

FBI

Law Enforcement

BULLETIN



1954

NOVEMBER

Vol. 23 No. 11

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

FBI Law Enforcement Bulletin

Restricted to the Use of Law Enforcement Officials

NOVEMBER 1954

Vol. 23, No. 11



CONTENTS

	Page
<i>Statement of Director J. Edgar Hoover</i>	1
Feature Article:	
Enforcing the Game Laws in the Maine Woods, by Chief Warden Elmer H. Ingraham, Department of Inland Fisheries and Game, State of Maine	2
Scientific Aids:	
Adapting Color Photography to Police Work, by Lt. James F. Shumate, Police Department, Denver, Colo.	6
Stolen Gasoline Can Be Traced With Chemicals.	9
Identification:	
Extensions Used in Subdividing Fingerprint Cards.	11
New Method Develops Years-Old Fingerprints.	14
Questionable Pattern.	back cover
Firearms Training:	
Practical Firearms Training Aids for Law Enforcement.	16
Other Topics:	
Rental Cars Give Better Service at Lower Cost, by Frank Anderson, Chief of Police, Bay City, Mich.	19
A Spare Tire Can Save a Life, by Chief of Police Philip Purcell, Newton, Mass., and Chief of Police W. Joseph Shea, Natick, Mass..	21
Wanted by the FBI (Ross French Parker)	24
Unidentified Deceased.	24

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.



**Published by the FEDERAL BUREAU OF INVESTIGATION, UNITED STATES
DEPARTMENT OF JUSTICE, Washington 25, D. C.**



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

November 1, 1954

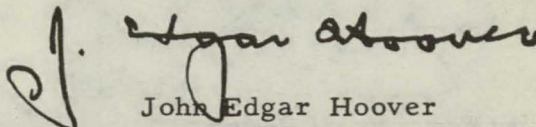
TO ALL LAW ENFORCEMENT OFFICIALS:

The growing threat of public insecurity from criminal depredations is sharply outlined by the statistics in the semiannual Uniform Crime Reports bulletin for 1954 showing that during the first six months of 1954 robbery increased 20 per cent, larceny increased 9 per cent and burglary increased 13 per cent over the same months of 1953. These increases should not be viewed as isolated, short-term fluctuations. Actually, they are sharp accelerations in a clearly defined trend toward increasing criminal activity which has been developing for several years.

The real significance of these figures is in the fact that the crimes which they represent -- robbery, larceny and burglary -- are closely related to juvenile delinquency. For example, a study made of persons arrested during the calendar year 1953 in 1,174 cities having a population of 2,500 or more shows that nearly half of all persons arrested for burglary were not yet 18 years of age, over one third of all arrests for larceny were made among children 16 years of age and under, and persons under 21 represented slightly more than half of all arrests for crimes against property. More arrests on robbery charges were made of persons 18 years of age than for any other age. These figures are convincing evidence that a sharp increase in robbery, burglary and larceny signifies a growing problem in juvenile crime and delinquency generally.

A simple calculation will indicate the magnitude of our problem a few years hence unless the crime rate among juveniles can be lowered in the near future. The juveniles of 16 to 20 years of age who are being arrested for robbery, burglary and larceny now were born from 1934 to 1938, a period when the birth rate was low. In a very few years that same age group will represent the abnormally high birth rate of the World War II period. The percentage of those juveniles who will dabble in crime cannot be predicted with any degree of certainty, but the uncertainty on this point should not obscure the obvious fact that if the ratio of delinquents to total juveniles does not improve, the number of crimes committed a few years hence will make the present figures look rather small by comparison.

Very truly yours,


John Edgar Hoover
Director



FEATURE ARTICLE

Enforcing the Game Laws in the Maine Woods

by CHIEF WARDEN ELMER H. INGRAHAM,
*Department of Inland Fisheries and Game,
State of Maine*

The Maine Inland Fisheries and Game Department Warden Service at the present time consists of 1 chief warden, 13 warden supervisors, 103 district wardens, 1 warden pilot supervisor, and 4 warden pilots. We are under civil-service regulations, the civil service board consisting of 3 members of the commissioner's 7-man advisory council.

Qualifications and Training

To be appointed to the warden service, the applicant must be a resident of Maine, domiciled here for 5 years, between the ages of 22 and 32, not less than 5 feet 9 inches in height, and weigh not less than 140 pounds. He must be a graduate of an approved secondary school and must pass a competitive examination. The examination is designed to test the general educational qualifications of the applicant and his knowledge of wild-

life, woodcraft, and outdoor life. He is investigated by the warden supervisor in whose district he is living as to his character and morals.

All promotions within the service are made as a result of competitive examinations, and no member is eligible for promotion to a higher grade until he has served 5 years in his present grade. Examinations for district wardens and for supervisors are conducted by the chief warden and a board of three supervisors appointed by the commissioner. The examination for chief warden is conducted by the commissioner and members of his advisory council.

Supervisors are required to hold monthly division meetings, at which time the district wardens receive instructions in laws of arrest, rules of evidence and policies of the warden division and of other departmental divisions. The chief warden attends many of these division meetings, and the commissioner attends meetings of all of the 13 divisions at least once a year. In addition to these divisional meetings, a 3-week school of instruction is held annually at Camp Keyes in Augusta, Maine. All new wardens are required to attend and some of the older men are brought back for a refresher course. This course includes instruction in fish and game laws, rules of evidence, laws of arrest, court procedure, game management, fisheries management, public relations, and conservation education.

Wide Range of Duties

While the warden's primary duty is enforcement of the fish and game laws, he has many other duties such as:

1. To supervise and assist in the distribution of all game fish in his district.
2. To investigate claims relating to damage by wildlife to crops and recommend control measures.
3. To investigate all accidents involving deer and motor vehicles.
4. To investigate all hunting accidents.



Chief Warden Elmer H. Ingraham.

5. To render first aid and perform general rescue duty. (All wardens have had first aid instruction.)

6. To assist in the prevention and control of forest fires.

7. To assist in the recovery of persons drowned.

8. To speak at school assemblies and sportsmen's clubs.

9. To assist fisheries and game biologists.

10. To search for lost persons. (Last year the wardens conducted searches for 197 lost persons, putting a total of 3,248 man-hours on this activity.)

Since the game management division of our department has but 12 regional biologists and the fisheries management but 6 regional biologists, both these divisions are very much dependent on the wardens to keep them informed on any conditions adversely affecting game and fish.

The aircraft division of our warden service consists of a pilot supervisor and 4 warden pilots. These men are stationed in strategic places in the wilderness areas of the State. We have a repair base and hangar at Greenville, on Moosehead Lake, with our own mechanic and quarters where the pilots may stay while working on their planes.

Warden pilots must have qualified as wardens under the civil-service regulations. Usually, we have a waiting list of district wardens who are qualified.

With so much of Maine a wilderness area, the aircraft division of the warden service is very important. Besides flying the district wardens and supervisors over their districts in enforcement work, they fly the regional biologists over their respective sections, and assist the forestry depart-

ment in prevention and control of forest fires. These planes are used extensively in search for lost persons and in rescue missions. We have records of many lives saved because of the efforts of these men. In addition to being good wardens and pilots, they are skilled mechanics, as every bush pilot must be.

Wardens are empowered to search without warrant any buildings, camps, boats, wagons, cars, motor vehicles, airplanes, stages, tents, and other receptacles and places where they have reason to believe that birds, fish, or game are taken or held in violation of the law, but no dwelling house shall be searched without a warrant and then only in the daytime, and no sealed railroad car shall be searched without a warrant.

In addition to enforcement of the fish and game laws, the wardens are empowered to arrest and prosecute for violations of the forestry fire-prevention laws. They are also empowered to arrest and prosecute camp trespassers and persons committing larceny from any camp, cottage, or other building.

Current Problems

One of our major problems is "night hunting." The penalties of \$200 to \$400 for the first offense, and \$400 to \$800 and 30 days in jail for the second or subsequent offense, act as a deterrent to the average person, but the influx of hunters in the fall of the year brings a certain percentage who will risk apprehension in order to get a deer and another percentage who will pay a price for a deer out of proportion to its value as meat in order to take one home. Consequently, we have market



Search for a missing plane in 1951.



Roland H. Cobb, Commissioner, Department of Inland Fisheries and Game.

hunters who will take the risk and who, if caught and convicted, will appeal to superior court. Most of the superior court sessions, at which hunting cases are tried, are held in January, February, and March. Thus, the convicted night hunter or market hunter can stave off the day of reckoning until after hunting season and take his jail sentence during the winter months.

In addition to the difficulties of being in exactly the right place at the right time and getting sufficient evidence to convict on a night-hunting charge, we have the problem of stopping cars. We have a statute providing a mandatory penalty of \$100 fine for any operator of a motor vehicle who refuses or fails to immediately stop his motor vehicle on request or signal of a fish and game warden when the warden is in uniform. Since the penalty is so much greater for night hunting, particularly if there are several in the party, some attempt to escape. Each year, we have wardens injured in attempting to stop cars, and some of the injuries have been serious. Probably, there is seldom any intent to hit the warden, but they do take the chance that he will jump in time to avoid being hit.

The case of one of our warden supervisors, Maynard Marsh of Gorham, will point out the danger involved and the lengths to which people will go to avoid capture. On the night of September 17, 1946, Wardens Maynard Marsh and George Town-

send were watching a field in Hollis, Maine. They saw a party "spot-lighting" the field from a car and attempted to stop the car. The driver accelerated, and Marsh jumped to one side of the road. The car swerved, struck Marsh and continued on its way. Marsh was taken to Westbrook Hospital and 2 days later to Massachusetts General Hospital, where he stayed 2 months. He had multiple fractures of the left leg. Two years later, he returned to Massachusetts General Hospital for additional operations on the left leg.

The car in question was found hidden away the following day. The owner was convicted and served 9 months on one charge, two others being filed.

Another case which will illustrate the hazards of the wardens' work and in which we were very fortunate that no officer involved was injured occurred in the Bowdoinham-Topsham section of Maine in the fall of 1951. The warden in this district (each warden has from 6 to 12 townships) had been getting complaints of illegal hunting in this section of his district. He notified his supervisor, Charles Head of Augusta, and Head asked aid of the State police, since wardens' cars do not have 2-way radios. Two troopers and four wardens worked the area this particular night and heard shooting. They set up a roadblock and attempted to stop the car, but it swerved into the ditch, narrowly missing the warden, and got away. Wardens and State troopers in another locale were notified by radio and parked across the road in an attempt to stop the car. Again it avoided the roadblock by taking to the ditch. Both crews of officers gave chase at speeds up to 100 miles an hour. About 6 miles from where the first attempt was made to stop the car, they found it. It had crashed into a utility pole, completely severing the body from the chassis. Two men were apprehended and a third escaped into the woods but was later apprehended. In the car was a doe deer which they had shot that night. The car was completely demolished, and a rifle in the car was broken in two parts, but the three men escaped with minor cuts and bruises. They paid a total of \$800 fines and costs.

Interagency Cooperation

We have been handicapped in the past by a lack of radio communications, but Col. Robert Marx, chief of the Maine State police, has offered to take us on their frequency. Since this does away with

the necessity for our having our own base stations, we are enabled to make a start this year, and we have 16 mobile units on order and will expand as fast as finances permit. We have had the very best of cooperation from State police and believe that the two agencies being on the same radio frequency will work out for the best interests of both departments and for the best interests of the State as a whole.

Sometimes crimes are committed in the wooded areas of the State. While such crimes are not under the jurisdiction of our department, the wardens are particularly fitted through training and knowledge of the country to lend assistance to State police and sheriffs in these instances. Such a crime was committed June 3, 1943, at Webster Lake in the remote wilderness area of Piscataquis County.

Wesley M. Porter, of Patten, Maine, was guiding a party of three Massachusetts men. Porter

went out of the cabin in the evening of the first day at camp. Three shots were fired from a thicket, and Porter was instantly killed. Word was sent out to the settlement and State police started an investigation. An empty 20-gage shotgun casing was found at the edge of the clearing, and ballistic tests at the State police laboratory indicated that the pellets which had killed Porter were 20-gage buckshot. It took several days of investigation before members of Porter's party were absolved of any connection with the crime. Their home backgrounds had to be checked and a careful check made as to whether any of them ever owned a 20-gage gun.

In the meantime, game wardens under the direction of Supervisor Helon Taylor of Guilford, Maine, moved into the area. They discovered that camps over a large wilderness area had been broken into. The pattern was the same in each

(Continued on page 23)

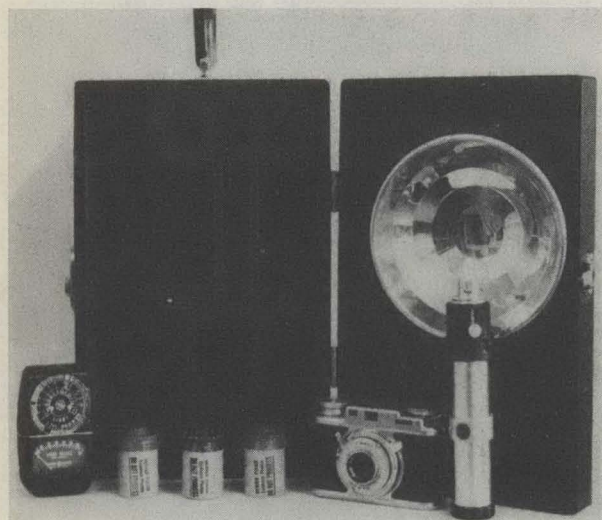


Warden Al Cummings, Supervisor Cash Austin and Warden Pilot Supervisor William Turgeon with illegal fisher and martin furs seized from a trapper's camp.

SCIENTIFIC AIDS

Police photography is a continuous problem, and no modern police department can afford to overlook it. For years, however, a portion of the evidence has been lost, since the average picture prepared for court does not contain the vital element of color. Comparisons made between color photographs and black and white photographs of the same scene will quickly show this fact. The main drawback to the use of color has always been the technical difference in the production of the picture.

In the Denver Police Department, we have attacked the various technical features and have overcome many of the difficulties, at least to the point where we can now produce an accurate, large color photograph on any and all cases where color can be an element of the case, and still keep our costs of production within the limited means of the budget requirements. As a matter of fact, the cost, instead of going up, has been materially reduced by the use of color, and the results obtained by the more real, lifelike photographs would justify an increase in expenditure should such have been the case. Let me outline the procedure and illustrate a few of the facts.



Except for the flash bulbs and leather camera case, this is the complete camera kit used by Denver officers and carried in the squad cars.

Adapting Color Photography to Police Work

*by LT. JAMES F. SHUMATE, Police Department,
Denver, Colo.*

35-mm. Cameras

The first consideration was in the choice of a camera. For years we had been operating with conventional camera equipment, standardized for the most part to the 4 by 5. Early experimentation with color in the 4 by 5 was not satisfactory. The old element of cost really ran high when color was used in the large sheets, and we had no satisfactory method of using the color transparency, once produced, in the courtroom. We switched to the 35-mm. camera for our color and at once enjoyed better results. We now have three 35-mm. cameras in use in the laboratory and identification section and 10 units in use in the traffic section. These cameras are rugged, compact, and adaptable to almost any photographic problem. The flash gun on our units is attached by screw to the body of the camera, and the whole unit can be carried by the officer making an investigation without hampering his movements. A complete unit for the officer is housed in a small carrying case approximately 10 inches high, 7 inches wide and 8 inches deep, and the case carries flash bulbs, light meter, spare film for the camera and report forms.

Viewer for Court Use

The second consideration was the method of presentation in court. We had tried, while still experimenting with the 4 by 5, to view the transparencies directly by transmitted light. This was unsatisfactory from several standpoints. If the transparency was viewed by daylight, the color temperature of the light was raised and the picture took on a blue cast. Various sources of artificial light were almost as bad because of variance in color temperature. We next tried cutting the 4 by 5 transparency to 3¼ by 4 and mounting it as a slide for use with a projector. This did not help much because it was almost impossible to get our courtrooms dark enough for proper projection, and any extraneous light interfered with the color balance. With the switch to 35-mm. cameras also

came the big switch in method of presentation which has made our present system so successful. We built a back-projection viewer for use with a standard 35-mm. projector. By this means we can now present proper color pictures in any court without any dimming of the lights in the room whatsoever. Photographs of this viewer are to be found in these pages showing their uses in the courtroom and elsewhere. Five of these viewers are in constant use in our courtrooms at present.

An outline of methods and technical procedures will be of interest to many departments contemplating use of color, and a comparison of cost may tend to bring the use of color closer for many of these departments.

Film

Any photography begins with the negative material for the camera. We have standardized our

procedures on Ansco color film. This was the only 35-mm. film available which could be processed in our own photo lab. In this way we maintain perfect custody of our evidence. The film is purchased in bulk rolls, and loaded into cassettes for the cameras. Any photographer or technician can learn the procedure of loading these small cartridges in a matter of minutes, and the work involved is no greater than that of loading 4 by 5 film adapters. It is not necessary to expose a complete roll before the film can be removed from the camera; in fact, any amount of exposed film can be removed from the camera in a darkroom, or the film can be rewound into the cartridge and the number of exposures indicated, whereby this amount of film may then be removed in the photo lab without difficulty. The unexposed part of the roll may then be returned to the camera for use.

The exposed film is then placed in any conventional type daylight tank for development of roll



Color photograph of an accident scene being presented by the author, with the viewer which he developed, in municipal court, Judge Gerald E. McAuliffe presiding. Lieutenant Shumate carries the camera with which the picture was taken.

film. The chemicals for development of color film are prepared in kit form by the manufacturer, and any person familiar with darkroom procedure can easily mix them properly. The chemicals must be brought to proper temperature before development, and temperature control during the processing is desirable; however, excellent results can be obtained even though temperature control is not available. The developing procedure is outlined on a work sheet provided with the kit of chemicals and is not difficult to follow. Results are consistent and the color obtained on this film is extremely accurate. We have in many cases taken some colorful garment or article into court for a direct comparison of colors should there be any question raised as to the accuracy of the photography. While the developing of the color film through to the finished transparency takes approximately one hour and a half, the time is only comparable with that of finishing a black and white photograph when it is considered that the original film for a black and white negative must be developed and dried, after which it must be printed or enlarged, and the positive print also finished and dried. The evidence, too, in the case of the color transparency is often considered better.



Victim viewing color photographs of suspects. She operates the viewer, giving her privacy and time to study the photographs in detail. (Editor's note: Photo of suspect masked for publication here.)

The original film is processed through to the color transparency which is the evidence produced in court. Any question of tampering with or altering the picture is almost ridiculous when the size of the transparency is brought into the question. The picture presented in court, which on our present equipment is about 44 inches high and 20 inches wide, is considerably larger than the black and white print usually presented.

There is nothing new for the photolab man to learn. He simply must follow the instructions provided and use a little more caution. There is very little tolerance for carelessness. The same is true of the work done by the photographer. He must be more careful of his exposure. Color film does not have too wide a tolerance for improper exposure.

Cost

As to the cost, a 100-foot roll of color film will make at least 700 exposures. This is a conservative estimate and allows film for lead strips in the rolls and a margin for cutting out pictures from rolls which are not all exposed, as when the camera is stripped of a few exposures in the darkroom. The 100-foot roll of film will ordinarily cost less than \$35. Seven hundred pictures for \$35 makes the cost 5 cents per picture. The additional cost for the chemicals will increase this to 7 or 8 cents but that is still less than the cost of a sheet of film alone for the conventional 4 by 5 camera.

The viewer used in court is simple to construct. Two front-surfaced mirrors are placed at the proper angle to reflect the image onto the back of the viewing screen. The screen is a piece of plate glass which has been frosted on one side. The picture is resolved on the frosted side of the glass. The box in which the mirrors are placed and where the image is resolved is dark. This is the darkroom necessary for proper projection, just as in the conventional method of projection of pictures. Extraneous light is reflected from the slick side of the glass and in no way affects the quality of the picture. The viewer is mounted on wheels and can be turned in any direction. This is useful when pictures are questioned as evidence. The picture can be placed on the screen (the viewer turned away from the jury) and discussed by the judge and the attorneys, without the necessity of removal of the jury, and if the picture is admitted as evidence, the viewer may be turned

toward the jury for consideration. An additional advantage is obtained by having the picture large enough for all of the jurors to see at one time. It is no longer necessary to pass a small print from one juror to another, causing disruption among the jurors.

Mug Photos

We have gone one step further with our color pictures in the Denver Police Department. We now take all of our "mug" photos in color, and by use of our viewer and an automatic projector we can show a victim color mug shots of suspects as fast as he wishes. We hand the pushbutton control on the projector to the victim and he presses the button when he wishes a change. The mug pictures are taken on a modified moving picture camera. This was purchased as war surplus and the shutter modified to take single frames. A flash contact was built in and "Strobe" lights supply the illumination. The mugging camera is permanently mounted on a tripod and is quite compact. Identifications have been made in several cases from our color mugs where they have been completely missed in our black and white "M. O." file. In fact, in one case in particular where we were attempting to identify a "stickup" we had seven victims identify the color photograph and not a single one of them could identify a black and white photo of the same man. When the man was picked up, he admitted all of the "stickups".

The success of these methods will undoubtedly encourage wider use of color photos. Several police departments have expressed interest in our procedures and some of them have already converted to color photography. The viewers will undoubtedly be improved; in fact, the author has already built a viewer about half the size of the one shown, and this should be ready for use before the first of the year (1955). The courts, while very skeptical at first, are now recognizing the use of the color photographs, and they have been used on dozens of homicides, hundreds of assault cases, and thousands of traffic cases. Color is here to stay, and the color scene is now a reality.

COPYRIGHTS

Infringements of copyrights and other violations of the copyright laws should be reported to the FBI.

NOVEMBER 1954

316908 O - 54 - 2

Stolen Gasoline Can Be Traced With Chemicals

Law enforcement officers are sometimes called upon to investigate thefts of gasoline from storage tanks, dispensing pumps, city- State- or Government-owned vehicles, and other sources. The following method for tracing stolen gasoline has been found to be more suitable than methods previously described.

The method involves the addition to the gasoline supply of a material foreign to the gasoline, one that does not interfere with the operation of the engine, is invisible to the eye, inexpensive, and can be readily detected by a simple and inexpensive procedure after the tagged or treated gasoline has been diluted with untagged or untreated gasoline in the fuel tank of a suspect's car.

The Materials

There follows a list of chemicals and equipment necessary for utilizing the present method for tracing stolen gasoline:

1. One half-gallon jug or bottle (clean, clear, not colored) with cork stopper.

2. A supply of 5-percent sodium carbonate solution, preferably in a bottle graduated in half ounces or ounces. Sodium carbonate is available at most chemical supply houses, drug stores, high school and college chemistry laboratories or professional chemical laboratories.

CAUTION—do not use sodium hydroxide or sodium bicarbonate.

3. Phenolphthalein is available at chemical supply houses, some drug stores, high school and college laboratories and professional chemical laboratories. One ounce generally costs about 50 cents.

CAUTION—do not use phenolphthalin (note difference in spelling). Of course, the amount of phenolphthalein needed is controlled by the amount of gasoline to be tagged. One ounce will tag 10,000 gallons of gasoline.

4. Alcohol. Any one of three kinds of alcohol is satisfactory.

A. Ninety-five percent ethyl alcohol (190 proof), obtainable from laboratories which have a license from the Federal Government to handle this item. This item is sometimes obtainable as 95 percent grain alcohol at liquor or whiskey stores.

B. Absolute ethyl alcohol (200 proof), obtainable from laboratories which have a license from the Federal Government to handle this item. Not obtainable at liquor stores.

C. Methanol, sometimes referred to as methyl or wood alcohol, obtainable from chemical supply houses, some drug stores, college chemistry laboratories and professional chemical laboratories.

5. One quart bottle with cork stopper.

Follow Numerical Order

The following four steps should be carried out in numerical order if gasoline is being tagged and efforts made to trace it.

First test the untreated or untagged gasoline in the following manner:

1. Place approximately 3 pints (1½ quarts) of untreated gasoline in the half-gallon bottle.

2. Add one-half ounce of sodium carbonate solution.

3. Stopper the bottle and shake *vigorously* for at least 2 minutes.

4. Invert the bottle and examine the water layer which will be on the bottom.

5. The water layer must remain clear and colorless.

6. Pour out the contents of the bottle and wash the bottle several times with water.

Second, tag the gasoline in the manner described below:

1. Place 1 ounce of phenolphthalein (for each 10,000 gallons of gasoline) in a clean quart bottle.

2. Fill the bottle about three-fourths full with alcohol. Stopper and shake until the white phenolphthalein is dissolved. The bottle now contains material for tagging 10,000 gallons of gasoline.

3. The alcohol solution of phenolphthalein should be poured slowly into the storage tank at the time the plain or untagged gasoline is being added to the tank. In order to secure adequate mixing of phenolphthalein with gasoline, it is recommended that the phenolphthalein solution be

added in small amounts at intervals during the time required to pump 10,000 gallons of gasoline into the storage tank.

If only 5,000 gallons of gasoline are being added to the storage tank, only one-half ounce of phenolphthalein dissolved in alcohol will be required. If 25,000 gallons of gasoline are being added, then 2½ ounces of the phenolphthalein dissolved in alcohol will be required.

4. After 2 to 4 hours have elapsed during which time additional mixing will occur in the storage tank, and sufficient gasoline is pumped from the tank in the normal manner to remove untagged gasoline from the pipeline, one should proceed with step three.

Test the tagged gasoline from the storage tank as follows:

1. Place approximately 2 pints (1 quart) of tagged gasoline from the storage tank in the half gallon bottle.

2. Add one-half ounce of sodium carbonate solution.

3. Stopper the bottle and shake *vigorously* for 2 minutes.

4. Invert the bottle and examine the water layer, which will be on the bottom.

5. The water layer will be colored bluish pink.

6. Pour out the contents of the bottle and wash several times with water.

Gasoline found in the possession of a suspect may be tested by use of the following procedure:

1. Place 3 pints (1½ quarts) of gasoline recovered from the suspect into the half-gallon bottle.

2. Add one-half ounce of sodium carbonate solution.

3. Stopper the bottle and shake vigorously for at least 2 minutes.

4. Invert the bottle and examine the water layer, which will be on the bottom.

5. If tagged gasoline is present, the water layer will be colored bluish pink. The depth of color at this point will be governed by the percentage of tagged gasoline in the gasoline found in the possession of the suspect.

6. Pour out the contents of the bottle and wash several times with water.

The FBI Laboratory would appreciate receiving information regarding the use of this or similar techniques in tracing stolen gasoline so that the information may be made available to other law enforcement officers.

IDENTIFICATION

When a group of fingerprint cards has increased in size to the extent of being cumbersome and inefficient to handle, it becomes necessary to subdivide that group into a number of smaller groups by extending the classification beyond the normal limits of the classification formula.

At the present time the Identification Division of the Federal Bureau of Investigation is using several types of extensions to subdivide the fingerprint files. Within a large number of the classification formulas, the extension of the subsecondary part of the classification alone is sufficient. This extension is obtained from the ridge counts appearing in the index, middle and ring fingers and is known as the second subsecondary and is used in addition to the regular subsecondary.

SML Extension

The letters S, M, and L indicate the relative size, small, medium or large, of the ridge counts appearing in the index, middle and ring fingers. The table below is used to determine the letter valuations of the individual ridge counts. It should be noted that the values assigned to identical ridge counts may vary in different finger-blocks.

Index Fingers	Middle Fingers	Ring Fingers
1-5=S	1-8=S	1-10=S
6-12=M	9-14=M	11-18=M
13 and over=L	15 and over=L	19 and over=L

When the S, M, and L extension is used as the second subsecondary as illustrated in figure 1, the valuations assigned to the ridge counts in the index, middle and ring fingers of the right hand determine the numerator part of the extension, and the values assigned to the ridge counts in the index, middle and ring fingers of the left hand determine the denominator part of the extension.

In examining figure 1 it should be noted that the index, middle, and ring fingers of the right hand contain the ridge counts of 14-9-15, respectively. Reference to the conversion table discloses that a ridge count of 14 appearing in the index finger is assigned a value of "L," a ridge count of

Extensions Used in Subdividing Fingerprint Cards

9 in the middle finger is given a value of "M," and a ridge count of 15 in the ring finger results in a value of "M." These three values, LMM, constitute the numerator part of the extension. The ridge count of 7 appearing in the index finger of the left hand has a value of "M," the ridge count of 7 in the middle finger a value of "S," and the ridge count of 6 in the ring finger receives a value of "S." These three values, MSS, constitute the denominator part of the extension. The completed extension of the subsecondary results in a second subsecondary of LMM over MSS, which is indicated above the subsecondary part of the regular classification formula.

Figure 2 is an example of the use of the SML extension of the subsecondary when whorl type patterns appear in the index fingers. Inasmuch as the second subsecondary is obtained only from the ridge counts appearing in the index, middle, and ring fingers, the whorl tracings appearing in the index fingers will not be included in the extension. Therefore, the extension has only two values appearing in the numerator and two in the denominator. The extension MS over MM is placed above the subsecondary part of the classi-

Figure 1.

fication, to the right of the whorl tracings appearing in the subsecondary.

When the S, M, and L extension is used to subdivide a group of fingerprint cards, it must be remembered that the extension does not eliminate the subsecondary but is an addition to the subsecondary.

Numerical Extension

The Numerical Extension could be used in any large group of fingerprint cards consisting primarily of loop type patterns. This extension is now used in the all ulnar loop group of the Identification Division of the FBI and affords a more complete subdivision of the file than can be obtained by the use of the SML extension of the subsecondary. The numerical extension, in contrast to the SML extension, eliminates the use of the subsecondary in our files but could be used in conjunction with the subsecondary. The subsecondary remains a part of the classification formula inasmuch as it is often necessary to conduct reference searches in groups using that part of the classification.

The numerical extension is obtained by assigning numerical values to the individual ridge counts appearing in the index, middle, and ring fingers, according to the table appearing below. Note that the values do not vary according to the fingerblocks, as in the SML extension, but remain constant.

1 through 4-----	1	17 through 20-----	5
5 through 8-----	2	21 through 24-----	6
9 through 12-----	3	25 and over-----	7
13 through 16-----	4		

The values assigned to the ridge counts in the index, middle, and ring fingers of the right hand become the numerator part of the extension, while the values assigned to the ridge counts in the index, middle, and ring fingers of the left hand are used as the denominator. When the extension formula has been determined, the numerical values are indicated above the subsecondary part of the classification formula.

Figures 3 and 4 are examples of the use of the numerical extension. In figure 3 individual ridge counts of 18-15-6 appear, in that order, in the index, middle, and ring fingers of the right hand. The ridge count of 18 has a numerical value of 5, a ridge count of 15 the value of 4, and the ridge count of 6 a value of 2.

These three values, 542, constitute the numerator part of the extension and are indicated above the subsecondary part of the classification formula. In the index, middle, and ring fingers of the left hand appear the ridge counts 8-10-6 in that order. The ridge count of 8 has a numerical value of 2, the ridge count of 10 a value of 3, and the ridge count of 6 a value of 2. These three numerical values, 232, constitute the denominator part of the extension formula and are indicated below the numerator. The completed extension is 542 over 232.

LEAVE THIS SPACE BLANK

Name _____ (Print name) (Last name) (First name) (Middle name) Class 20 M 1114 001 13

Alias _____ (Please type or print plainly) No _____ Sex _____ Ref _____

RIGHT HAND

1. Thumb 20 2. Index finger 0 3. Middle finger 8 4. Ring finger 4 5. Little finger 2

LEFT HAND

6. Thumb 17 7. Index finger 0 8. Middle finger 8 9. Ring finger 4 10. Little finger 2

Impressions taken by: _____ Note annotations: _____ Signature of person fingerprinted: _____

Date: _____ (signature of official taking prints)

Four fingers taken simultaneously: _____

Left Hand _____ Left thumb _____ Right thumb _____ Right Hand _____

DO NOT FOLD THIS CARD

Figure 2.

LEAVE THIS SPACE BLANK

Name _____ (Print name) (Last name) (First name) (Middle name) Class 17 L 11001 5

Alias _____ (Please type or print plainly) No _____ Sex _____ Ref _____

RIGHT HAND

1. Thumb 17 2. Index finger 18 3. Middle finger 15 4. Ring finger 6 5. Little finger 2

LEFT HAND

6. Thumb 14 7. Index finger 8 8. Middle finger 10 9. Ring finger 6 10. Little finger 2

Impressions taken by: _____ Note annotations: _____ Signature of person fingerprinted: _____

Date: _____ (signature of official taking prints)

Four fingers taken simultaneously: _____

Left Hand _____ Left thumb _____ Right thumb _____ Right Hand _____

DO NOT FOLD THIS CARD

Figure 3.

The method used to determine the numerical extension in figure 4 is the same as explained in figure 3. The values 334, constitute the numerator part of the extension and the values 344 the denominator. The completed numerical extension, 334 over 344, is indicated above the subsecondary part of the classification formula.

WCDX Extension

The WCDX Extension is used to extend the classification formula of large groups of fingerprint cards consisting primarily of whorl type patterns. This extension is obtained by subdividing the general whorl type patterns into individual types, i. e., plain whorls, central pocket loops, double loops and accidentals. The symbols used to indicate the individual types are illustrated below.

W—Plain whorl.

C—Central pocket loop.

D—Double loop.

X—Accidental.

The type of whorls appearing in the fingerblocks of the right hand are used as the numerator in the extension formula, while those appearing in the left hand are used as the denominator. For practical purposes the WCDX symbols appearing in the index fingers are used as the secondary in the extension, and are indicated by a capital letter W, C, D, or X in the upper left-hand corner of the fingerblock. In all other fingerblocks the symbols "c", "d", or "x" are indicated by a small letter in the upper left-hand corner of the fingerblock.

The symbol "W" is not indicated in the fingerblocks, in other than the index fingers, unless a plain whorl type pattern is referenced to or from another whorl type pattern. When the symbols appearing in the fingerblocks are placed in the extension formula, they are indicated as they appear in the fingerblocks. In the extension formula the symbol "W" is not indicated unless it appears in the index fingers or when a plain whorl type pattern appears between the index finger and another type whorl pattern, or between two "c", "d", or "x's". The "W" is used then only to indicate the proper position of the other type whorl pattern in relation to the index fingers.

Figure 5 is an example of the WCDX extension used in the all whorl group. In figure 5 a central pocket loop whorl appears in number two fingerblock and an accidental type whorl appears in fingerblock No. 7. The symbol "C" with the symbol "X" below is placed above the regular classification formula and becomes the secondary part of the extension formula. All other WCDX symbols to be indicated in the extension will be indicated so as to show their relative position to the index fingers. A plain whorl type pattern, not referencable to another type whorl, appears in fingerblock number one and is not indicated in the fingerblock or extension formula.

A central pocket loop type whorl, referenced to a plain whorl, appears in fingerblock number three. The symbol "c" is placed in the fingerblock with the symbol "w" below to indicate the plain whorl reference. The symbol "c" only is

Figure 4.

Figure 5.

placed in the extension formula inasmuch as a symbol representing a referenced pattern is never indicated in the extension formula. The plain whorl type pattern appearing in fingerblock number four is not indicated in the fingerblock or extension formula. A plain whorl type pattern referenced to a central pocket loop appears in fingerblock number five and the symbols "w" over "c" are placed in the fingerblock only to indicate the referencable pattern. All symbols, necessary for the completion of the numerator, have now been placed in the extension formula. A double loop type whorl appears in fingerblock number six and is indicated in the denominator to the left of the symbol "X." A plain whorl type pattern appears in fingerblock number eight and a central pocket loop appears in number nine fingerblock. The symbol "w" is placed in the extension formula between the capital letter "X" and the symbol "c" only to indicate the proper position of the central pocket loop. A double loop type whorl appears in fingerblock number ten and is indicated in the extension formula to the right of the symbol "c." All symbols appearing in the fingerblocks of the left hand have now been placed in the denominator part of the extension formula. The completed extension formula, as indicated, is Cc over dXwcd.

Due to the necessity of reducing the size of the fingerprint cards illustrated in this article, the fingerprint patterns are unavoidably indistinct. The sole purpose of the illustrations of the complete fingerprint cards is to show the method of obtaining the classification formula and how it is indicated on the classification line.

Civil Files Identify an Amnesia Victim

Early in 1954 the officers of a large eastern city found a man wandering aimlessly along one of the Nation's main highways. He did not know his name and carried no credentials or identification of any kind. The officers fingerprinted the amnesia victim and forwarded the card to the FBI. The card was received in the morning mail, and by 1:45 that afternoon, four fingerprint cards which had been submitted previously for this man were found in the Civil Fingerprint files. At 2 p. m. on the same day, the submitting agency was advised of the man's identity, together with significant events of his past life.

New Method Develops Years-Old Fingerprints

An article entitled "Detection of Fingerprints by the Ninhydrin Reaction" appeared in the March 6, 1954, issue of *Nature*, a British scientific publication. This article by Svante Oden, Institute of Pedology, Royal Agricultural College, Uppsala, Sweden, and Bengt von Hofsten, Institute of Biochemistry, University of Uppsala, Sweden, outlined primary research work done in connection with the development of latent prints by the ninhydrin method.

It has been known in scientific work that ninhydrin (triketohydrindene hydrate) and certain amino acids react to give a colored product. Latent fingerprints will usually contain some of the amino acids. The FBI Laboratory and the Single Fingerprint Section experts are presently conducting research to further determine the applicability of the ninhydrin method in the development of latent prints.

Fifty sheets were taken from a notebook not subjected to fingerprints since its preparation in the summer of 1945. These sheets were treated with iodine fumes and an iodine print, identified as having been made by the owner of the notebook, was developed on one sheet. Ridge fragments unsuitable for identification were found on two more of these sheets. Because of the age of the sheets, the latent and ridge fragments developed by the iodine fuming would have had to contain grease, oil or some other foreign substance as ordinary latents cannot be developed with iodine fumes if they are more than a few weeks old, the length of time depending on varying factors.

These same 50 sheets were subsequently treated with the silver nitrate method. Only some very faint smudges without ridge formations developed.

Another portion of the sheets from the notebook was treated by the ninhydrin method. Identifiable latent prints of the person who prepared the notebook 9 years ago, several of which were on the same sheet of paper, were found. Fragments of latent impressions containing ridge detail were developed on almost every sheet of the notebook using the ninhydrin method. It was particularly noted that these years-old latent impressions were more sensitive to the ninhydrin treatment than were fresh latent impressions.

A solution composed of approximately 0.4 percent ninhydrin in ethyl alcohol or acetone is

sprayed on latent prints on paper in the form of a very fine mist with a dental spray. The evidence containing the latents is then placed in an oven. The temperature of the oven used in heating the latents after spraying is critical. The heating should be between 80° C. and 140° C. The length of time the specimen is heated must be controlled to obtain maximum development. Different specimens require shorter or longer periods than others depending on the specimen and the amount of solution sprayed on the paper. The specimen should be heated until it starts to turn faintly pink in an area where no fingerprint images have appeared. The stains on the paper caused by the ninhydrin solution are only in the latent print areas if carefully sprayed and heated. This new method stains the document but does not make it illegible. Research is being conducted by the FBI Laboratory in order to develop a technique to remove these stains without mutilating the document.

Further research has shown that the latent prints developed by the new ninhydrin process required spraying which thoroughly moistened the paper. If too little spraying was done, the latents would not develop. Too much spraying caused the latents to become smudges as the material in the latent ridges was dissolved by the sprayed solution. Specimens cannot be soaked in the ninhydrin solution. To develop latents with ninhydrin required careful concentration of spraying over the entire surface of the paper so that no latent areas would be missed. Careless spraying of specimens, especially large ones, for latents by this method would undoubtedly result in missing prints capable of being developed. At this time, it is the opinion of the FBI Laboratory that the ninhydrin method should be used only on small paper specimens, such as documents.

The ninhydrin method can be used in conjunction with the iodine fuming and silver nitrate methods. Iodine fuming should be followed with the ninhydrin method and then the silver nitrate method. The spraying of ninhydrin on latents may prevent the subsequent development of such latents with iodine fumes. The ninhydrin method should precede the silver nitrate method as prior treatment by the former method does not apparently decrease the sensitivity of the subsequent silver nitrate treatment. The ninhydrin treatment could not be used after the silver nitrate method.

Fresh latents developed with ninhydrin on a dark background such as brown paper are usually

too faint to identify because of lack of contrast without the possible aid of photography.

Fresh prints on white paper as well as on brown paper were treated with the ninhydrin method and then subjected to the silver nitrate methods. Some latents were developed by the subsequent silver nitrate method which were not developed by the ninhydrin method, indicating that fresh prints are ordinarily more sensitive to the silver nitrate method.

The ridges, although often very faint in the fresh latents developed by the ninhydrin method, were sharply defined with little smudging whereas the ridges in the silver nitrate latents had a tendency to smudge or diffuse in areas of the print.

The results of further research to be conducted concerning the development of latents with ninhydrin will be published in some future issue of the FBI Law Enforcement Bulletin.

Upon request, submitted latent evidence will be treated with the ninhydrin method but presently no evidence should be sent for treatment which cannot be permanently stained.

Nursemaid With a Criminal Record

Many cities and States have ordinances or laws requiring the fingerprinting of certain individuals. These prints are then sent to the Identification Division of the FBI for search against the FBI files, after which the fingerprints, together with whatever information may be contained in the files, are returned to the contributing agency.

On September 29, 1953, in compliance with a criminal registration law, the police in a southern city fingerprinted a woman employed there as a nursemaid. These fingerprints were then transmitted to the Identification Division of the FBI.

A search of the files revealed that this woman had been arrested a number of times and had a rather lengthy criminal record. Her previous arrests began in Washington, D. C., in 1940 for charges of soliciting prostitution and violations of the Internal Revenue Law. Another arrest had been made by the Bureau of Narcotics of the Treasury Department for a violation of the Marihuana Tax Act. She was again arrested in 1949 and charged with a violation of the Pennsylvania Narcotics Law. In addition, she had been fingerprinted for investigation—vagrancy.

FIREARMS TRAINING



Practical Firearms Training Aids for Law Enforcement

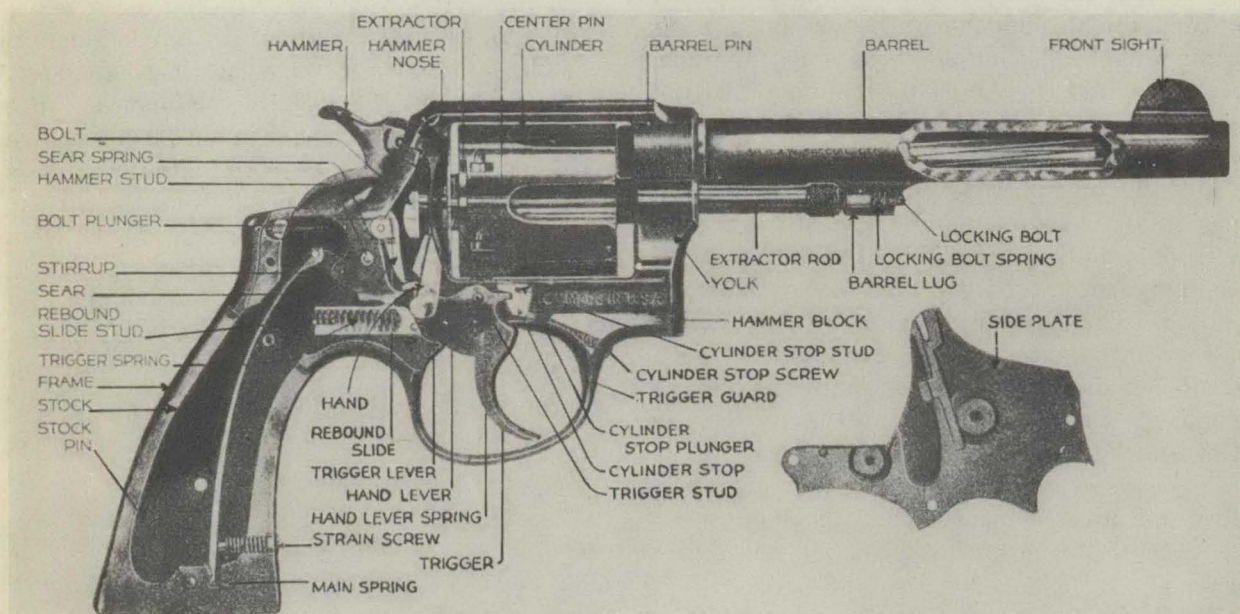
Criminals have a healthy respect for law enforcement officers who have the ability to shoot quickly and accurately. The ability to shoot is gained through training and practice, but shooting is mechanical, just as driving an automobile, or anything else requiring coordination of brain, eye, nerve and muscle. The more training and practice, the more proficient the shooter becomes. Too many police officers today have little or no knowledge of firearms and, if the need arises, cannot use their sidearms with safety to themselves and innocent bystanders. Training is therefore of great importance to the officer and his department as well as the whole community because criminals are known to be more cautious in communities where the police are recognized as being efficient and well trained.

The type of training received by the law enforcement officer is necessarily different from that of the combat soldier. The police officer can shoot only as a last resort to save his own life and, if he cannot shoot with safety with respect to innocent bystanders, he cannot shoot. In the military services, fire power, a large number of bullets through

a given area in a short period of time, is the important factor. Noncombatants and one's own men are or should be out of that area. But in law enforcement the officer cannot shoot into an area hoping to hit the bank robber; he might hit a bank employee or a customer.

Train Every Officer

It is not enough to train a few officers of each department to shoot effectively; it may be an untrained officer who is suddenly confronted with a situation requiring the use of his revolver. In the FBI new Special Agents just out of training school have found themselves in situations where there was no time to summon assistance and have used their sidearms to effect the apprehension of dangerous criminals or to successfully defend their own lives. The police officer does not have any way of knowing when or where this action will take place. He should be ready at all times. Several untrained police officers have been killed on the first day of active duty. Such deaths are inexcusable when caused by lack of instruction or training in the use of firearms.



Smith & Wesson military police revolver.

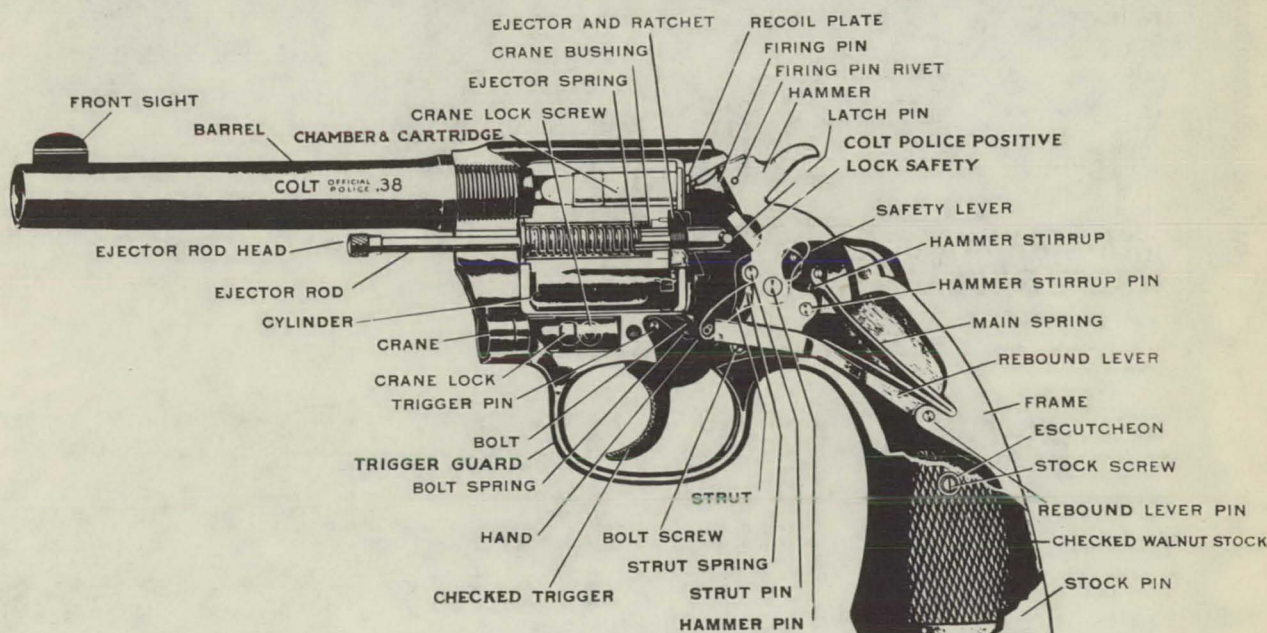
The average police department or sheriff's office is handicapped with little or no appropriations for firearms training. This training can be expensive and requires no small amount of the officer's time and effort. Practical firearms training can be accomplished at comparatively low cost, however, with home made, inexpensive training aids, and exercises to teach and give practice in the fundamentals of shooting. Every member of the department should participate in such a program because a department with every officer able to hit a man-sized target with the first shot is far better balanced and efficient than a department with 10 percent of its officers able to hit a small bull's-eye target with every shot.

The most desirable basic training program for law enforcement officers requires about a thousand rounds of ammunition per shooter, and a target range properly located and constructed for safety. Several cities and towns have met the latter problem by locating a range easily accessible to all and pooling their resources for construction and maintenance as well as the actual training. Others have located ranges on departmental recreation areas and have constructed facilities with labor and material donated by civic organizations. Training facilities within easy reach encourage the men to practice and improve their shooting ability. Intradepartment competitions also tend to serve as an incentive for constant practice.

Because it is realized that such a training program may be out of the reach of some departments, it is the purpose of this and subsequent articles in the FBI Law Enforcement Bulletin to outline a more economical course of training. It is said that "a little learning is a dangerous thing," but every bit of knowledge on handling firearms gained through study and practice better equips the individual to protect his own life as well as other lives and property in the community. This series of articles will cover the fundamentals of shooting and defensive shooting positions, with suggested exercises which can be conducted in the "squad room" or similar space, without cost to the department. It is recommended that such a program be fully covered and that no phase be skipped over or eliminated.

Arms and Ammunition

Probably one of the most important points to be considered in selecting the proper sidearm and ammunition is the "stopping power" or shock delivered by the bullet. The finest revolvers and pistols in the world are manufactured in this country, but regardless of type and make, each weapon should be checked by a competent expert to insure perfect mechanical condition. Many police officers have been killed because a gun jammed at a critical time, or the ammunition was defective or the wrong type.



Colt "official police" revolver.

Consistent with the necessity of concealment, no officer should carry a hand weapon smaller than a .38 caliber. With a smaller caliber, it is possible for a person struck in a vital spot to still draw and kill the officer. A heavy .38 caliber lead bullet, in almost every instance, packs enough energy to disable a person regardless of where he is struck. There are pros and cons in the choice of the double action revolver and of the semi-automatic pistol. Either type weapon in the hands of an expert is effective. There are, however, a large number of officers still carrying the old style single action frontier model revolver. The officer who does so is handicapping himself because it is impossible to shoot this weapon as effectively as a modern double action revolver. This is the reason why the single action model is now out of production and considered a "museum piece."

A law enforcement officer should carry the best possible handgun, have it in perfect condition and use "fresh" ammunition. The life of a cartridge under perfect storage conditions is considered 10 years. Oil, such as that used to protect a revolver

or pistol, will, if applied too freely, destroy the primer of the cartridge.

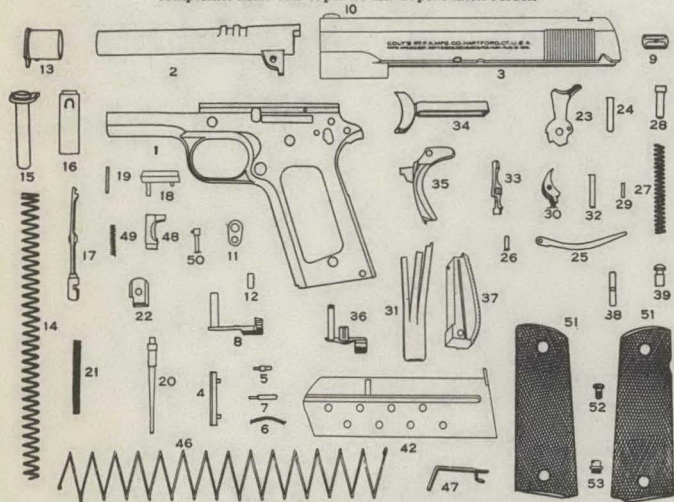
Nomenclature and Mechanics

Every police officer should know generally the names of the most important parts of his gun and understand its mechanical operation. Basically, they are all the same. He should be able to recognize a defective or unsafe condition to insure dependable operation of the weapon when needed. It is not necessary for him to be able to make his own repairs. In fact, the less a nonexpert works on his revolver (except for cleaning) the better. Inasmuch as the life of every officer may at times depend on the perfect functioning of his gun, it should be examined and repaired by only the best expert in that field, just as you would want a competent doctor or surgeon for medical services.

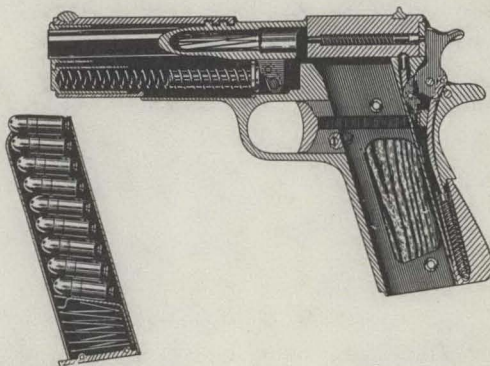
The revolver is far more complicated than the automatic pistol and requires more precise fitting of each part. It is a precision instrument and should be treated as such.

(Continued on inside back cover)

Component Parts Colt Super .38 and Super Match Models



Sectional View



Component Parts

- | | | | |
|------------------------|-------------------------|-------------------------|---------------------------|
| 1 Receiver, | 13 Barrel Bushing, | 26 Hammer Strut Pin, | 39 Housing Pin Retainer |
| 2 Barrel, regular. | 14 Recoil Spring, | 27 Main Spring, | 40 Lanyard Loop. |
| 3 Barrel, Match Type. | 15 Recoil Spring Guide, | 28 Main Spring Cap, | 41 Lanyard Loop Pin. |
| 4 Slide, | 16 Plug, | 29 Main Spring Cap Pin, | 42 Magazine Complete. |
| 5 Plunger Tube, | 17 Extractor, | 30 Sear, | 46 Magazine Spring. |
| 6 Slide Stop Plunger, | 18 Ejector, | 31 Sear Spring, | 47 Magazine Follower. |
| 7 Plunger Spring, | 19 Ejector Pin, | 32 Sear Pin, | 48 Magazine Catch. |
| 8 Safety Lock Plunger, | 20 Firing Pin, | 33 Disconnector, | 49 Magazine Catch Spring. |
| 9 Rear Sight, | 21 Firing Pin Spring, | 34 Trigger, | 50 Magazine Catch Lock. |
| 10 Front Sight, | 22 Firing Pin Stop, | 35 Grip Safety, | 51 Stocks, |
| 11 Link, | 23 Hammer, | 36 Safety Lock, | |
| 12 Link Pin, | 24 Hammer Pin, | 37 Main Spring Housing, | 52 Stock Screws |
| | 25 Hammer Strut, | 38 Housing Pin, | 53 Screw Bushings |

*This part shown attached to Slide. Partridge Type Sights

Colt automatic pistol and national match model—caliber .38.

OTHER TOPICS

A brand new fleet of police cruisers which took their bow about March 1, 1953, in Bay City, Mich., is wringing smiles of satisfaction from city officials. It was on that date that the Bay City Police Department began the policy of renting or leasing police cars instead of buying them outright. According to all observations, it is a policy which is here to stay and one which will, no doubt, be adopted by many other police departments.

Prior to the initiation of this rental plan the Bay City Police Department, which is comprised of 56 officers and serves a population of 53,000, operated with a fleet of 9 cars at a total cost of \$18,000 per year, or an average of \$2,000 per year per car. Under the rental plan, we operated the first year with 11 cars at a cost of \$15,000. Under the old plan, the cars were purchased by the city and were usually driven 100,000 miles or more and kept until they were unsafe for the policeman and inadequate to perform police work. They were serviced at a city-owned garage and by mechanics employed by the city. It was not uncommon for a car to be tied up 3 or 4 days for repairs and there were times when as many as 3 of the 9 cars were out of service. Different makes of cars were used which necessitated the buying of parts from various garages in town as the city could not maintain a parts department for different makes and models. The maintenance of the police cars and the acquisition of new ones were always problems for the police department and sources of concern to the city council.

The Contract

In early 1953, with authorization of the city council, I solicited bids from the various automobile agencies in Bay City for the rental of cars to be used by the police department. The bid of Paul K. Ritter, Inc., Ford agency, was accepted and a contract drawn. The contract runs from July 1 to July 1 of the ensuing year. It provides that the lessor furnish the lessee with 11 two-door black Ford sedans. Seven of these are 8-cylinder and

Rental Cars Give Better Service at Lower Cost

*by FRANK ANDERSON, Chief of Police,
Bay City, Mich.*

four are 6-cylinder cars, two of which are converted to ambulance use by the lessor. These cars are fully equipped by the lessor with heater, defroster, external rear-view mirrors on both sides, 6-inch spotlight, heavy-duty generator, and wiring, factory tools and puncture-proof tires. Snow tires are also provided for the wintertime, which was never done under the old system. Each car is replaced with a new one after it has been driven a total of 60,000 miles or as soon thereafter as one is available from the factory. The department may at any time, upon 15 days written notice, increase the number of units under contract. The lessor also furnishes all necessary lettering for each unit.

The lessor services these cars completely with the exception of gasoline and the repair and installation of special equipment such as radios, sirens, flashers, etc. He replaces any unit which



Chief Frank Anderson.

may have been stolen and replaces any unit and/or motor which becomes unfit for operation. He furnishes all oil, lubrication, tires, parts and labor necessary to maintain the cars in good operating condition, and to repair and wash and clean each unit once a week. He provides emergency maintenance service for tire repair or replacement and breakdown repairs and wrecker service on a 24-hour basis. Each car contains a vehicle service card on which are recorded the date and mileage when service is due and the date and mileage when the service is performed. At the end of each 1,000 miles, the lessor changes the oil, lubricates, checks general maintenance, battery, tires, differential and transmission on each unit. After each 5,000 miles, he greases the wheels, changes oil filters, checks distributors and spark plugs and makes a general inspection of the car. Operating repairs, parts and tire replacements are provided by the lessor as they are needed. He also furnishes anti-freeze for the cars during the winter months.

Repair work on police cars is given special preference, and at no time during the past year of operation under this rental plan has a police car been tied up for repairs for more than a few hours. When a car is in for repair and the work has been completed, the department is advised and, if a man is not available to get the car, it is delivered to the police station by someone from the garage.

A \$10,000 performance bond has been furnished by Paul K. Ritter, Inc., to insure the performance of the obligations of the contract.

The police department is responsible for insurance and for the installation and maintenance of such special equipment as radios, sirens, and special lights. Such special equipment remains the property of the police department and may be removed from the units at any time. The police department also furnishes all gasoline, license plates and pays the lessor 4 cents a mile at the end of each month for every mile each car has been driven.

This contract may be canceled by either party upon written request on or before April 1 of any year. City Manager Casimer F. Jablonski states, "The plan provides the police with a complete fleet of cars in excellent condition, which provides an opportunity to offer the public the protection they deserve."

Advantages

The first year of operation under this rental plan saved the city \$3,000 cash and, in addition, our department had the services of 11 instead of 9 cars. I have found no disadvantages to this plan and would recommend it highly to any department

(Continued on inside back cover)



First exchange of a car driven 60,000 miles for a new one under the rental plan.

A Spare Tire Can Save a Life

by CHIEF OF POLICE PHILIP PURCELL, *Newton, Mass.*, and CHIEF OF POLICE W. JOSEPH SHEA, *Natick, Mass.*

Every car carries a potential life preserver. That life preserver is the fully mounted spare tire found in the trunk of your car.

In the development of a safety program to include rescue methods which might be utilized in

connection with ice safety methods, it was found that the regularly established ice rescues, namely, ring buoy, human chain, ladder and rope, board type, all represented individual problems. In many instances the availability of the material to be utilized in connection with the ice rescue was the predominating factor, but in every case it was found that these methods did not effectively accomplish the desired result, namely, providing every person with the facility to accomplish a water rescue whether through the ice or in connection with summer water activities.

Experiments with an ordinary spare tire



Safety Officer Charles E. Feeley, *Newton, Mass.*, rolls the tire to Lt. James F. Cahill, a U. S. Navy "frogman." In left rear (left to right) are Chief Philip Purcell, *Newton, Mass.*; William Garvey, School Safety Officer, *Natick, Mass.*; and Ray Cox, Safety Officer, *Belmont, Mass.*



Pulling the "victim" from the water. At extreme left is Lt. James A. Cretecos, commanding officer, *Massachusetts State Police Training School*. Fourth from left is Alfred Little, Supervisor of Safety Education for the *Massachusetts Registry of Motor Vehicles*.

mounted on a steel rim disclosed that when rolled into the water it supported the weight of four grown men. Many motorists, instead of standing helplessly on the shore, could be actual rescuers simply by unbolting their spare tires and rolling or sliding them into the water near the victim. Many drownings could be avoided if every autoist realized that the spare tire of his car could be used most effectively as a life buoy.

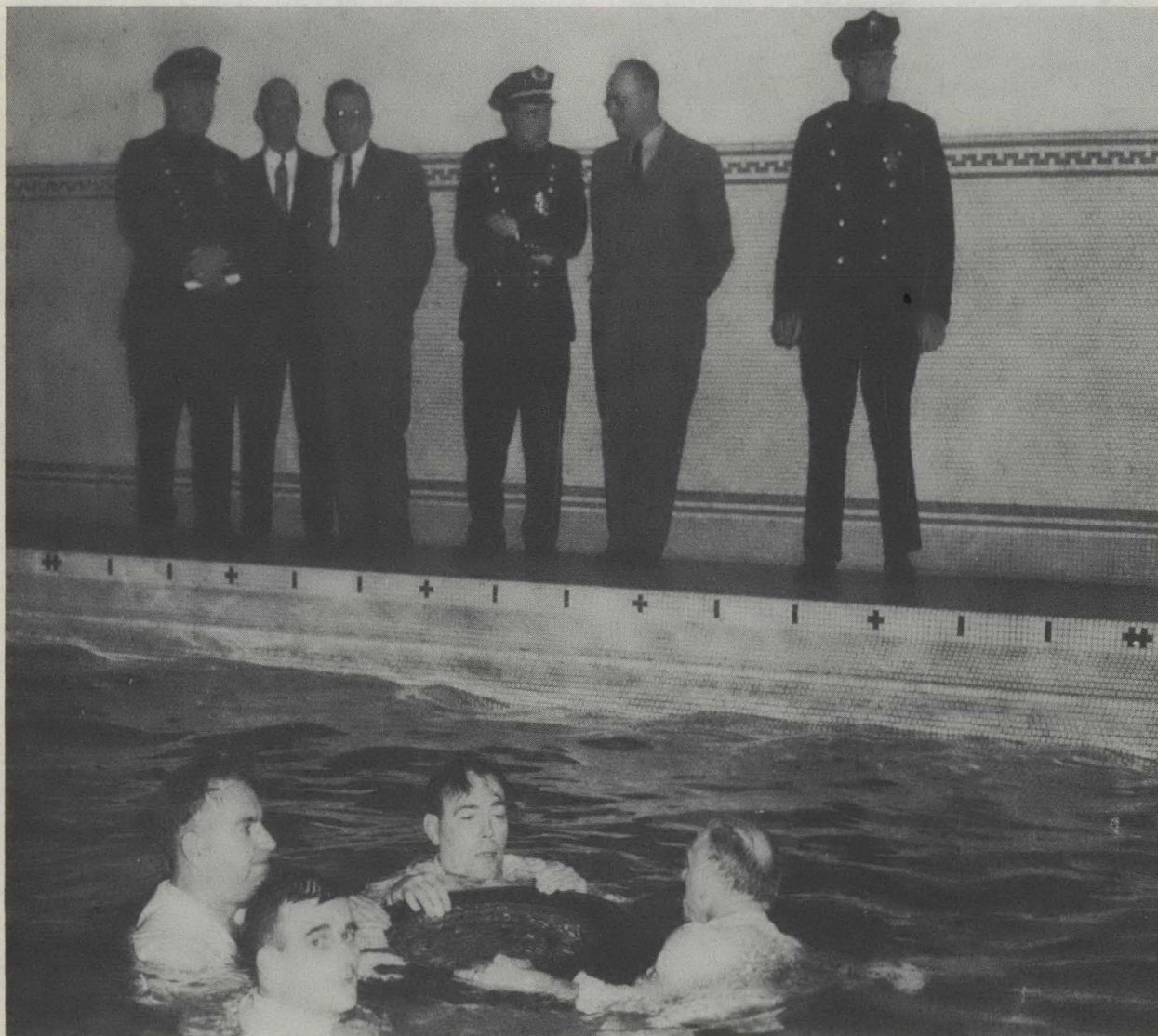
In order to prove the value of this idea, a program was developed by the Newton and Natick, Mass., Police Departments in conjunction with the Massachusetts Safety Council and the Massachusetts Safety Officers' League. One of the photographs which appear in connection with this ar-

ticle, taken at the demonstration, illustrates a 600-16 tire, fully mounted on its steel rim and properly inflated, weighing 42 pounds and supporting a total of 750 pounds as represented by 4 grown men.

Here is how you can help save a life by using your spare tire, based upon successful tests.

1. Release spare tire from trunk.
2. Roll, carry, or slide the tire into the water near the victim. Be careful not to hit him.
3. This tire will keep the victim or victims afloat until rescue is effected.
4. Know where your lug wrench is located. (Keep it in sight.)

During the recent tests it was shown that the



Four men on a tire. Left to right: Alfred Little; Charles E. Feeley (looking at camera); John Evans, Boston and Worcester Street Railway Safety Supervisor; and Gilbert J. Champagne, Water Safety Officer, Newton, Mass. Observing are (left to right): Chief Purcell; Mayor Howard Whitmore, Jr., of Newton; Chairman George Yeo, Board of Selectmen, Natick; Chief W. Joseph Shea of Natick; Chief Samuel H. Bradish of Marblehead, Mass.; and William Garvey.

tire can be removed from the trunk under average conditions in less than 60 seconds.

Questions and Answers

Questions asked following the demonstration:

1. *Can a woman assist in this type of rescue?*

A. Yes, she could roll the tire to water's edge, or edge of ice.

2. *Can a nonswimmer use the tire effectively?*

A. Yes, the tire—not the person—is the instrument. However, should a nonswimmer find himself in the water, the tire will support the victim and the would-be rescuer until help arrives.

3. *How many persons can this tire support?*

A. See picture showing tire supporting four men whose weight totals approximately 750 pounds. The tire is still floating above the water.

4. *Is this method just for ice rescues?*

A. This method can be used for all types of water rescues regardless of season.

5. *What do I do after I get the tire into the water?*

A. Remember, keep your head. This is merely a free floating support. It will not effect a rescue by itself, additional help is still needed. Your police or fire department should be called immediately.

6. *Can a swimmer, untrained in rescue techniques, make a swimming rescue?*

A. Yes, very safely by keeping the tire between the rescuer and the victim.

The value which we find in the development and existence of this idea is an intricate part of water safety activities and is as follows:

1. The availability of the tire.

2. The limited amount of effort necessary to remove the tire from the car and place it in the water.

3. The security which the tire gives to the person in the water until such time as a complete rescue can be accomplished.

We have embarked on an extensive program of public education, and trust that other law-enforcement agencies will find this idea useful and worthwhile in their programs. We recommend the holding of a public demonstration to which safety officials and the public are invited and thus to highlight the value and keynote the fact that "A Spare Tire Can Save a Life."

MAINE WARDENS

(Continued from page 5)

break. A window was broken, either by a rock or a charge of shot, and the door forced. It became obvious that the person making the break first threw a rock through a window or fired a shot to see if anybody was there. If he heard nothing, he then went in and looked for food. At the scene of one of the breaks, the wardens picked up a 20-gage casing. This was turned over to the State police for comparison, and it was found that the shell and the one picked up at the camp at Webster Lake were fired from the same gun. The man hunt was on, but we did not know for whom.

The number of breaks over such a large area indicated that the man whom we were hunting had been in that country for a year or longer. Remember, this was during the war when there was very little travel in the north country, and many of these cabins were not visited by their owners during the war years.

The hunted man was cunning enough to avoid traveling trails, and it was nearly 6 weeks after the search really got underway before he was captured. He was shot in the right thigh by "Chub" Foster, a Maine guide and friend of Wesley Porter, near Fourth Musquacook Lake, about 80 air miles from Webster Lake. Questioned by Warden Supervisor Cash Austin, who speaks French, he admitted shooting at a man "early in the summer" on the shore of a lake "a long way from here." He had with him a double-barreled 20-gage gun, the same gun from which the empty shell picked up at the scene of the Porter shooting had been fired.

He was a resident of Canada and said that he had "taken to the woods" to avoid the draft. He had come into Maine in July 1942.

This was the most publicized crime in the north vicinity of recent years, but there have been many incidents where our men and planes have been made available to other law enforcement agencies. We are always willing to cooperate and welcome opportunities to repay State police and sheriff departments for the cooperation given us.

FIBER EVIDENCE

Fibrous material submitted as evidence should be placed in a folded paper, identified and then placed in an envelope.

WANTED BY THE FBI

ROSS FRENCH PARKER, with alias: "Frenchie"



Unlawful Flight To Avoid Prosecution (Murder)

On the night of November 15, 1948, Mrs. Ross French Parker was fatally stabbed with a hunting knife in a rented room which she and her husband shared in Richmond, Va. Parker subsequently left their home, abandoning his job as a ward attendant at a hospital in Richmond without notice. A Virginia State grand jury at Richmond returned an indictment on December 6, 1948, charging Ross French Parker with the murder of his wife, and local authorities, after determining that Parker had been in North Carolina after his wife's death, requested the assistance of the FBI in locating this man. On February 2, 1949, a complaint was filed before a U. S. Commissioner at Richmond charging Parker with unlawful interstate flight to avoid prosecution for the crime of murder.

This fugitive has a ninth grade education. He was in the U. S. Army from May 1945, until July 1946, and was honorably discharged after serving with a field artillery unit. In recent years he resided in the vicinity of New York City, where he was employed as a dishwasher in a restaurant, a mechanic at several service stations, and a hospital attendant. Parker has been reported to use intoxicants excessively and to have expressed a desire to visit the west coast.

CAUTION: Parker may be armed and should be considered dangerous.

He is described as follows:

Age	27, born December 25, 1926, Charlotte, N. C.
Height	5 feet, 5½ inches.
Weight	170 pounds.
Build	Heavy.
Hair	Black.
Eyes	Brown.
Complexion	Light brown.
Race	Negro.
Nationality	American.
Education	Ninth grade.
Occupations	Auto mechanic, hospital attendant.
FBI Number	134,117 A
Fingerprint classification	I 31 W 100 22 O 28 W MII

Notify FBI

Any person having information which may assist in locating this fugitive 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.

Unidentified Deceased

On August 2, 1954, the body of an unidentified man, apparently of Mexican ancestry, was found in a closed boxcar which had been sent to the freight yards at the Southern Pacific Railroad Co., Lafayette, La., for repairs. There was no indication of violence. The body was naked when found. Clothing found in the car consisted of a greenish-blue, long-sleeved sport shirt labeled "Gloden Line, Hecho En Mexico"; a pair of blue dress trousers and a pair of khaki trousers labeled "Pache, Marca Reg. Hecho En Mexico"; a badly worn pair of brown half-boots with cowboy type heels and an undershirt labeled "Fajer, Camisa Sport, Hecho En Mexico."

The victim is described as follows:

Age	From 25 to 30 years.
Weight	From 135 to 150 pounds.
Height	From 5 feet 6 inches to 5 feet 8 inches.
Hair	Black, curly.
Build	Medium.
Eyes	Brown.
Complexion	Olive.
Fingerprint classification	51 a U t 4 1 a T t

The sheriff of Lafayette Parish, Lafayette, La., has requested assistance to determine the identity

of subject, as investigation to date has met with negative results.

The condition of the body made a good living likeness impossible to obtain by photography. Photographs were taken, however, and are available if desired.

Any person having information bearing on this identification is requested to send it immediately to Mayo Harson, sheriff of Lafayette Parish, Lafayette, La., or to Elmer R. Allison, identification officer of that parish.

POLICE CARS

(Continued from page 20)

which may be interested. Some of the outstanding advantages may be summarized as follows:

1. It provides the department with a fleet of new and well-equipped cars.

2. It provides safer transportation for the officers.

3. The cars are seldom out of service.

4. The cars are maintained in much better condition and they are serviced by mechanics who are factory trained in servicing that particular make car and have access to a complete parts department.

5. It removes the problem of buying new cars and disposing of the used ones.

6. A fleet of new, well equipped cars adds to the morale and prestige of the department.

7. It saves money. Under the old system it cost our department \$18,000 a year to maintain a fleet of 9 cars, while under the present plan we operated with 11 cars for the first year at a total cost of \$15,000, a saving of \$3,000.

Space will not permit setting out the complete contract agreement now in effect, but I shall be glad to answer questions from any department interested in this plan and will furnish a copy of our contract upon request. (Photos courtesy *Bay City Times*.)

FIREARMS TRAINING

(Continued from page 18)

Every officer should frequently check his revolver for (1) obstruction in the barrel, (2) bulging or swollen barrel, (3) firing pin protrusion through recoil plate when trigger is in rearward position, (4) on older revolvers, the imprint of

the primer on the recoil plate in relation to the firing pin hole (to insure blow in center of primer), (5) evidence of "spitting lead" around breech of barrel, or from complaints of fellow shooters on the firing line, (6) tightness of all side plate screws, (7) tightness of the ejector rod head if weapon is a Colt or the entire ejector rod if the weapon is a Smith & Wesson revolver, (8) cleanliness and protective film of oil to prevent rust.

Fingerprints Cure Amnesia

Early in April 1953, the Veterans' Administration at Atlanta, Ga., requested the assistance of the FBI in identifying a man who claimed to be a Korean war veteran suffering from amnesia. A check of his fingerprints in the FBI's Identification Division files at Washington, D. C., revealed that he was a fugitive wanted in Texas on charges of unlawful flight to avoid prosecution for burglary.

At the subsequent hearing before the United States Commissioner in Atlanta the "amnesia victim" denied he was a fugitive and insisted that he was a Korean war veteran. The commissioner continued the hearing pending presentation of further proof of identity by the Government.

This case received widespread newspaper publicity with particular emphasis being placed on the subject's denial that he was a fugitive and his insistence that the FBI's fingerprint analysis "must be wrong."

In accordance with the commissioner's request that further proof of identity be furnished, a fingerprint examiner from the Single Fingerprint Section of the Identification Division of the FBI testified that the fingerprints of the "Korean veteran" were identical with the fingerprints of the fugitive wanted in Texas. In addition, the sheriff of Beaumont, Tex., also testified that he had known the fugitive for 15 years and that the man claiming to be a Korean war veteran was definitely identical with the fugitive. Following the testimony of the fingerprint examiner and the sheriff, the commissioner ruled that sufficient proof of identity had been presented and ordered the fugitive's return to Texas.

The identification record upon which the fingerprint examiner based his testimony included fingerprints taken in Rawlins, Wyo.; Port Arthur, Tex.; Shreveport, La.; and Beaumont, Tex., in connection with arrests on such charges as grand larceny, forgery, and the interstate transportation of a stolen automobile.

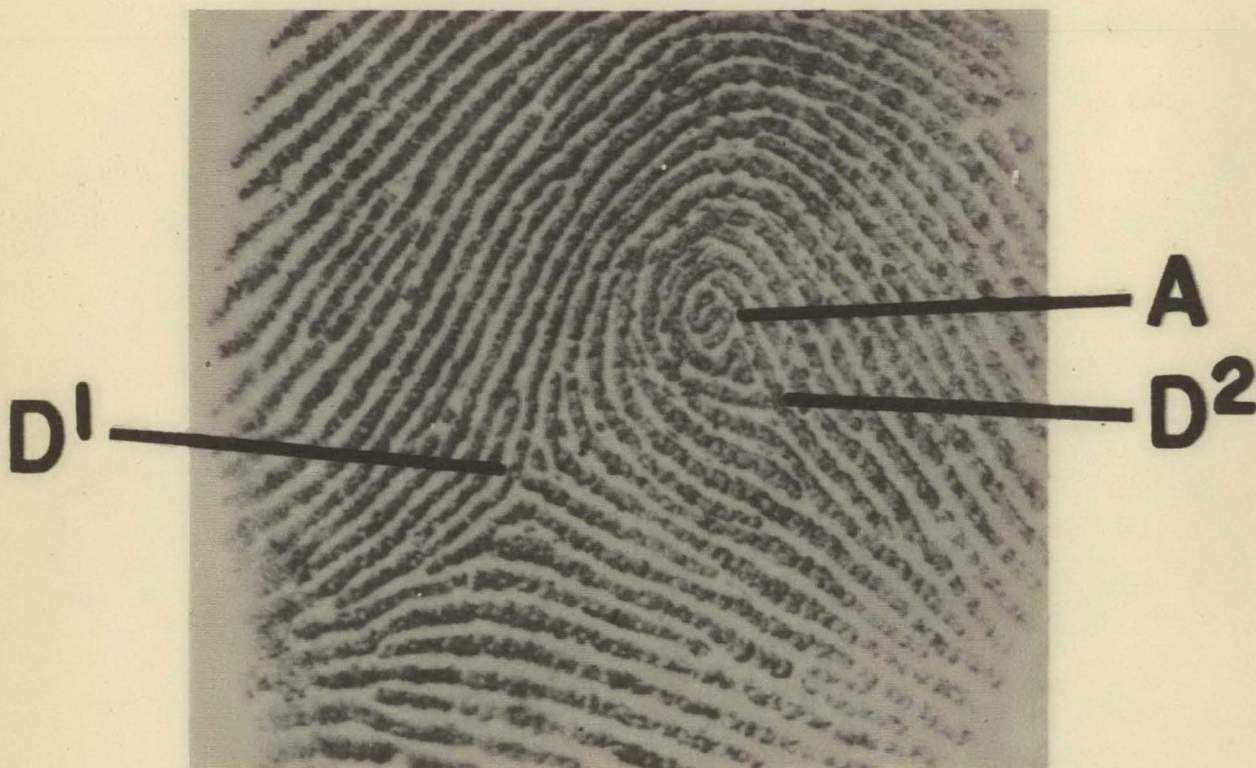
UNITED STATES DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
WASHINGTON 25, D. C.
OFFICIAL BUSINESS
RETURN AFTER 5 DAYS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, \$300
(GPO)

Superintendent
State Police
Salem, Oregon

(1)

Questionable Pattern



This pattern is classified as a central pocket loop whorl with an outer tracing. The deltas are indicated by D^1 and D^2 . Ridge A, which forms the recurve in front of D^2 , is an unusual formation.