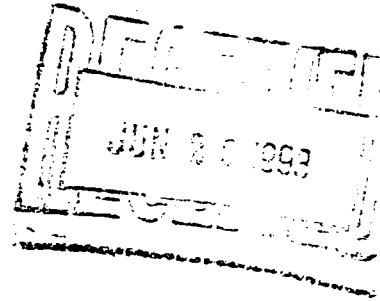


UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS



UNITED STATES OF AMERICA

v.

THOMAS A. SHAY

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CRIM. NO. 92-10369-Z

AFFIDAVIT OF ALBERT W. GLEASON

I, Albert W. Gleason, on oath, do hereby depose and say as follows:

1. My name is Albert William Gleason. In or about March, 1993, the government, by its attorneys, Assistant U.S. Attorneys Paul V. Kelly and Frank A. Libby, Jr., retained me to serve as a consultant and potential expert trial witness, with regard to investigation and analysis, generally, of the design, construction and disposition of improvised explosive devices, and particularly as regards a device which exploded in Roslindale, Massachusetts on October 28, 1991 (the "1991 Device") and a device which exploded in Quincy, Massachusetts, on September 1, 1986 (the "1986 Device").

2. In the course of serving in this capacity, I have spoken with: police officers and Homicide detectives from the Boston Police Department involved in the Roslindale bombing investigation (the "1991 Bombing"); and Special Agents, investigative technicians and support personnel assigned to the Bureau of Alcohol, Tobacco and Firearms ("ATF"). The documents

and things I have reviewed include: ATF Reports of Investigation; ATF Laboratory Reports; ATF Explosives Technology Branch ("ETB") Reports; forensic evidence (i.e., post-blast debris) gathered, identified, bagged, tagged and secured at the crime scene by the ATF National Response Team ("NRT") following the 1991 bombing; photographs of the 1991 bombing crime scene; Report of Examination (3 pages) dated November 20, 1986 prepared by Francis R. Hankard, Assistant Chief of Laboratory, Commonwealth of Massachusetts Department of Public Safety Crime Laboratory (results of gross and microscopic examination of bomb debris from the 1986 Device); Report (3 pages, typewritten) prepared by Detective William Lanergan, Quincy Police Department (which includes detail as to circumstances surrounding 1986 Bombing and composition and design of 1986 Device); and notes (1 page, handwritten) made by Detective Lanergan contemporaneous with interview of Alfred W. Trenkler, as to the 1986 Bombing and 1986 Device.

3. My qualifications as an expert consultant and expert trial witness with respect to the foregoing matters include the following:

(a) I have testified as an expert witness with respect to explosive and incendiary incidents and/or devices in both federal and state courts throughout the United States more than one hundred (100) times.

(b) Between the years 1953 and 1973, I served as a detective/technician with the New York City Police Department Bomb Squad. During this period, my duties included the disarming and safe disposition of all types of improvised explosive and incendiary

No
Review
of
Trenkner
Report

devices as well as the investigation of explosion and incendiary incidents.

(c) Between the years 1973 and 1986, I served as an Explosives Enforcement Officer assigned to the Explosives Technology Branch ("ETB"), Office of Law Enforcement, Bureau of Alcohol, Tobacco and Firearms. During this time, my duties and responsibilities included: On site investigation of explosive and fire incidents; serving as Cause and Origin Specialist with National Response Teams; review and examination of investigative reports, laboratory findings, photographs, physical evidence and other materials and exhibits relating to explosive and/or fire incidents; providing assistance for ongoing criminal investigations and support for court preparation and presentation.

(d) My training and expertise in this area dates to 1946, when I served as a Bomb Disposal Technician and Powder Man with the United States Navy. Since that time, I have received extensive professional training, and thereafter have attended -- and instructed at -- schools, training sessions and seminars relating to explosives/incendiary device technology as well as improvised fuzing and firing systems.

(e) I belong to numerous professional associations, have received several awards from both the New York City Bomb Squad (i.e. for disarming explosive devices and investigation of bombing incidents) and from the Bureau of Alcohol, Tobacco and Firearms, and have served as an instructor in numerous training seminars relating to fire/explosion sciences throughout this period of time.

(f) A copy of my curriculum vitae is attached.

4. At the request of the government's attorneys, I have reviewed the Affidavits of Denny L. Kline (signed and dated June 18, 1993) and Affidavit of Donald L. Hansen (signed and dated

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No Answer

June 15, 1993). Most of the matters set forth in Hansen's Affidavit either constitute summary conclusions or are also addressed in Kline's Affidavit. The observations and opinions set out below are therefore geared to respond to matters raised within the Kline Affidavit.

5. Kline opines, essentially: 1) that the 1986 Device and the 1991 Device are not similar in many respects and that the similarities which do exist are generic only, and thus of little use in determining the identity of the maker of the 1991 device; and 2) that "a comparison of the design, construction and circumstances" between the 1986 device and the 1991 device indicate that a different person made each device."

6. Based upon my years of training, education and experience in this specialized field, my review of the evidence, real and documentary, of each of the 1991 Device and Bombing and the 1986 Device and Bombing, as well my review of the various reports, photographs and other materials made available to me as an expert consultant in this matter, I disagree with each of Kline's above-restated opinions.

7. It is my opinion that, while (some dissimilarities) exist between the two devices (primarily in the type of main charge and nature of components used in the firing circuit), these dissimilarities are -- as will be shown below -- both fewer and far less significant than Kline claims in his affidavit. In fact, the claimed dissimilarities in no way preclude me from conducting an extensive analysis of those design and construction

features common to each device, and of the circumstances
surrounding each bombing, to determine the presence or absence of
any "signature."

8. Contrary to Kline's opinion that "a different person made each device", it is my opinion that the features common to each of the 1986 Device and the 1991 Device constitute "signature"-type evidence, that is, evidence ^{indicate} indicative that the person who made the 1986 Device also made the 1991 Device.

9. On detailed review of Kline's Affidavit, I have noted several erroneous observations and other material errors of fact. For these reasons, among others, I believe Kline's intermediate conclusions and ultimate opinions, as stated within his affidavit, to be faulty. Included among these errors, without limitation, are the following:

1986 Artillery Flash Simulator: Electrical versus Mechanical (i.e., "pull-friction") Initiation.

10. There is no dispute between us that the "main charge" for the 1986 Device was an Artillery Flash Simulator. This is a pyrotechnic explosive, encased within a plastic container, intended for training and demonstration use by the military. Simulators of this type may be initiated one of two ways: either by "pull friction", or electrically.

a) **"Pull-friction"**

The "pull-friction" variety consists of a container made entirely of cardboard and features a small plastic cap which, when pulled off by hand, reveals a string, attached to a looped wire. When this string is pulled, a time-delay (approximately 5-10 seconds) black-powder fuse is initiated; at the end of this delay, the main charge mixture within the

simulator is initiated.

b) Electrical

The electrically-initiated variety of artillery flash simulator is distinctive in that the external container, shaped like a tube, is made entirely of plastic and has, on its interior surface, longitudinally-raised (plastic) ribs. Also, as distinguished from the "pull-friction" variety, this type of simulator utilizes a two-pronged plug consisting of a white plastic housing with two cylindrical prongs on one side and two sections of wires on the other. When energized, these wires carry an electrical impulse into an ignitor, which, in turn, triggers the main charge in the simulator.

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11. Kline's Affidavit nowhere identifies the 1986 simulator as either "electrically initiated" or "pull-friction."

10. In my opinion, the main charge of the 1986 device was an electrically-initiated Artillery Flash Simulator, otherwise known as an "M-21 Hoffman Device." The November 20, 1986 Report of Commonwealth of Massachusetts Assistant Crime Laboratory Chief Francis R. Hankard (3 pages) details the presence, among other things, of the plastic container with the raised ribs and the two-pronged plug with the white plastic housing containing the cylindrical prongs on one side and two wires on the other, each of which, as explained above, distinguishes the "electrical" simulator from the "pull-friction" simulator.

12. Kline's Affidavit, however, makes no reference to Mr. Hankard's detailed forensic description; rather, Kline points to two factors which purportedly preclude him from identifying the type of simulator: A preliminary assessment made on the scene (September 1, 1986) by Leo Voght, State Explosives Technician, as restated by a Quincy Police Officer within his report of

September 1, 1986; and the absence of the remains of the 1986 device.

13. As to the substance of the Quincy Police Officer's report, Mr. Voght's initial on-site assessment was nothing, in my view, more than a "curb-side" analysis of evidence made by one apparently unfamiliar with the electrically-initiated simulator (use of the "pull-friction" type of simulator was far more common in the years before and including 1986). In addition, Mr. Voght's preliminary comments, given on the scene, predated by several weeks Mr. Hankard's detailed gross and microscopic examination and resultant three-page report.

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14. As to unavailability of physical evidence, Mr. Hankard's detailed report of forensic examination provides more than sufficient information from which an expert should conclude -- as I have concluded -- that the main charge of the 1986 Device was indeed "electrically-initiated."

"High Explosive versus "Low Explosive"

15. Kline goes on to state that while the main charge for the 1991 Device was a "high explosive", the main charge for the 1986 Device was a "low-explosive, used to produce loud noise and smoke to simulate the sound of military ordinance during training." While Kline is correct insofar as the legitimate, intended application of the artillery simulator is concerned, he is incorrect on two other material points: First, the explosive material utilized in an artillery flash simulator is known as "photoflash powder", a material categorized as a "high explosive"

by the Bureau of Alcohol, Tobacco and Firearms. Second, while Kline's statement as to the intended purpose of the flash simulator is correct insofar as it goes, this simulator is far more than a "very large firecracker", and -- like dynamite (although dynamite is more certainly powerful) -- can cause serious personal injury or death if held by or in the immediate area of an individual at time of detonation.

Toggle Switch: Present in the Firing Circuit For Each of the 1986 Device and the 1991 Device.

16. There are two electrical circuits present in each of the 1986 and 1991 Devices: A "fuzing" circuit, which provides the electrical power needed to receive the radio signal remotely transmitted to the device; and a "firing" circuit, which provides the means by which an electrical impulse is sent to trigger the main charge of the device. Kline is correct in stating that the toggle switch in the 1991 Device was used as a trigger to fire that device. Kline is incorrect, however, when he claims that the toggle switch in the 1986 Device "was used as a safety or backup switch to arm the power switch for the fusing system." (Kline Affidavit, ¶24).

17. Stated otherwise, Kline is claiming that the toggle switch in the 1986 Device was placed in the fusing circuit, a circuit that undisputedly already had a switch (the "on/off" switch which comes with the remote control receiver unit) serving the same purpose, that is, to regulate the flow of electrical power to the remote control receiver unit. This claim makes no sense, because only one such switch is necessary to prevent the

continuous drain of energy from the "AA" batteries to the remote control receiver unit. To the contrary, the toggle switch found in each of the 1986 Device and the 1991 Device was employed, in my opinion, in the firing circuit to each device.

Soldered Wires

18. Kline states (at Affidavit, ¶ 27) that the wire connections in the 1986 Device were twisted, soldered and taped; Kline goes on to claim that the wire connections in the 1991 Device were twisted and taped, but not soldered. From my review of the evidence, this is not correct. This is an important matter of forensic examination [the presence of soldering,] and, further, the location and manner of soldering within a device can be an important factor in any "signature" analysis) which, among the other matters listed in this affidavit, lead me to conclude that Kline's opinion of "no signature" is materially flawed.

Magnets and Their Shape: "Round" Can Be Important

19. Kline's observation as to the differences between size and number of round magnets between the 1986 device and the 1991 device is virtually meaningless; the significant feature of each of the two is that the magnets which were indeed present were round.

Opinion Factors, Generally

20. Among the features common to each of the 1986 Device and the 1991 Device which I find significant and on which I base my "signature" opinion -- found at ¶¶ 7 and 8, above -- include

the following:

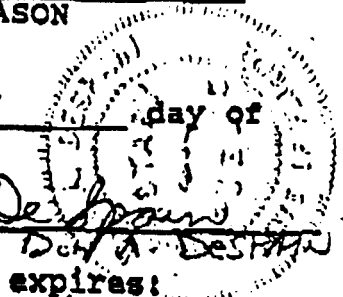
Each of 1986 Device and the 1991 Device was: designed to be affixed to the undercarriage of a motor vehicle by means of one or more round magnets; designed to be initiated/detonated by a remote control system, in which system a toggle switch was employed; bound in some fashion by duct tape; and featured wires which were twisted and soldered at the end. On the basis of these factors, together with the other similarities existing between the non-forensic circumstances surrounding each incident, made known to me in the course of my role as an expert consultant in this matter, lead me to conclude that the same individual that designed and constructed the 1986 Device also designed and constructed the 1991 Device.

Signed, before me under the pains and penalties of perjury this 25TH day of June, 1993.

Albert W. Gleason
 ALBERT W. GLEASON

Sworn and subscribed before me this 25TH day of June, 1993

Donle DeSpain
 NOTARY PUBLIC Donle DeSpain
 My commission expires:



11/26/94
 Notary Public
 State of Florida at Large
 My Commission Expires:
 November 26, 1994