Physical Evidence in Hit-and-Run Traffic Deaths

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Physical evidence includes anything of a physical nature (that which can be seen, felt, etc.) which will furnish information about a matter under investigation. In most cases we think of physical evidence as those things which we can transport bodily (or through photographs, casts, etc.) to the court room and use to demonstrate to the jury the facts in the case. In recent years this type of evidence has been playing an ever increasing role in the investigation and prosecution of criminal cases.

Hans Gross, the grandfather of modern scientific criminal investigation, said “Circumstances cannot lie; witnesses can and do.” Physical evidence cannot change its story or forget, neither can it be influenced by the opinion of others as the story is told and retold.

Do not be misled, however, and believe the use of physical evidence in hit-and-run traffic deaths.

Figure 1

Paint chip identification: Specimen 1 from scene and specimen 2 from suspect’s car. Matching fracture line and polish marks from metal surface of fender establish identification.
of physical evidence will completely replace the
work of the investigator. Information must be
gathered from witnesses, suspects and victims to
complete the investigation. Physical evidence may
play an important part in any investigation and
are often than not valuable information is ob-
tained through careful examination of this type of
material. Never overlook this important phase of
the investigation.

In many hit-and-run cases there are no eye-
ewitnesses and the victim is past talking, so physical
evidence becomes all important, and the solution
depends on the recognition, protection, selec-
tion, identification, and evaluation of this ma-
terial. As in other types of criminal investigations
we seek to identify the criminal and place him on
the crime scene through something he takes from
the scene of the crime or something he leaves at
the scene.

It would be impossible to mention here all the
materials which might be included under the head-
ing of physical evidence, since practically anything
might fall in this category at one time or another.
We will talk about some of the things commonly
associated with these cases but do not want to
infer that the listing is by any means complete.
Methods of handling will also be mentioned since
it is important that the evidence collected be ad-
missable as evidence in court. Often the materials
collected will need little or no further examination
to establish their connection with the investigation.
Large parts of fenders, accessories, pieces of gar-
ments, etc., can sometimes be matched with the
naked eye, or with ordinary photographs, when it
is not practical to take the entire car into court.
At other times the minute pieces of paint, glass,
hair, fibers, bloodstains, etc., must be subjected to
more precise examination, using the tools of mod-
Parallel marks on shirt sleeve match the coil spring around the shock absorber on the suspect’s car see Figure 4.

There are several steps in the systematic investigation involving physical evidence; all of which should be followed and short cuts avoided.

**RECOGNITION**

First the investigator must recognize those materials which may be of importance as evidence. Systematic search is necessary for this step, not
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**Figure 4**
The coil spring around the shock absorber which made marks upon the victims shirt as shown in Figure 3.

...only of the scene at the point of impact but also of the areas leading to and away from the point of impact. Tracks leading to and from the scene indicate direction of travel, speed, and attempts to stop or avoid collision. Broken parts or material from the person or object struck may be scattered along this path. Other objects may have been stuck and parts of them carried off on the suspect vehicle. Even fingerprints may be of value. In St. Louis a hit-and-run driver stopped momentarily to survey the damage before leaving the scene. He leaned against a parked car and was observed by a witness in an upstairs window nearby. When this information was given to the investigating officer the latent prints were developed and lifted. When the suspect was located these prints placed him at the scene beyond any doubt. You do not often have a case like this but nothing should be overlooked. Much of the material at the point of impact is obvious as potential evidence. The broken headlight glass, windshield, bumper guards, parking lights, mirrors, spotlights, and so on are automatically collected. An important omission, however, is to neglect to collect all available material. Often a seemingly insignificant bit of material may be the matching piece to complete the jig-saw puzzle. Other material should not be ignored, however, and anything which is not naturally a part of the scene should be noted and collected. Objects foreign to the scene may have come from the suspect's car. The dirt that falls from the car at the time of the impact may give a clue as to the areas where the car has been operating. In the case of trucks, some of the cargo may have spilled. Be alert and suspicious of anything unnatural.

**Preservation**
Before anything is moved (except the body if there is any chance of saving a life) photographs should be taken. Several photographs from different angles and directions are necessary along with notes, measurements, and sketches to orient...
the photographs properly and indicate dimensions. When indicated, rulers, scales, or objects of known dimensions should be included in the photograph so that the actual size of the objects involved may be scaled from the photograph. Bystanders and police officers do not belong in evidence photographs since they were not present when the crime was committed. If objects in the scene do not show up well enough without someone pointing them out, they are not of much value. Take your publicity photographs separately, and you will not have to worry about your photographs being inadmissible in court. This is the first step in preserving the evidence and is quite important. It is impossible to replace objects, including bodies, in the exact position from which they have been moved. It should go without saying that the curious public and bystanders (well intentioned as they may be) must not be permitted to track through the scene before the evidence is collected. This also applies to curious police officers who are not actually working on the investigation.

COLLECTION AND MARKING FOR IDENTIFICATION

Now the evidence must be collected, identified by the officer(s) collecting it, and prepared for transportation to the laboratory, headquarters, the prosecutor's office, or court room. All evidence must be collected as soon after it is discovered as possible since if there is any time during which the evidence is not in the possession of someone who can be in court to testify, the court may exclude it. One case in Missouri brings out this point. The Troopers investigated a fatal hit-and-run one night and some broken headlight glass was collected. For several days thereafter, whenever the trooper passed the scene of the accident he picked up a few more pieces of glass. Several days later the suspect's car was located, with the broken headlamp still in the socket. When the case got to court there was considerable discussion about the fact that the glass had been collected over a period of several days. Fortunately, the specimens were forwarded in separate containers and marked as to the time that they were collected, and the matching pieces were collected on the first night. Had they been picked up on any of the succeeding days the court would not have admitted the testimony about the matching glass. Pick up everything you can as early as you can. It can always be disposed of if not needed but seldom can you go back later and collect more.

PACKAGING

Proper packaging is as important as collecting. If improperly packed, specimens may become lost by sifting out of a leaky container. This is particularly true of dust, small paint chips, small hairs of fibers, and similar material when put into envelopes. Ordinary envelopes are not sealed at the corners, and small objects should be wrapped in paper folds before placing in an envelope. (Use a druggist fold). Round pill boxes with pushon tops are the best. Handle your specimens with clean hands so you will not add something to the specimen that did not come from the scene. Do not change the specimen any more than absolutely necessary, and if it is changed, make a note of the changes to accompany the specimen. Proper containers are a great help in properly packaging evidence. Pill boxes are handy for fine small material such as paint chips, small pieces of glass, paint, soil, etc. Paper sacks or plastic freezer bags are handy for larger objects and may be used for several smaller containers after they are properly labeled. Always put material from different parts of the scene or from different cars or bodies in separate containers. Unknown or questioned specimens should always be packaged separately from known materials. Even the various garments from a body, for instance, should be wrapped separately. Tags, labels, marking crayons will help in marking the various containers. When possible specimens should be marked on the object itself, but very fine material must be marked on the container.

TRANSPORTATION; STORAGE

Evidence in hit-and-run cases is subject to the same rules of handling as is evidence in other types of cases. Care should be taken to prevent damage or changes in the specimens; to prevent mixing or intermingling of specimens and to keep a record of all persons who have had the evidence in their possession. When not in the possession of a particular person specimens should be kept in suitable locked storerooms used only for the storage of evidence.

The examination of the body has been covered by other writers, but physical evidence may be found there also. When the investigating officer can be present at the examination of the body he

may gain information valuable in his search for the car involved, and he can supply the medical
man with information he has collected in his ex-
amination of the scene. He can also get some idea
about what to look for on the suspect's car. A re-
cent case in Missouri showed some peculiar marks
on clothing of one of the persons struck by a hit-
and-run driver. Several parallel black greasy marks
were found on one sleeve of a shirt worn by the
man who was killed (figures 3 and 4). When lo-
cated, a week later, the suspect's car revealed a
coil spring wound around a rear shock absorber
which exactly matched the marks on the shirt. Fur-
ther examination disclosed human hair, tissue,
and cotton fibers on the underside of the car. This
evidence along with witnesses who had seen the
car in the vicinity on the night of the accident
helped in obtaining a conviction in this case.

When the suspect's car is located, review the
facts obtained from the investigation of the scene
and the body as you approach the car. If you know
the approximate speed of the vehicle, it will help
in judging whether the body was thrown over the
the car or dragged under it. Imprints of clothing
or objects worn by the victim may be found on
the car in the traffic film or in the grease and dirt
on the running gear. In one Ohio case the cuff of
a shirt left a perfect impression complete with the
weave of the fabric and a four hole button which
was oriented in the same position as on the sleeve.
Use a lift and a good strong light to examine the
undercarriage. Of course the hair you find may be
from a rabbit, as the driver says, and the blood
from a dog. The laboratory will let you know about
that, and it may be human and of the same blood
group as that of the victim. If the victim wore
glasses, some of the broken lenses may be found on
the suspect's car. Look for anything unusual, any-
thing which does not belong where it is found and
may be identified with the victim, the scene, or
the suspect's car.

We have mentioned some of the materials which
have been useful in identifying hit-and-run cars.
You may have seen similar cases and probably
others which we have not mentioned. If you will
remember to consider everything found at the
scene, on the victim, or on the suspect's car as
potential physical evidence subject to identifica-
tion or comparison with other material found dur-
ing the investigation, we will have accomplished
our mission with this paper. And do not forget to
handle it as evidence so that it may be admissible
in court to substantiate other testimony.

REFERENCES

The texts listed below will furnish details on the
investigation and the handling of physical evidence.

Traffic Accident Investigators Manual, The
Traffic Institute of Northwestern University,
Evanston, Illinois.

Traffic Accidents, Charles A. Williams, Charles C

An Introduction to Criminalistics, C. E. O'Hara
and J. W. Osterburg, The MacMillan Company,
New York, N. Y.