

WEDNESDAY MORNING SESSION, 9:15 A.M., NOVEMBER 9, 1966

THE COURT: Counselor Corrigan
or Spellacy?

MR. SPELLACY: Miss Mary Cowan,
please.

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Thereupon the State of Ohio, further
to maintain the issues on its part to be
maintained, called as a witness MARY COWAN,
who, having been first duly sworn, was
examined and testified as follows:

DIRECT EXAMINATION

By Mr. Spellacy:

Q For the record, please state your name?

A Mary Cowan.

Q Will you spell your last name, please?

A C-o-w-a-n.

Q You will have to keep your voice up, Miss Cowan, so
everybody in this courtroom can hear you.

Will you give us your address, please?

A 84 Ennis Avenue, Bedford.

Q Are you employed?

A Yes, sir.

Q And where?

A At the Cuyahoga County Coroner's office.

Q How long have you been employed at the Cuyahoga County Coroner's office?

A 27½ years.

Q What are your duties as a member of the Cuyahoga County Coroner's office?

A I am the Medical Technologist in the Laboratory.

Q And have you been engaged in this work for the past 27 years?

A I have.

Q Would you give us an outline of your educational background, please?

A I was graduated from Dennison University. I took postgraduate work in biochemistry, immunology, physical chemistry, at Western Reserve University, and have had six years of experience -- I am sorry -- medical technology training at Mount Sinai Hospital here in Cleveland.

Q And when was that?

A In 1935.

Q Did you receive a Degree from Dennison University?

A Yes, Bachelor of Science.

Q Now, have you had occasion to teach with regard to the

field that you are in?

A Yes, I have.

Q And where do you teach?

A At Western Reserve University and through the Law Medicine Center.

Q Do you teach anywhere else beside the Law Medicine Center at Western Reserve University?

A No. Occasional lectures. My title is Lecturer in Legal Medicine to the Department of Pathology, School of Medicine, Western Reserve University.

Q That is your title?

A Yes.

Q You do have occasion to lecture at the medical school?

A Yes, occasionally, and to law students.

Q Pardon me?

A And to law students.

Q Can you give us an outline of your professional affiliations that you have and organizations?

A I am a member of the American Chemical Society, a Fellow in the American Association for the Advancement of Science, a Fellow in the American Academy of Forensic Sciences, a member of the National, State and Local Medical Technology Societies.

Q Now, have you had occasion to write papers with regard

to the work that you are engaged in?

A Yes, sir.

Q Will you tell us briefly some of those articles that you have written?

A "Use of Associated Evidence," which appeared in the Journal of Criminal Law and Criminology, and Police Science.

Q Keep your voice up.

A I have a little sore throat, I am sorry. "Trace Evidence Discussion," which appeared in Postgraduate Medicine.

The most recent was "Fundamentals of Crime Laboratory Investigations."

I am sorry.

THE COURT: Would you like some water, Miss Cowan?

THE WITNESS: I think it would be a good idea.

A Which appeared in the American Medical Technology Journal.

Q I think there are others that I have forgotten.

Q These are the ones you recall, is that right?

A Yes.

Q Miss Cowan, will you tell us briefly what your duties are as a medical technologist in the Cuyahoga County

Coroner's office, just what do you do?

A Presently, and for the past 16 years, I have been -- my attention has been directed to most and now specifically to the trace evidence examinations, which is the examination of any material, mark, or sign, that is to say, traces, which will afford a means of demonstrating source or identity, activity or use or association between persons and objects, or between individuals involved in any type of incident.

This includes examination conducted at the scene, examination of clothing, examination of suspected weapons or materials collected from the scene of the incident, examinations of blood stains, hairs, fibers, and evidentiary material.

Q Previously you mentioned the word immunology; is that correct?

A Yes, sir.

Q What is that?

A Immunology is a science more directly concerned with antibody, antigen reactions, which are responsible, for instance, for immunity and disease which people are most familiar with.

But it includes, also, the reactions of blood groupings.

Q Then, immunology simply has to do with blood, is that

correct?

A More than that, but specifically my interest has been in the field of blood grouping.

Q As a medical technologist with the County Coroner's office, have you had occasion to work with blood?

A Yes, sir.

Q How often would you say that you do this?

A Well, actually, I work with it every day, one type or another, either fluid blood being grouped, because it is routine in our office, we group blood from homicide victims and traffic victims, so that the blood groupings on fluid blood is performed every day.

The examination of blood stain is frequent and I would say certainly several times a week.

Q Several times a week?

A Yes.

Q And you have been engaged in this type of work for how long?

A 27½ years. That is, with the blood stains at the Coroner's office. Before that at the hospital.

Q Now, Miss Cowan, directing your attention to the month of July in the year 1954, did you have occasion to conduct any investigations in connection with this case before this Court and Jury?

A I did.

Q At that time you were employed by the County Coroner's office, is that correct?

A That's correct.

Q Were you at that time a medical technologist with them?

A Yes, sir.

Q Now, did you have occasion at that time to examine the blood of Marilyn Sheppard?

A I did.

Q And what examination did you conduct on that blood?

A I did the blood grouping for the A-B factors.

Q You will have to tell us what the A-B factors are.

A This is the major blood group of O-A-B and A-B.

Q In other words, there are four groups?

A These are the four major blood groups into which all the population can be divided.

Q What are those four groups again?

A O, A, B, and A-B.

Q These are the four major groups that all people can be divided into, is that correct?

A That's correct.

Q What did you do in connection with the blood of Marilyn Sheppard in your examination for this type of test?

A The grouping was performed in the usual manner and

determined to be blood group O.

Q In addition to blood group O, are there other tests performed to get another grouping?

A Yes, the types can be determined and a variety of sub-typing.

Q Would you describe what you mean by typing and sub-types?

A Well, as I said, all the population can be divided into the four groups that I have mentioned. Then in addition people have other factors in their blood. People are most familiar with the Rh factors, which are pretty generally known, but there are others.

There are at least 12 types and sub-types that are used routinely now in most blood banking to type blood.

Q Can you tell us some of those sub-types?

A The Rh, which I spoke of, the MN, the S, and innumerable others.

Q These are names that are attached to various types, is that correct?

A Yes.

Q Was there any sub-typing done on the blood of Marilyn Sheppard?

A There was. I took the blood specimen in its original container to Dr. Marsters at MacDonald House, University

Marilyn
"O-M"

Hospitals, who was in charge of the blood bank there, and in my presence he drew a sample from the bottle and he conducted the sub-typing groups.

Q Do you know what the sub-typing group was?

A The complete one I would hate to recall from memory, but I do know that it was type M, O, type M, I believe, if I recall from memory.

Q What type was Marilyn Sheppard's blood?

A O-M.

Q O-M?

A O-M, yes.

Q In addition to this typing and sub-typing of the blood, did you have occasion to examine certain articles that came into the Coroner's office?

A Yes, sir.

Q Now, you mentioned previously that much of your work, or, that sometimes you worked on the scene, and other times you worked in the laboratory, is that correct?

A That is correct.

Q Where is most of your work done?

A In the laboratory.

Q In the laboratory. Now, what did you examine that was brought in to you?

A That was brought in from the outside?

Q Yes.

Q The clothing that was identified as the property of Dr. Samuel Sheppard, the watch, his watch, key chain, charms, and keys, ring. Do you want a rundown of all of it?

Q Let me stop you right here and ask you this, what type of examination did you conduct on the clothing that you received?

A The clothing was examined for the presence of staining or -- may I interject here and say, we don't look for evidence, we look at the material and see what we elicit from it.

It was examined to see if there was, what was on it, and it was found that there was blood stain.

Q What was your observation of the clothing that you received?

A The only clothing of evidence, and I should say the only one I took to the laboratory in evidence, in the way of clothing, was the trousers.

Also, I examined in the property custodian's office a pair of undershorts, white socks, shoes, a handkerchief, and took to the laboratory only the trousers for further examination.

Q Showing you what has been marked for identification purposes as State's Exhibit 33, can you identify that for us,

please?

A I can.

Q What is it that you are holding in your hand?

A These are the trousers that were shown to me on the 5th of July at approximately 9:30 in the morning by Dr. Gerber, and identified by him as being the clothing, the trousers belonging to Dr. Samuel Sheppard.

Q Will you tell the Court and Jury what observations you made with regard to the trousers that have been marked as State's Exhibit 33?

A The examination revealed minute reddish brown stains in the portion, the upper portion, in the front, a large stain which is on the left leg between the crease and seam, which is a diffused type of stain.

It has a stronger concentration in the center of the stain, and diffused out from that.

There was some staining in the cuff. There is some staining at the right side, a very small reddish brown staining, and at the edge of the right pocket. This stain-- do you want me to tell how I found the stain?

Q Yes, please do; tell us what your examination consisted of.

A The examination consisted of laying the trousers first on clean white paper sheet, and examining them in detail.

Then in a darkened room they were sprayed with luminol.

Q What is luminol?

A Luminol is an organic reagent which is used to detect blood.

Q How does one spray the luminol?

A One uses an all glass atomizer and sprays the reagent over the spot in a dark, absolute dark room. The stains will show up a bright luminescence or bright white light, and working with my assistant on this where we saw such a luminescence, we marked the spot and later then looked at it visually, and saw very tiny brown stain.

Q When you say very tiny, can you describe that?

A As to sizes?

Q Yes.

A Most of them are a streak type of staining, and I think none of them more than one-half inch in length.

Q Where did you find these stains that you have referred to?

A May I refer to the chart, the diagrams, which I have made from my original report?

Q Yes.

A On the front, on the right front they extend from the edge of the pocket to about the mid-point, and there are five small stains on that side.

On the left side there were three stains. There was some soiling noticed on the right side which did not luminesce, which was a soiling type of stain.

The large stain which I have mentioned which the whole area measured six inches by six and a quarter, and the more intense stain measured about three inches in diameter.

Q Where was that located?

A That was on the left trouser leg between the crease and the side seam, as I recall. The top of the six inch area was 18 to 20 -- 18 inches, I believe, from the top of the trousers.

There was also a similar type staining not as concentrated on the inside of the left leg.

On the back of the trousers, there was a peach covered discoloration around the left rear pocket which reacted with ultra-violet light, identically to the area underneath the belt loops.

There were luminescent stains at the right side just slightly towards the back.

On the back of the left leg, again, towards the inside of the trouser, and at the bottom of the right cuff.

Q These are the areas that you received luminescence, is that right?

A With the exception as I said of the soiling area which

was not red brown, and the peach colored area.

Q After performing the luminol test, did you have occasion to perform other tests with regard to these spots that you have demonstrated for us?

A Yes, sir.

Q What type of tests did you perform?

A The benzidine test in the usual manner of applying, as performed in our laboratory, of applying a dampened piece of white laboratory blotting paper against the surface, and subsequently testing it with benzidine.

Q What is the benzidine test?

A The benzidine test is, again, a reagent that is used for the detection of blood.

Q What reaction did you get with the benzidine test?

A The benzidine reaction was negative in every instance except for the large stain I spoke of down here on the left leg.

Q In other words, you got a positive on the luminol test, and a negative on the benzidine test, is that correct?

A That is correct.

Q Now, do you know whether or not the pants that you have there, State's Exhibit 33, were wet prior to coming into the Coroner's office?

A Of my own knowledge, I do not. I have only the

information.

MR. BAILEY: We still stipulate

that they were, if it helps the witness to give us an opinion.

Q Now, Miss Cowan, have you had experience -- strike that.

What is the best way of removing blood from clothing?

A Depending of course always on the type of fabric you are dealing with, but it can be generally stated that cold water is the best way of soaking out blood stains.

Q Now, have you in your experience examined clothing that first had blood on it and then was placed in cold water and then performed a benzidine test on that particular piece of clothing?

A I have performed some experiments with some fabrics.

Q And what reaction do you get on a benzidine test to clothing that blood is first placed on it and then it is placed in water?

A I have had the experience of being able -- of not being able to get a positive benzidine after having placed a single drop of blood on synthetic fabrics, allowing it to dry and then soaking it and washing it in water in as little as three minutes, not being able to get a positive benzidine test in the manner in which I usually test.

Q Now, Miss Cowan, you indicated before that you had occasion to examine watches, is that correct?

A That is correct.

Q I show you first what has been marked for identification purposes as State's Exhibit 26; can you tell us whether or not you have examined that at any time?

A Yes, I have.

Q Will you keep your voice up, and tell us what type of an examination you conducted on State's Exhibit 26?

A This green bag was shown to me on the 5th of July by Dr. Gerber. It was in the bottom of a Hallmark stationery box, and on top of it were the man's watch, the key chain, and the key, and charms, and the ring, each individually wrapped in white cleansing tissue.

The bag was examined visually, and under the stereomicroscope, unfolding it very carefully, and examined interior and exteriorly with lighting directed from various angles.

Q Will you tell us what a stereomicroscope is?

A A stereomicroscope enables the observer to see fine detail in three dimensions, so that you are seeing details you could not see with the naked eye, but you are seeing them in the same manner as your usual sight.

As I said, you can direct light from various angles.

Q What did your examination with the stereomicroscope reveal insofar as the green bag is concerned?

A I saw no significant staining other than the discoloration apparently where color has bleached out, the dye has bleached out.

There was one area of brown staining which was cut out and tested with a routine test for detection of blood, and the tests were negative.

Q Did you find any blood or evidence of blood on the green bag?

A I did not.

Q Did you examine that green bag both inside and outside?

A I did.

Q Now, you indicated before that you had observed other articles in a Hallmark box, I guess, when you first saw these things?

A Yes.

Q And specifically now, referring to State's Exhibit 24, will you tell us whether or not you saw that?

A Yes, sir, I did.

Q For the record, State's Exhibit 24 is the man's watch. Now, what examination did you first conduct on that man's watch?

A As I said, Dr. Gerber showed these items to me in the

box, and apprised me of the fact that they had not been examined for fingerprints, and warned me not to handle them until I had looked at them which is our routine with blood stained articles.

It was taken to the laboratory in the box, each item laid on the microscope stage, still in the cleansing tissue; the cleansing tissue opened up then to reveal the item.

The item was handled with tweezers, the tips of which were protected with rubber tubing, and the watch or other items were examined on all edges with the lights directed for any type of pattern imprint.

Q What do you mean by pattern imprint?

A An imprint that would be made from fingerprints or fabrics, indentations of any type.

Q Did you find any pattern imprints?

A I did not.

Q Who performed this examination that you have just described for us?

A I performed the examination myself. Mr. Johnson, our photographer, was present, and also looked through the scope, but the examination was mine.

Q Did you have occasion to examine other articles at that time?

A Yes, sir, all of the items from this box were handled

in the same manner.

Q Referring to State's Exhibit 23, will you tell us whether or not the same examination was conducted on that?

A It was.

Q What were your findings with regard to State's Exhibit 23?

A There was no evidence of any pattern imprint.

Q Now, referring to State's Exhibit 25, can you tell us whether or not any examination was made with regard to that?

A It was examined in exactly the same manner.

Q State's Exhibit 25 being the ring. State's Exhibit 23, being the chain.

Did you find anything on State's Exhibit 25?

A I did not.

Q And can you tell us what examination if any was made on State's Exhibit 22, a lady's wristwatch?

A This was examined similarly. It was presented as you see it here, in a vial, plastic vial.

It was removed from the vial with the forceps, the tweezers, protected with rubber tips, and examined likewise under the stereomicroscope.

Q Now, you indicated an examination of State's Exhibit 24. Can you tell us what your first observations were of State's Exhibit 24, the man's watch?

A Well, the first thing that was noted was the blood staining that was present on the watch.

Q After noticing the blood staining on your first observation, did you have occasion to conduct a further examination, a more detailed examination of that watch, State's Exhibit 24?

A In regard to the stain?

Q Yes.

A Yes, the watch was steady as to the pattern and type of stain present.

Q Now, did you have occasion to take any pictures of State's Exhibit 24?

A Yes.

Q When were those pictures taken?

A Again, the ones that were taken in my presence were stereophotographs that were taken on the 7th by Mr. Johnson in my presence. The watch was photographed first by Mr. Johnson immediately after I had examined it under the stereomicroscope, he took it to photography and photographed it.

Q And were you present when that photo was taken?

A Not the first photograph that was taken originally. I was present when the stereo --

Q When a stereophoto was taken, is that correct?

A That's correct.

Q And do you recall what portion of the watch the stereophoto was taken of?

A The stereophoto was taken of the area below the usual position of the numeral six, and the wristband, the first two links of the wristband, the wristband having 37 links, each one with a groove through the center, so the appearance is twice as many -- there are 37 links.

Q You indicated there was a pattern on the watch, is that correct, on State's Exhibit 24?

A A stained pattern, yes, across the crystal of the watch there was a thin film that was typical of smearing.

Around the rim of the watch there was blood in the crevice, between the crystal and the rim.

On the rim and on the wristband there were numerous spatter type staining of large and small drops of varying sizes, some drops coalescing with each other, and some drops, fine drops, superimposed on them.

The fine spray or spattering type of drops extending on what I call the medial side of the band, that is, the part running from the watch down this way on the wrist.

There were fine tiny stains to beyond the link where there is the dent here, and a few even all the way around to the middle.

Q Now, you said spatter type stains; what do you mean by

spatter??

A Spatter type stain is composed of a spray of blood, of which the original size of a drop is broken up by force, and blood moving in a direction will give various types of deposits, and most of them will be very small stains.

Q Now, you indicated that there was a photo taken, a stereophoto, is that correct?

A That's correct.

Q For what purposes was a stereophoto taken?

A It was taken to demonstrate the presence of a drop superimposed upon another drop.

Q And do you have that photo with you?

A I do.

Q May I have it, please?

A Yes.

MR. SPELLACY: Will you mark this, please.

(State's Exhibit 69 was marked for identification by the reporter.)

Q Miss Cowan, showing you what has been marked for identification purposes as State's Exhibit 69, can you identify that for us, please?

A I can. This is --

Q Keep your voice up, please.

A This is one of the set of stereo pictures that was taken in my presence, a stereo -- may I show the other one?

Q Yes, please.

A I have a little difficulty explaining, I think. Ordinarily a stereo camera, as with a stereomicroscope, takes two views directed from different angles, so again, your two eyes are seeing in stereo.

One of these has been removed and mounted in the single mount.

Q And for what purpose was it removed and mounted in a single mount?

A So that it could be projected in an ordinary projector. Of course, now it loses the three dimensional effect, and you see it only in two dimensions.

Q Referring once again to State's Exhibit 69, was this a photo that was taken in your presence?

A It was.

Q And is this a fair and accurate portrayal of the watch as you saw it when this photo was taken?

A Of a portion of the watch.

Q Of a portion of the watch; what portion of the watch was this taken of?

A This is the medial area below what would be the normal position of the numeral six.

Q Could you indicate on State's Exhibit 24?

A (Indicating).

Q All right, just below the number six, then, is that correct?

A Yes.

MR. SPELLACY: If it please the Court, at this time I would offer into evidence State's Exhibit 69.

MR. BAILEY: Your Honor, I don't fully understand what we have here. This appears to be half of a stereo.

If the witness represents that it is the same as an ordinary camera would take, forgetting any stereo aspects, I would have no objection.

I just don't fully understand what it is supposed to show, or whether it has some distortion due to the peculiarities of a stereo camera.

THE COURT: May I see counsel?
(Thereupon counsel and Court conferred at the Court's bench outside the hearing of the jury.)

THE COURT: Please proceed, counselor.

Q Miss Cowan, referring once again to State's Exhibit 69,

the photo, is what is depicted here now what you would get if you took this picture with a regular camer, rather than a stereo?

A To the best of my knowledge, yes. I am not a photographer.

Q At any rate, is this a fair and accurate representation of what you saw?

A Yes.

MR. SPELLACY: At this time, then, if it please the Court, I will offer in evidence State's Exhibit 69.

MR. BAILEY: No objection, your Honor.

THE COURT: Received.

MR. SPELLACY: And request permission of the Court to show this to the Jury.

THE COURT: Permission granted.
(Thereupon the exhibit was shown on the projection screen.)

A The rim of the watch is out of focus, because the concentration was on the blood stain. But you can see that there are numerous tiny -- may I have the pointer?

Q Yes.

A That these are discreet stains.

Q What do you mean by discreet stains?

A They are isolated individual stains made by a single droplet.

Q You referred to a pattern before, and what was that pattern?

A The pattern was a spatter pattern, which is composed of the varying sizes. Again, the photograph was taken concentrating on this stain, which would be opposite the numeral six, showing that it is a crusted stain and superimposed upon it, and this is why we try to take it in three dimensional, so that we can show that this stain here, this drop here, was superimposed upon the other stain.

Q What do you mean by superimposed on the other stain?

A It was on top of it.

Q It was on top of it?

A Yes. One was deposited first, and the other deposited on top of it, when this was beginning to congeal.

Q And what is congeal?

A Well, like jello congeals.

Q Is that part of the drying process?

A The beginning of it, yes.

Q So if I understand you correctly, some time after the one had landed on the watch, and had started to congeal, another one landed on top of that, is that correct?

A Yes.

Q Calling your attention now to just directly underneath the numeral six on the watch portion itself, what is that, in that area?

A These are -- this is the rim of the watch, and these are individual spatter type stains.

Q Now, Miss Cowan, while we have the projector up, did you have occasion to examine other photos in connection with this watch?

A Yes, sir.

Q Now, if you will step over this way, please; showing you what has been marked for identification purposes as State's Exhibit 42, can you tell us what that is?

A Yes, sir. That is the photograph that was taken originally prior to this. This was taken on the 5th of July.

Q Can you tell us what the examination of the other portions of the watch revealed insofar as a spatter stain?

A There were, as I said, these fine tiny spray type of droplet stain extending on the lateral surface of the wristband, around to the under surface of the wristband.

There were fewer on the lateral side, that is, it would go from the position of 12, of the numeral 12, to around about the back of the hand.

Q If I understand you correctly, then, most of these spatter stains were from the numeral six around towards the

bottom of the watch?

A That's correct.

Q And there were fewer from the numeral 12 around in that direction, is that correct?

A Yes.

MR. SPELLACY: If it please the Court, at this time I would request permission to show State's Exhibit 42 and have Miss Cowan explain that.

THE COURT: Please proceed.

Q Did you have occasion -- I will withdraw my request, for the purpose of the record, at this time.

Did you have occasion to examine a lady's watch and have a photo taken of that?

A Yes, sir.

MR. SPELLACY: Mark this.

(State's Exhibit 70 was marked for identification by the reporter.)

Q Showing you what has been marked for identification purposes as State's Exhibit 70, can you identify that for us, please?

A Yes. That is the photograph of the lady's wristwatch that was presented to me in the plastic vial, and identified as the property of Marilyn Sheppard.

Q Was this photograph taken in your presence?

A Yes, sir, it was taken at the same time as the one that is in the projector now.

Q Is this a fair and accurate representation of Marilyn Sheppard's watch as you saw it on July 7th, was it?

A Of a portion of it, yes.

Q All right.

MR. SPELLACY: If it please the Court, at this time I will offer in evidence State's Exhibit 70.

MR. BAILEY: No objection.

THE COURT: Received.

Q Now, showing you once again what has been marked for identification as State's Exhibit 42, would you please show that to the Jury?

A We will have to use the large projector.

Q Now, can you tell us what this photo shows with regard to the examination you made for blood?

A In comparison with a previous photograph we just showed, this is the stain that was photographed in the close-up.

These are the small discreet spatter type stains on the rim of the watch.

This is a film or smear type stain on the crystal, and these are deposits made by flying drops of blood in motion,

that only could be making this type of drop coming at an angle.

Q And why do you say that?

A Because this is the way these stains are made.

Q Pardon me?

A Do you want a lecture? I am sorry.

Q Is this based on your experience in blood work?

A Yes, sir.

Q Particularly directing your attention to the drop over the numeral, I guess it would be the figure 11 --

A Yes.

Q -- could you describe that for us, please?

A This is a drop that has been drawn out, elongated, along a line of force. Normally a drop of blood is spherical, and when it strikes a surface, a metal surface such as this, perpendicularly with a low speed or simply falls on it, it will be a round type of stain.

When it strikes at an angle, you will have it adhering and then drawing out along the line of force.

Q Are you able to tell us what angle that particular spatter mark struck at?

A The indication is that it struck here on the broad surface and was pulled out, as it were, along to this little tailing effect here. I believe some -- Dr. Adelson refers

to them as tadpoles.

Q Pardon me?

A Dr. Adelson refers to them as tadpoles.

Q Now, immediately above that, above that mark, there is another area; what is that?

A This I would not want to say definitely whether this is a smatter of several drops or whether this is -- it would appear from this, that it is a large drop which may be made up of two drops hitting simultaneously.

Q Directing your attention now below the numeral six, is that an area that you have previously described for us?

A On the rim here?

Q Yes.

Q On the rim and this large stain are the ones that are shown in the stereo photograph.

Q Are there other spatterings on that watch that are shown in that picture?

A Shown in this picture, yes. Here for instance is a very small one, this is definitely, this comes from a spatter type staining. These very small ones. The larger ones, in that they are broken up by the grooves in the wristband itself, it is difficult to tell whether these are multiple small ones hitting at approximately the same time, or whether they were larger drops.

Q Is that the extent of the spatterings, then?

A As shown in this photograph, yes. There is this one on the crystal. There are these. This could be a smearing type of stain. This is on the crystal, certainly smearing. These are spatter type.

Q Pardon me?

A These are spatter type, the smaller, the smaller discreet type.

Q Will you resume the stand, please?

A Yes, sir.

THE COURT: Ladies and gentlemen of the jury, it is just about recess time. While you are away on your morning recess, you will bear in mind the instructions given you on each occasion when you left the room. You shall not discuss this case or what you have heard of it among yourselves, nor permit anyone else to discuss it with you, nor permit yourselves to overhear anything that relates to this case by any media of communication.

We will have our morning recess.

(Thereupon a recess was had.)

THE COURT: Please proceed, counselor.

MR. SPELLACY: Thank you, your Honor, if it please the Court.

By Mr. Spellacy:

Q Miss Cowan, prior to the recess you told us about the observations of the patterns that you saw on the man's watch -- I forget the exhibit number --

THE COURT: Exhibit 24, counselor.

MR. SPELLACY: Thank you.

Q -- State's Exhibit 24, did you have occasion to make an observation with regard to a pillow that was submitted to the laboratory?

A I did.

Q And what did you find on that pillow?

A There was evidence there of spattering stains as well as large stains.

Q Now, going back to the watch that you have identified and performed tests on, State's Exhibit 24, can you tell us whether or not you had occasion to do anything else with the blood other than make these, take these photos and make these observations that you have talked about here?

A Yes. There was a chemical test made for detection of blood, the benzidine test.

Q Keep your voice up.

A The precipitin test to demonstrate that the blood was

human blood. Human or protein was present. An attempt was made to determine the agglutinin content. Crust was removed, and no O cells, no A cells, and no B cells added to the portion of the crust.

Q What do you mean by the agglutinin content?

A The agglutinin content are the antibodies present in the serum, which will agglutinate the corresponding antigen in the red cells.

Q You mentioned the word serum. What is that?

A Serum is the liquid or fluid part of the blood in contrast to the red and white corpuscles.

Q What tests did you perform, again, insofar as State's Exhibit 24 is concerned?

A It was the group determination -- are you referring to this portion? I did the benzidine test, the precipitin test, for human blood, which was both positive, and the grouping for the O-A-B classification.

Q These are the major groups that we talked about earlier, is that correct?

A Yes.

Q The four major groups?

A Yes.

Q What did your examination, what did you learn with regard to the four major groups?

A Although there was slight agglutination of the A cells and B cells, which would be typical of group O blood, it was inconclusive in that it was slight.

Q Pardon me?

A It was inconclusive in that there was slight agglutination. There was no agglutination of the O cells.

Q Now, you used the word agglutination; what is that?

A Agglutination is a uniting of the red cells due to the reaction between the antibody in the serum and the antigen of the red cell.

Q Now, in type O, what agglutination do you get if it is type O?

A If it is type O and we add the antigen of the cells, a cell suspension, in other words, to anti A and anti B serum, there will be no reaction because there is no antigen present in the cells of group O.

However, present in the serum of group O are anti A and anti B antibodies, so that if we add to a serum of a group O individual, cells from an A person, cells from a B person, there will be reaction or agglutination between both, because both antibodies are present.

Q Did you do that in this case?

A The crusted stain was tested with known A cells and known B cells and known O cells.

Man's
watch
up 11"

Q And what results did you get?

A There was slight reaction between the known A cells and known B cells. No reaction with the known O cells.

Q Did you perform further tests after that?

A Yes. Working with Dr. Marsters on the 16th and 17th of July, we determined -- we typed it for the MN factors and found evidence of the presence of the M factor.

Q The M factor?

A M.

Q All right. Can you tell us what the blood grouping was of Marilyn Sheppard?

A O-M.

Q O-M?

A Right.

Q Was this finding of the M factor conclusive with the same type of blood as Marilyn Sheppard's?

A Yes.

Q Did you have occasion to perform a test with regard to the lady's watch that you had received and had previously identified as having examined, State's Exhibit 22?

A Yes.

Q Will you tell us what examination you conducted on that?

A Yes. The blood grouping in the same manner as I have

ladies'
watch
"H"

described for the man's watch, with the crusted stain, with the same type of results for the O-A-B grouping.

Q What were those results, again?

A The same as with the man's watch. There was slight agglutination of known A cells and known B cells. No agglutination of O cells, and it was again called inconclusive in that the reaction was slight.

Q Inconclusive insofar as the O grouping is concerned, is that right?

A That is right.

Q Did you perform a further test then with regard to the lady's watch?

A Yes. Working with Dr. Marsters we also did the M-N typing and determined that it was type M.

Q You got a M factor, then, with regard to the lady's watch?

A Yes, sir.

Q What factor did you find present on the male's watch referred to as State's Exhibit 24?

A The same, type M.

Q Type M?

A Yes.

Q So you received the same type on both watches, is that right?

A Yes.

Q Now, did you have occasion to examine a red substance, a fragment that was brought into the Coroner's office?

A I did.

Q Will you tell us what examination you made with regard to that substance and who you got it from?

A I received it from Dr. Gerber. It was examined visually and under the stereomicroscope.

Q What was it?

A I was satisfied that it was red nail polish and compatible with flaking off of a toe nail, and that I could see on the under surface ridges which were compatible with that source.

Q Will you describe how large it was, and so forth, if you can?

A As I recall, one-fourth of an inch by three-sixteenths of an inch. It was concave. It was a curved surface, so that it would be difficult to measure it accurately without breaking it up.

Q Did you learn whether or not Marilyn Sheppard wore toe nail polish?

A Yes.

Q What were your findings with regard to that?

A Dr. Adelson viewed the red substance that I had. I

asked if she wore toe nail polish, had polish on her toe nails, and he said yes, and it was a comparable color.

Q Did you have occasion to go to the Sheppard residence on Lake Road at any time?

A I did.

Q Will you tell us when the first time was you went there?

A The 11th of July.

Q Pardon me?

A The 11th of July.

Q Did you return to that home at any other time?

A Yes.

Q When did you return?

A August 6th and August 9th.

Q When you went there on July 11th, 1954, what did you do there?

A I tested some spots that were pointed out to me by Sergeant Hubach and Fred Drenkhan as suspicious to them of the presence of blood, and these were tested with benzidine reagent or with leuchomaladigren by applying dampened bibulous paper to the spots, and applying the reagent to the bibulous paper.

Q You indicated you had occasion to return on August 6th and August 9th. Who did you go with or who did you meet

upon those occasions?

A Henry Dombrowski, Elmer Roubal and Jerome Poelking.

Q On those occasions did you work together?

A Yes.

Q Now, did you have occasion to perform any tests in the Sheppard residence with regard to the testing for human blood?

A Yes.

Q What type of tests did you use when testing for human blood?

A It is a precipitin reaction which is essentially, again, an antibody antigen reaction.

Q A precipitin?

A Precipitin.

Q Will you spell that, please?

A P-r-e-c-i-p-i-t-i-n.

Q How does one perform that test?

A One uses antiserum, which is prepared by injecting animals, usually rabbits, with human blood of group O, so you don't have antibodies to A and B factor; and drawing the blood and using the serum in the test.

Now, we do use commercial serum, the serum is prepared commercially, and there are other steps in it. But that is the principle.

In performing the test, the antiserum is placed in tubes and at the same time or with it is normal rabbit serum.

Then the extract of the suspected stain is run in on top of the serum, antiserum or normal serum, controls being run at the same time from unstained areas.

The reaction that results will be, as appears, a fine white line which will appear at the juncture of the liquid on top, and the antisera at the bottom. At the juncture of the two will appear a fine white line.

Q What does this indicate?

A This indicates a reaction between the antigen present in the extract, and the antibody in the antiserum, which in this case indicates the presence, if we are using antihuman serum, on extract of a stain, and the reaction, this indicates the presence of human protein.

Q Is it necessary in performing that test to remove portions of the blood in order to take it back to the laboratory?

A The material on which the stain is deposited must be tested also as a control, and it is necessary to remove the stain by that way which will provide the most satisfactory and optimum amount of material.

So in some cases when this is on a surface that you

cannot apply saline to extract it, then it is necessary to cut out the stain.

Q Did you do that at the Sheppard residence?

A I did in some places.

Q Will you tell us where you did that?

A The green chip was taken from the riser between the first and second tread going from the second floor down to the first.

Q May I stop you and interrupt you, you say the riser between the first and second tread; are you referring from the second floor down?

A Yes.

Q In other words, that is walking down the stairs from the second floor?

A Yes.

Q All right. Did you perform a test with regard to that?

A Yes. That was taken back to the laboratory and subsequently tested. It was collected on the 9th of August and tested on the 7th of September. There was a stain on the tread of No. 3 step, again going from the second floor down to the first floor, which I was able because this is on a horizontal surface to lift it by scraping.

Then there was a paint chip cut off, cut out, on the riser between the first and second -- the first and second

tread -- or --

Q Pardon me?

A I am trying to recall, the landing, or the first tread, I believe it was, of the kitchen.

Q Of the kitchen area?

A Yes, and two samples taken from the basement steps, a wood chip from tread No. 3, an extract from one of the stains on step No. 6, again numbering from the top to the bottom.

Q So in addition to the ones between the second floor and the first floor, you also took extracts or samples from the basement, or, from the first floor going down to the basement, is that correct?

A Yes.

Q You said it was the third step from the top, or, from the first floor, and from the sixth step from the top, is that right?

A That is right.

Q Now, with regard to the sixth step, do you know if anyone else also removed another portion of the stain there?

A Yes. Henry Dombrowski took a stain at the same time, a chip.

Q And was this the same stain?

A No, there were two stains there.

Q Now, will you tell us with regard to the sample that you took from the riser between the first and second treads going from the second floor to the first floor, what reaction you got insofar as human blood was concerned?

A This was tested with antiserum from two sources and gave a typical reaction for presence of human protein.

Q Now, with regard to the third tread between the first and second floor, what results did you get with the precipitation test there?

A I also got a positive reaction for human protein.

Q With regard to the riser between the first step and the landing going into the kitchen, what type of reaction did you get?

A That was also positive for human protein.

Q Now, with regard to the third step and the sixth step from the first floor going down to the basement, what reaction did you get?

A They were likewise positive for human protein.

Q When you say human protein, would you describe that?

A There is also protein in blood, that is a constituent of blood.

Q Pardon me?

A This is a constituent of blood.

Q This home that you visited was in the City of

Bay Village, is that correct?

A That is correct.

Q And that is in Cuyahoga County?

A Yes.

Q And the State of Ohio?

A Yes.

MR. SPELLACY: You may inquire.

THE COURT: Counselor Bailey
or Sherman?

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CROSS EXAMINATION

By Mr. Bailey:

Q Miss Cowan, in connection with your work in the field of blood, do you subscribe to any periodicals in order to stay abreast of developments in the field?

A Yes.

Q Will you tell me which of those you regularly receive?

A Regularly, the Journal of Forensic Sciences that I receive and read regularly.

Q You read that regularly?

A Yes.

Q I take it a good deal of your work with the Coroner's office involves work with dried blood as opposed to cold