ness Avenue, San Francisco. Each must be accompanied by the following notarized statement:

REPRESENTATION AND WARRANTY

The undersigned represents and warrants that it is a duly organized, qualified law enforcement agency or organization operating as such under existing law: That the* acquired herewith are purchased only for use in carrying out law enforcement purposes and for no other purpose: That these* guns will not be transferred, resold, or offered for transfer or resale by the purchaser without the prior written consent of the War Assets Administration.

The foregoing representation and warranty is herewith made with intent and knowledge that the Government relies thereon.

(POLICE DEPARTMENT) (OR OTHER)
(CITY OFFICIAL)

ACK. BY NOTARY PUBLIC

*Insert proper nomenclature of weapon.

Police Personalities

Chief of Police Frederick A. Roff, Morristown, New Jersey, started his career with the Morristown Police Department in 1916. In 1933 he was appointed Chief of Police.

Recognizing the need for better and more comprehensive training, Chief Roff set out, first among his own men and ultimately through larger organizations, to preach the doctrine of advanced and continuous education for police. Today he is a strong factor in the promotion of the Zone Police Training Schools in New Jersey which are sponsored jointly by the New Jersey State Association of Chiefs of Police, the Federal Bureau of Investigation and the New Jersey State Police. He is a consultant and lecturer with the FBI National Academy, and is chairman of the Training and Educational Committees for both the New Jersey and International Association of Chiefs of Police.

CHIEF ROFF

A foe of juvenile delinquency and public apathy, Chief Roff developed the Morristown Police Junior Legion of Honor in 1941. Police officers volunteered to assist in their spare time and provide wholesome sports and other activities for the youngsters. Results? The kids appreciate their friends, the police, and Morristown has been singularly free from juvenile crime.

His talent for organizing has tabbed Fred Roff as a leader in almost every large venture touching on law enforcement in recent years. Attorney General Clark named him as Police Advisor on his Committee on Juvenile Delinquency. The Federal Security Agency gave approval by selecting him as a member of its Committee on Social Protection. President Truman acknowledged his ability by nominating him to a place on his Advisory Committee of the National Traffic Safety Conference. In 1942, the State Department requested him to serve as Administrator of the National Urban Police Forces in Iran, a position which, due to current circumstances, he could not accept.

In 1940 Mr. Roff was chosen sixth Vice President of the International Association of Chiefs of Police. In 1946 he was made President of that organization. His record with the I.A.C.P. is typical of his entire career as a police officer. No job has been too small and none too large, and when he relinquished the President's gavel at the Mexico City Convention all law enforcement echoed a hearty, "Well done!"

★ ★ ★ ★ ★

The problem presented in the questionable pattern for this month concerns the location of the deltas. There is no question as to the tracing for this particular pattern, but the delta formations do present an interesting study.

At first glance the bifurcation "B" might appear to be the delta, since in so many instances the point of delta is located at a bifurcation. However, on closer inspection, it is found that the forks of the bifurcation possess all the requirements for typelines, that is, they are the innermost ridges which are parallel, diverge and tend to surround the pattern area.

Therefore, the forks of the bifurcation are the typelines and point "D" is the delta.

QUESTIONABLE PATTERN

In looking for the other delta, one notices five ending ridges. None of these may be used as typelines, because, if extended, they would cross the lower typeline which proves they are not parallel to it. Therefore, the typelines must be those ridges marked "T" and the delta must be placed at point "D" in accordance with the rule for locating deltas: "The delta is a point on the first bifurcation, abrupt ending ridge, meeting of two ridges, dot, fragmentary ridge, or any point upon a ridge at or nearest to the center of divergence of two typelines, located at or directly in front of their point of divergence."

This pattern is a whorl with an "O" tracing.

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