

1 relay?

2 A No, I did not.

3 Q All right.

4 MR. LIBBY: Thank you, nothing further.

5 MS. GERTNER: Mr. Donald Hansen.

6 First, we'll take a five minute recess.

7 THE COURT: For the record, Mr. Shay is absent and
8 his counsel has agreed that we may proceed without him while
9 we determine whether he's absent voluntarily or otherwise.
10 The parties have agreed that Mr. Hansen is qualified to
11 testify on what?

12 MS. GERTNER: On the issue of whether the factors
13 listed by the Government in its motion to admit the '86
14 bombing are indicators of similarity in the --

15 THE COURT: The identity question.

16 MS. GERTNER: The identity question.

17 MR. LIBBY: For the purposes of this hearing, your
18 Honor.

19 MS. GERTNER: Yes, yes.

20 Donald L. Hansen, sworn

21 Direct Examination by Ms. Gertner

22 Q Mr. Hansen, directing your attention, in your
23 experience --

24 THE COURT: Let's have Mr. Hansen's full name,
25 please.

1 THE WITNESS: Donald L. Hansen, H A N S E N.

2 Q Where do you presently work, sir?

3 A Pardon me?

4 Q Where do you presently work?

5 A I'm self-employed and I'm also a contract instructor for
6 the Federal Government on a project.

7 Q For how many years have you been a bomb expert
8 essentially an improvised explosive device expert?

9 A I've been involved in the field for over 25 years.

10 Q During that period of time, can you describe to the Court
11 how one goes about determining signature?

12 A As I believe Mr. Waskom explained earlier, it's the
13 uniqueness of a bomb builder's technique in constructing a
14 bomb.

15 THE COURT: Excuse me, the record will reflect that
16 Mr. Shay has reappeared. Also while we're in the interrupted
17 mode, there's half an hour left.

18 I would tell you we will finish by 5. We will finish
19 by 5. Now, the question was how do you tell signature,
20 correct?

21 THE WITNESS: That's the question I understood, your
22 Honor, yes.

23 THE COURT: And the answer?

24 THE WITNESS: As I started to say, it's the
25 uniqueness or the individual technique that the bomb maker —

1 employs in constructing an explosive device. This could
2 entail the placement of certain components. It could entail
3 the manner in which the components are connected, one to the
4 other. It could entail the packaging of the bomb or the
5 components of the bomb or the explosive material of the bomb.
6 It could entail the placement of the bomb. There are many
7 factors that enter into that that have to be considered.

8 Q Do you analyze in determining signature that bombs
9 physically, what's the significance of having in front of you
10 the physical devices for the purposes of making comparisons?

11 A Because then you can look at the evidence, you can look
12 for those little individual things that I alluded to: The
13 manner in which a person may twist a wire, he may use a
14 particularly unique twist. He may use a lineman's twist, or
15 he may simply use, he may lay one wire across the top of
16 another with one twist and put a piece of tape on it. There
17 will usually arise a characteristic that you can identify a
18 person with.

19 Q And for that you need the actual physical device?

20 A Absolutely, or at least the evidence of the device.

21 Q Typically, are you comparing one device to another or
22 more than one device for signature comparisons?

23 A If I were looking for a signature comparison, and I
24 wanted to establish firmly in my mind a signature comparison,
25 I would be looking or I would like to look at a series of _

1 devices beyond one to another.

2 Q With respect to the explosive mechanisms in the '86 and
3 '91 bombs here, is there any significance to the difference
4 in the explosive used in one as it compared to the other for
5 signature purposes.

6 A Yes.

7 Q And what's that significance?

8 A Well, in the 1986 device the bomb maker used for all
9 intents and purposes a modular unit, a manufactured military
10 item containing an explosive powder. In the 1991 device, a
11 manufacture -- a commercially manufactured high explosive
12 dynamite has been identified as being used.

13 Q And what physically did the '91 bomb maker have to do to
14 that dynamite?

15 A He has to prime it with a detonator in order for it to
16 function.

17 Q So, the '91 device did not include any modular component,
18 right?

19 A As to the explosive?

20 Q Yes.

21 A No.

22 Q He had to know about blasting caps and their relationship
23 to dynamite, right?

24 A Absolutely.

25 Q That kind of knowledge was not necessary to have

1 configured to the '86 device, was it not?

2 A No.

3 Q With respect to the external, the difference between the
4 configuration so far as it has been reconstructed of the '91
5 device and what we know of the '86 device, does that have
6 significance for signature purposes?

7 A In my reading of the reports made available to me
8 pertaining to the 1986 device, it appeared to me as though
9 that were a conglomeration, if you will, of mismatched wires
10 putting into a circuit utilizing a Tyco radio control or at
11 least a portion of the Tyco radio control system, and the
12 whole thing was kind of haphazardly wrapped together with
13 tape, and then the military simulator affixed to it.

14 Q And the '91 bomb?

15 A The '91 bomb, as I see the Government's reconstruction
16 and the evidence that was collected, was very precisely made.
17 It exhibited characteristics of a person who was very,
18 very, -- the term I want to use is machine oriented. He was
19 talented with his hands in being able to construct so
20 precisely the outer container of the package for the bomb.
21 The placement, as the Government has shown in their mockup,
22 was precise. Things were put precisely in a preplanned
23 position. The bomb essentially was compartmentalized in
24 separating the explosive charge, the batteries, the power
25 source, and the firing switch. A distinct -- in my mind's --

1 eye, a distinct different style of construction.

2 Q There was also evidence, was there not, that blue pencil
3 was used to outline exactly where the components would go, did
4 you see that?

5 A There was some indication that if I recall correctly in
6 the reports that possibly a template of some sort had been
7 used to manufacture the container.

8 Q Is it of significance that the packaging that the
9 external component for '91 was put together with plywood and
10 Superglue, and the component in '86 was apparently not?

11 A That's the way it appears, yes.

12 Q Is it of significance that the '91 --

13 THE COURT: Wait. I didn't understand the answer.
14 Is there significance to that?

15 THE WITNESS: In my mind's eye, yes, your Honor,
16 there is. It shows a different distinct style in putting the
17 package together.

18 Q With respect to the toggle switches, do you have an
19 opinion as to the significance of the use of the toggle switch
20 in '86 and the use of the toggle switch in '91?

21 A It's very apparent. In '91, the toggle switch was the
22 firing switch. In '86 it was a safety mechanism.

23 Q And do you have an opinion as to the significance of the
24 way the Futaba receiver was used in '91 as contrasted the way
25 the Tyco receiver was used in '86?

1 A Yes, the '91 Futaba receiver received a signal which sent
2 power to a Servo motor which flipped the firing switch and
3 fired the bomb. In the '86 device, the receiver received an
4 impulse, sent it forward ultimately through a system which
5 fired the simulator.

6 Q What's the difference between the two?

7 A Well, again, the power, if the Government's correct in
8 their depiction, the power that ultimately fired the '86
9 device or gave the heat source to the '86 explosive device
10 came from the receiver, where as in the '91 device, it did
11 not.

12 THE COURT: I don't understand that.

13 Q Do you want to explain it in terms of the schematics?

14 THE COURT: In each instance the receiver received a
15 signal?

16 THE WITNESS: Yes.

17 THE COURT: And then the receiver started receiving
18 impulses?

19 THE WITNESS: In the '86 device, your Honor, there
20 was no Servo motor in there.

21 THE COURT: But nevertheless, the receiver sent an
22 impulse that then got the toggle switch going or the next
23 switch going that ultimately caused the connections to be made
24 and the --

25 THE WITNESS: The Government is asserting that their

1 switch mechanism was the relay in that.

2 THE COURT: Right.

3 THE WITNESS: But the power went through the relay,
4 down lined into the explosive device or the explosive
5 simulator.

6 THE COURT: Passed the batteries?

7 THE WITNESS: Yes, ma'am.

8 THE COURT: That's essentially the same as in the '91
9 device, isn't it, they had a Servo motor?

10 THE WITNESS: Without the Servo motor. Maybe I'm not
11 making myself clear. That's the point I am trying to make.

12 THE COURT: One had the Servo motor and the other
13 didn't?

14 THE WITNESS: Yes, ma'am.

15 Q What's the significance of a use of a relay?

16 A It shows a different style in my mind's eye.

17 Q Do you have an opinion as to what the bomber in '86, the
18 significance of the bomber in '86 did to the Tyco receiver
19 circuit board, what he had to do or not do?

20 A It would appear to me that he, No. 1, he had to remove it
21 from the car, and he had to adapt it to his bomb, to his
22 system, so he had to, and I'm going to use that term,
23 gerryrig, he had to do some reconfiguring with that
24 componentry he had removed from the car and then put in his
25 device.

1 Q Do you have an opinion as to whether the '86 device
2 betrayed more knowledge of the electronics than the '91
3 device?

4 A I, I would think that it probably did, as to electronic
5 circuitry, because it used the, the bomb builder was able to
6 remove the componentry from the car, the circuit board and
7 reconfigure it into his bomb.

8 Q Do you have an opinion as to whether or not the '91 bomb,
9 the bomber that constructed the '91 bomb had greater knowledge
10 of finish work, woodworking, essentially craftsmanship in the
11 '86 bombing?

12 A Based upon the description of witnesses that saw the
13 package prior to it going off that I have read, and based upon
14 the Government's mockup model, it's apparently evident that
15 the maker of that device was very skilled in his machine
16 making capabilities, in his construction of that outer
17 container.

18 Q Directing your attention to the issue of solder, is there
19 any significance in the solder, the placement of solder in '86
20 as contrasted in '91?

21 A Again, based on the description in the report in the '86
22 device, it appears as though, it would appear as though, a
23 great deal of soldering was done there, the only evidence that
24 I have personally seen him soldering utilized in '91 was on
25 one connection, pardon me, two connections possibly.

1 Q Did that have any significance to you in terms of
2 signature issues?

3 A The fact that soldering was used in the amounts that it
4 was used in these devices is not a particular, in my mind's
5 eye, a particular signature characteristic.

6 Q Why is that?

7 A There's not enough to compare, No. 1.

8 Q Because we don't have the physical '86 device?

9 A The physical evidence is not here from '86.

10 Q So, with respect to that, you really can't compare
11 whether that was a signature or not?

12 A I can't, no.

13 Q Is it of significance, sir, the two different kinds of --
14 well, is the difference in the magnets that were used in one
15 versus the other of significance?

16 A The fact that magnets were used, I don't think is a
17 particular signature characteristic.

18 Q Why is that?

19 A I think that's kind of a commonly accepted way that if
20 you're going to affix a bomb to a car or a metal object, you
21 use magnets.

22 Q Are you familiar with the literature involving improvised
23 explosive devices?

24 A I am.

25 Q Does that literature say something about magnets? —

1 A It does.

2 Q And what does that literature say?

3 A That it's common to use magnets to affix radio controlled
4 explosive devices to a vehicle.

5 Q The circuitry in 1991 is this a common kind of circuitry
6 for an improvised explosive device?

7 A Yes, that's a fair statement.

8 Q And it's fair to say that you could find that not only in
9 the device of the manuals that we found, but found it in the
10 literature generally?

11 A I believe that's a fair statement, yes.

12 Q Does an amount of duct tape in '86 versus the amount of
13 duct tape in '91 have any particular significance to you?

14 A There was far less, at least from what I've read, there
15 was far less duct tape used in '91 and for a different purpose
16 than was used in '86, as I reconstruct the '86 device in my
17 mind based upon what I've read, the duct tape kind of held
18 this whole operation together where as in '91, if I'm not
19 mistaken, it was used strictly to hold some sort of a wrapping
20 around the explosive material.

21 Q By the way, could you just describe generically to the
22 Court so we set your testimony in context, the reports that
23 you saw?

24 A Yes.

25 Q And what were those reports?

1 A In reference to '86 the preliminary officers report?

2 Q Yes.

3 A And that's the officer, the founder that went up to the
4 device, I believe. There was another three-page investigative
5 report, I believe, and the report made by the lab forensics
6 person.

7 Q You saw a report by the Department of Public Safety on
8 the '86 bombing incident?

9 A Yes.

10 Q You saw statements by the explosives enforcement expert
11 Larry McCune in the second affidavit of Jeffrey Kerr dated
12 March 2nd, 1992?

13 A Yes.

14 Q You saw investigative reports from the ATF Boston Police
15 Department and the Quincy Police Department both with respect
16 to '86 and '91?

17 A Correct.

18 Q You saw a one-page sheet of paper purported to be the
19 contemporaneous handwritten notes of Officer William Lanergan?

20 A That's correct.

21 Q And you saw the handwritten report of the Quincy police,
22 the three-page report that you referred to; is that right?

23 A Yes, ma'am.

24 Q Based on all that you have seen, and in addition you
25 physically reviewed the 19, the evidence with respect to the

1 1991 bomb?

2 A I did.

3 Q Based on all that you reviewed, do you have an opinion as
4 to whether or not you can even come to the conclusion about
5 whether '86 and '91 are signature versions of the other?

6 A In my opinion, although there are a number of generic
7 similarities between '86 and '91, simply based on the style of
8 construction as has been shown me through what the Government
9 has put forth as the mockup and what I have read in the lab
10 reports, the style of construction of those two bombs are
11 distinctly different.

12 Q And in what way are they distinctly different?

13 A In packaging, and there was no -- one did not have a
14 container, the other one did, the precise manner that the 1991
15 bomb was built in terms of the container, in terms of the
16 placement of the componentry within the container, in terms of
17 what appeared at least, to be the neatness of the construction
18 as opposed to the '86 device that -- if I could use the term,
19 really didn't show any imagination, if I could use that word.
20 It didn't, there was no indication from '86, no particular
21 method of twisting wires or no real distinct technique
22 employed that could be transferred or seen in the '91 device
23 that could be identifiable between the two, other than the
24 generic use of radio control or toggle switch and batteries.

25 Q And the generic similarities of radio control, toggle-

1 switch and using a magnet is not sufficient to establish
2 signature; is that right?

3 A No, not in my mind's eye particularly when you're dealing
4 with two bombs.

5 Q Thank you.

6 MR. LIBBY: May I go to five past?

7 THE COURT: I will not commit myself just as you guys
8 won't commit yourself.

9 MR. LIBBY: I will. I will do my best.

10 Cross-examination by Mr. Libby

11 Q Bear with me, Mr. Hansen, I am under these time
12 constraints.

13 A Absolutely.

14 Q You just gave an opinion here, sir -- you said there was
15 between the '86 and the '91, you said there were generic
16 similarities, but there were some other differences that you
17 pointed out; is that right?

18 A Yes.

19 Q And in fact, you gave that opinion in your affidavit that
20 you signed the date on the 15th of June, 1993; is that
21 correct?

22 A That's correct. I did give an affidavit, yes.

23 Q And you also indicated in your testimony, your response
24 to counsel's questioning, that you simply had to see the
25 evidence, the real evidence left by the device in order to

1 reach your opinion, correct?

2 A That is the best scenario, yes.

3 Q I believe your testimony was you simply had to have it in
4 front of you in order to reach those kinds of opinions to
5 certainty?

6 THE COURT: I don't think he said that. He said that
7 it was best to have the physical devices to be able to
8 compare.

9 Q Sir, the opinion you gave today was the same essentially
10 as the one you gave on the 15th of June. When did you first
11 see the real evidence as to the 1991 device in this case?

12 A Yesterday.

13 Q Now, with respect to determining the main charge in the
14 1986 device, sir, you sat through Mr. Waskom's testimony, did
15 you not?

16 A I did.

17 Q With respect to, if I may, the white canister, you read
18 Mr. Hankard's report. You read Mr. Hankard's report, the lab
19 tech's report, Mr. Hansen?

20 A I believe I did, yes.

21 Q I'll show you Government's Exhibit 41, you learned from
22 that report, did you not, references to certain things, such
23 as plastic ribbing, right?

24 A Correct.

25 Q Cardboard?

1 A Correct.

2 THE COURT: There doesn't appear to be a dispute
3 between the parties about the fact that it was this kind of
4 thing that was in the '86 device.

5 MR. LIBBY: I don't know that that is so, your Honor.

6 MS. GERTNER: No, the only dispute we make, your
7 Honor, is ultimately a chain of custody issue, whether or not
8 the Government can establish that Hankard was looking at --

9 THE COURT: But in terms of this hearing, that it was
10 this kind of device is not substantially --

11 Q I will ask that question. Do you have any difficulty at
12 all, Mr. Hansen, in determining from reading this lab report
13 that what Mr. Hankard is describing here is the M 21 Hoffman?

14 A That's what he describes in his letter.

15 Q You have no difficulty reaching that conclusion based on
16 the objective description appearing on pages 1 and 2 of his
17 report?

18 A That's a reasonable assumption.

19 Q Did you have any difficulty reaching that conclusion,
20 sir, yes or no?

21 A No, I did not have any difficulty.

22 Q Did you in fact reach that conclusion?

23 A I have to preface that, if I may.

24 Q Can you say that yes or no?

25 MS. GERTNER: He's an expert witness, your Honor. -- He

1 doesn't have to answer yes or no.

2 Q Did you reach a conclusion -- very simple -- whether the
3 device depicted here was in fact the Hoffman Artillery Flash
4 Simulator?

5 A This is the first time in my life that I have seen an
6 M 21 Hoffman simulator.

7 Q Did you reach that conclusion of what was being described
8 in Mr. Hankard's report?

9 A Based on what is described in his report it is highly
10 likely that was the item that was used.

11 Q Thank you.

12 Now, I believe you testified that there was in fact,
13 based on your examination of real evidence and your
14 understanding from whatever other source, in the 1991 device
15 the solder was in fact used, correct?

16 A In looking at the evidence, I saw a piece of evidence
17 that did have solder adhered to it.

18 Q All right. And that was the contact point on the toggle
19 switch, sir, did you see soldering there, presence of
20 soldering there?

21 A No. What I specifically looked at on the two wire --

22 Q Had you not looked at the contact points on the toggle
23 switch, sir?

24 A Other than the photograph.

25 Q Have you looked at the photograph?

1 A Yes.

2 Q Can you determine on the photograph whether there was
3 soldering present there, yes or no?

4 A Precisely, no.

5 Q You haven't looked at the real evidence on that?

6 A No, I don't recall that.

7 Q You see soldering presence on 17C here?

8 A I do see what appears to be soldering on this, and in
9 fact I looked at this real evidence.

10 Q Now, do you agree, sir, with the statement that twisting,
11 soldering and taping the wire ends is a singularly unique
12 method of assembly which individual bomb makers are very
13 likely to repeat; do you agree with that statement?

14 A The manner in which they twist a wire or connect wires
15 can be unique to the bomb maker, yes.

16 Q My question is to you, is twisting, soldering, and taping
17 a singularly unique method of assembly which an individual
18 bomb maker is likely to repeat?

19 MS. GERTNER: Your Honor, he answered, it depends on
20 how it is done, not the fact.

21 MR. LIBBY: It is a perfectly proper question to the
22 expert. He can answer it.

23 THE COURT: I don't think he answered the precise
24 question. He said that a particular way of twisting can be
25 unique, but the question generically twisting, generically-

1 then soldering and generically then taping, can that be
2 unique.

3 THE WITNESS: No.

4 Q You disagree with that statement; is that right?

5 A Yes.

6 Q Is it your understanding, sir, that the 1986 device
7 featured twisting, soldering and taping; is that your
8 understanding, yes or no?

9 A There --

10 MS. GERTNER: Your Honor, I object. This is an
11 expert witness. He can't be pidgeon holed into yes or no
12 particularly under the time constraints.

13 MR. LIBBY: Your Honor, it's an objective question.
14 It's his understanding whether the '86 actually showed --

15 THE COURT: Ask precisely for his opinion.

16 Q What is your understanding -- strike that.

17 Is it your testimony, sir, that the 1986 device as
18 you understand it featured twisting, soldering, and taping of
19 wires.

20 A I, I'm aware that there was mention of tape, and that
21 there was mentioning of soldering. I don't specifically
22 recall twisting or a style of twisting.

23 Q So you would disagree with the statement that the 1986
24 device featured wire and twisted solder and tape; is that your
25 testimony?

1 Q Have you before appeared here today spoke with
2 Mr. Trenkler about the design of the 1986 device?

3 A No, I have not.

4 Q Have you received information from anyone who has spoken
5 with Mr. Trenkler regarding the design and construction of the
6 1986 device?

7 A No, I have not.

8 Q So all that you're relying on is written documentation;
9 is that correct?

10 A That is correct.

11 Q Now, with respect to the report of November 20, 1986,
12 Mr. Hankard's report on which you base, I believe, your
13 opinion that what was being described here was in fact an M 21
14 Hoffman device, you rely on these lab reports all the time, do
15 you not, sir, these official lab reports, you looked at them
16 all the time in connection with your work, correct?

17 A Correct.

18 Q And in fact, there are times when you do not have any
19 real evidence related to reports such as this, correct?

20 A I've read reports where in I did not have the physical
21 evidence in front of me at the time of reading the reports.

22 Q And on the basis of not having the real evidence
23 available to you, that in no way gives you any reason to
24 discount or disbelieve anything you see in an official
25 chemistry course; is that right, sir?

1 A That's true.

2 Q Okay. Now, with respect to circuits, fusing and firing
3 circuits, we agree that we have a fusing and firing circuit in
4 each of the 1986 and 1991 devices?

5 A Yes.

6 Q And we can have those circuits irrespective of the
7 containers in which they are found, right?

8 A True.

9 Q In 1986 we did not have a plywood box container and in
10 1991 we did, true?

11 A Correct.

12 Q Would you agree with me, sir, where you have
13 similarities, assuming that you have similarities in the
14 configuration, in the fusing circuit in one device, and the
15 fusing circuit of another device, and the firing circuit of
16 the one device, and firing circuit of the other device, where
17 there are similarities in the componentry and the
18 configuration of those circuits, you don't need to look to the
19 container in order to determine signature type ties between
20 the two, correct?

21 A Sure you do.

22 Q You do need to look at the container?

23 A You need to look at the whole picture, the entire bomb.

24 Q Are you telling this Court then there is no value of
25 looking at the componentry, configuration of fusing, firing

1 circuits in one device as opposed to the other?

2 A I didn't say that.

3 Q So there is some value associated with it?

4 A Absolutely, there is.

5 Q You can, in fact, look beyond the fusing and firing
6 circuitry in order to lead you to a signature type opinion,
7 correct?

8 A If there are sufficient indicators in that fusing and/or
9 firing system or componentry from one to the other that are
10 similar or alike or distinct, then I can say yes there are
11 signature characteristics there.

12 Q In fact, presence of one device of a container and the
13 absence of another doesn't necessarily disqualify that there
14 are similar indicators between the two?

15 A I don't think the presence or lack of presence of one
16 particular item in the entire picture disqualifies it, no.

17 Q So the answer to my question is no, the lack of container
18 in one and the absence of the container in the other doesn't
19 disqualify one, such as yourself, an expert reaching a
20 conclusion, that there are sufficient similarities between the
21 two to ascribe signature type ties between them?

22 A If the lack of container in one and a container in the
23 other indicates to me very preliminarily, particularly when
24 the container of one is made in the manner in which this one
25 was made, the preliminary look that I'm going to say is these

1 bombs were not made by the same person until I looked deeper
2 into it. It's so distinctly different on the face of it.

3 Q It doesn't automatically conclude a signature type
4 opinion, does it, sir?

5 A Automatically, no.

6 Q Okay. Now, one cannot initiate dynamite electrically,
7 correct?

8 A Well, you can initiate dynamite with an electrical
9 circuit as long as you incorporate the detonator in the
10 circuit, yes.

11 Q You need detonator caps. So if you choose dynamite as
12 your main charge, you've got to go to detonator caps, correct?

13 A Correct.

14 Q So the fact that one has dynamite in one device, drives,
15 if you will, the presence of detonator caps as also being
16 present in that device, right, you have to have it?

17 A One goes with the other.

18 Q Now, with respect to the question of counsel on presence
19 of magnets used, using magnets to affix the device to a
20 vehicle, do you recall that question?

21 A Yes.

22 Q And you said it wasn't all that uncommon, I think it's a
23 fairly common thing; is that right?

24 A Yes, that's correct.

25 Q Does the same hold true in your experience, sir, for

1 circular magnets, round magnets?

2 A Are you asking me if the use of circular magnets is
3 unique.

4 Q No, I'm asking you if your opinion holds true with
5 respect to round magnets. You said that it was not uncommon
6 to see magnets. I'm asking you if the same holds true for
7 round magnets?

8 A I can't say whether it's common or uncommon.

9 Q Sir, it is uncommon, in fact, isn't it?

10 A I don't know if it is or not.

11 Q You don't know one way or the other?

12 A No, I do not.

13 Q Your expertise doesn't extend that far; is that what
14 you're saying?

15 A I'm saying that I can't specifically state that the use
16 of a round magnet as opposed to the use of a square magnet is
17 unique.

18 Q Let me ask you, sir, with respect to the 1991 device, can
19 we agree on the following things: It reflected quality
20 craftsmanship?

21 A Absolutely.

22 Q Thought, much thought in planning, right?

23 A Yes.

24 Q All right. Substantial time went into it to construct
25 it, right?

1 A I would assume so, yes.

2 Q Meticulous construction, nails, glue, things of that
3 sort?

4 A That's correct.

5 Q Then it incorporated a feature in terms of the power
6 circuit, two power sources, one for each circuit, right?

7 A Correct.

8 Q A fail safe type feature where there was excessive, more
9 than enough power for each circuit, right?

10 A Sufficient power.

11 Q More than enough. The AA batteries on the fusing circuit
12 provided far more than necessary?

13 A Yes.

14 Q Same with the firing circuit, 45 volt series?

15 A Yes.

16 Q You agree also that the device was designed to be low
17 profile, right?

18 A I suppose you could say that, yes.

19 Q Do you say that?

20 A I don't know what the purpose or the intention of the
21 bomb builder was in constructing that.

22 Q What I'm asking you from the configuration and the
23 appearance of this device, do you understand it to have been
24 low profile so as to avoid detection, if you will?

25 A Based on the mockup that I saw last night that the

1 Government made, it was a very slim package.

2 Q Do you agree in general terms with that slim package?

3 A In general terms I would agree, yes.

4 Q So you would agree that it's low profile?

5 A In general terms, yes.

6 Q It was spray painted black again to avoid detection,
7 right?

8 A I don't know if that was the bomb builder's intent.
9 That's certainly a possibility.

10 Q Designed to be affixed to a vehicle, right?

11 A That's correct.

12 Q By means of one or more round magnets, true?

13 A Correct.

14 Q And it was designed to be initiated by remote control?

15 A That's correct.

16 Q There was toggle switch, there was a toggle switch used
17 in the circuit?

18 A That's correct.

19 Q The firing circuit, correct, and in fact, is that right?

20 A In '91, yes.

21 Q Now, with respect to the '91 and the '86, the very same
22 function being used by the Servo motor and the arm pushing the
23 toggle switch fires that circuit, correct?

24 A That's correct.

25 Q The very same effect, if you will, is seen in the 1986-

1 device when an electrical impulse is sent into the relay
2 magnetizing the coil, correct?

3 A Correct.

4 Q Closes the relay?

5 A Correct.

6 Q And closes the circuit and essentially thereafter sends
7 an electrical impulse into the M 21, correct?

8 A Correct.

9 Q Same concept, true?

10 A Circuitry wise, yes.

11 Q We have duct tape present in the 1991 device, right?

12 A Employed it, yes.

13 Q As we saw here on the photographs, we saw it features
14 wires that were twisted soldered and taped, right?

15 A Twisting and soldering and taping were used, yes.

16 Q You saw that. Okay. Now, --

17 A May I back up one moment. Let's go to the twisting
18 again. I can't specifically say that because the soldering I
19 saw, I couldn't tell whether it was twisted or not. So as to
20 technique of twisting, I'll have to leave that out of my
21 answer.

22 Q You agree with Mr. Waskom that a M 21 could take a man's
23 hand off if he's holding it?

24 A Unquestionably.

25 Q Result in death?

1 A Possibly.

2 Q Have you ever detonated one to determine its power?

3 A It's the first time I've ever seen one.

4 Q So you don't know what that device is capable of doing if
5 it were used to set off a 55-gallon drum; is that right?

6 A I don't understand that question.

7 Q If you put a 55-gallon drum over and detonate it, you
8 don't have any idea --

9 A If you put the drum over it and totally enclose the --

10 Q Yes.

11 A It would do a substantial amount of damage to the
12 55-gallon drum.

13 Q Now, with respect to your understanding of the 1986
14 device, Mr. Hansen, do you agree that that device was made to
15 be affixed to the undercarriage of the vehicle?

16 A It would appear so.

17 Q Is that your understanding?

18 A It would appear so, yes.

19 Q And in fact, it's your understanding it was affixed to
20 the undercarriage of the vehicle?

21 A That's correct.

22 Q That was also designed to avoid detection, true?

23 A I can't state that it.

24 Q You don't know that one way or the other?

25 A Not with reference to '86, no.

1 Q It wasn't designed to be found, was it, as far as you
2 know?

3 A I don't know.

4 Q Was it fixed by means of a, at least, one round magnet?

5 THE COURT: You've got two minutes left.

6 MR. LIBBY: I'm finishing this question.

7 A It would appear so.

8 Q It was fixed by means of a round magnet, correct?

9 A True.

10 Q And it was designed to be initiated by remote control?

11 A Correct.

12 Q Was it in fact initiated by remote control, true?

13 A Correct.

14 Q It provides safety for the trigger person, correct?

15 A Correct.

16 Q And the toggle switch was used in that firing circuit,
17 true?

18 A Yes.

19 Q Okay. And the duct tape was featured there as well?

20 A Yes.

21 Q And it also featured wires which were soldered and taped?

22 A Soldered and taped, was evidence.

23 Q Was it soldered and taped?

24 A As I have stated earlier, I don't recall seeing the
25 evidence of twisting.

1 MR. LIBBY: I have nothing further, your Honor.

2 Thank you.

3 Redirect Examination by Ms. Gertner

4 Q In the 1986 Hankard report, the relay system was never
5 found, isn't that right?

6 A I don't recall evidence of a relay switch nor a slide
7 switch being found.

8 Q With respect to the circuitry that was used and just
9 described, there's nothing unique in the remote control --

10 THE COURT: I believe you are repeating what you have
11 already established on the direct.

12 MS. GERTNER: One more question.

13 Q You had familiarity with the use of magnets --

14 A Yes.

15 Q -- to attach bombs?

16 A Yes.

17 Q Was there any significance with respect to the kind of
18 magnets, so far as you know?

19 A Not that I'm aware of, no.

20 MS. GERTNER: No further questions.

21 MR. LIBBY: One question, your Honor.

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