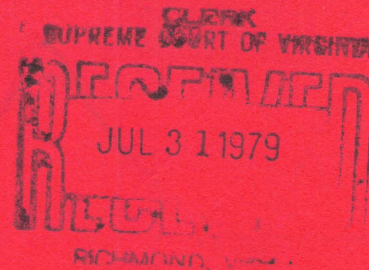


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IN THE  
**Supreme Court of Virginia**  
AT RICHMOND

RECORD NO. 790001

THE VIRGINIA HEART INSTITUTE, LTD.

Appellant

v.

NORTHSIDE ELECTRIC COMPANY, ET AL.

Appellees

JOINT APPENDIX  
Volume I

Howard W. Dobbins, Esq.  
Robert D. Perrow, Esq.  
WALLERSTEIN, GOODE &  
DOBBINS  
1011 East Main Street  
Richmond, Virginia 23219

Counsel for Appellant

Edward A. Marks, Jr., Esq.  
SANDS, ANDERSON, MARKS  
AND MILLER  
Fidelity Bankers Building  
Ninth & Main Streets  
Richmond, Virginia 23219

Counsel for Appellees



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MOTION FOR JUDGMENT

Comes now the Plaintiff, Virginia Heart Institute, Ltd. (hereinafter "Plaintiff"), by counsel, and moves the Court for joint and several judgment against the defendants, Northside Electric Company, a Virginia Partnership, and Charles Milhiser, II and Joseph B. Guedri, Jr., and Claire M. Rosenbaum, and Mildred M. Heltzer, partners trading as Northside Electric Company (collectively hereinafter called "Northside"), on the grounds and in the amount as hereinafter set forth, reserving the right to expand, alter or amend same at any time should it be so advised:

1. By contract dated October 23, 1975, and made between the Plaintiff and Century Construction Company, Inc. (hereinafter "Century"), Century agreed and contracted to construct a second story addition to the then existing structure owned and occupied by the Plaintiff, said structure being located at 105 Berrington Street, Richmond, Virginia, as well as to perform certain alterations to the existing first story.

2. Century, in its capacity as general contractor, then subcontracted with Northside to perform the electrical work attendant with the construction project, which was to include the expansion of the then existing fire and intrusion detection system ("the system") to the second story addition.

3. On December 18, 1975, employees, servants, and agents of Northside, while acting in the scope of their employment,

were engaged in expanding the system to the second story and in doing so, had neutralized or disconnected the said system.

4. At the conclusion of the work day and prior to leaving the project site, Northside's employees, servants and agents carelessly, recklessly and negligently failed to re-activate or re-connect the system.

5. Sometime in the evening of December 18, 1975, an electrical short circuit occurred in the Plaintiff's structure causing a fire which completely destroyed the Plaintiff's structure and all its furniture, fixtures and equipment, records and possessions therein.

6. As a direct and proximate result of the negligence of Northside and its employees, servants and agents in failing to re-activate or re-connect the system prior to their leaving the Plaintiff's premises, the fire that resulted from the short circuit was allowed to smoulder and burn undetected for a long period of time during which had it been detected, fire fighting equipment could have been promptly dispatched to the scene of said fire and it could have been extinguished with minimal damage.

7. The Plaintiff alleges that had it not been for the negligence aforesaid of Northside and its employees, servants and agents in failing to re-connect or re-activate the system, the fire resulting from the short circuit would have been discovered at its inception by the system and fire fighting equipment promptly dispatched to the scene of the said fire and the resulting damage to the Plaintiff's structure, furni-



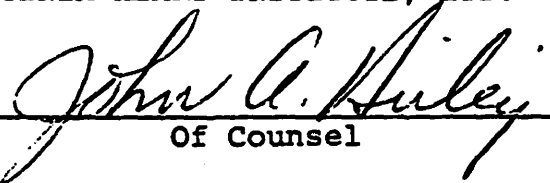
ture, fixtures, equipment, records and other possessions would have been minimal.

8. The Plaintiff further alleges that as a direct and proximate result of the negligence of Northside and its employees, servants and agents, Plaintiff suffered damages to its building structure and premises in the amount of \$240,000.00; damages to its furniture, fixtures, equipment and other personal property in the amount of \$180,000.00; and has suffered and will continue to suffer in the future loss of profits occasioned by business interruption in the amount of \$150,000.00.

WHEREFORE, the Plaintiff demands judgment jointly and severally against the Defendants in the amount of \$570,000.00 and its costs in this behalf expended.

VIRGINIA HEART INSTITUTE, LTD.

By

  
Of Counsel

Howard W. Dobbins  
John A. Heilig  
Wallerstein, Goode & Dobbins  
1011 East Main Street  
Richmond, Virginia 23219  
Counsel for Plaintiff

### GROUND'S OF DEFENSE

The defendants, jointly and severally, come and say that the grounds of their defense to the motion for judgment filed against them by the said plaintiff are as follows:

1. They have no direct knowledge of the truth or falsity of the allegations of paragraph 1 of the motion for judgment but believe them to be correct insofar as they go.

2. They admit that they were employed by Century Construction Company, Inc. to perform certain electrical work on plaintiff's premises and state that rather than accept the construction of the contract stated by plaintiff in paragraph 2 of the motion for judgment they state that the contract itself with all underlying documents is the best evidence of its terms.

3. They deny in their entirety the allegations of paragraphs 3 and 4 of the motion for judgment.

4. They have been advised that a fire of unknown origin damaged and/or destroyed plaintiff's premises on December 18, 1975 but deny that they were guilty of the acts and omissions laid to their charge in paragraph 6 of the motion for judgment, and the conclusions and opinions drawn therefrom.

5. They deny that they were guilty of any negligence which proximately or remotely caused or contributed to the fire and/or the damage and they deny the legal conclusions stated in paragraph 7 of the motion for judgment.

6. They deny that the plaintiff suffered damages to the extent alleged and further deny that said damages resulted from any fault on their part.

7. They deny that they are indebted to the plaintiff for the sum sued for or for any amount.

8. They say that the plaintiff was itself guilty of negligence and that the negligence of the plaintiff was the sole proximate cause of the fire and/or that in any event the plaintiff acting through its employees and officers was guilty of negligence which was a contributing cause of the fire and resultant damage.


9. They will rely upon all further defenses lawfully available which may be disclosed upon discovery and/or by the evidence on trial.

Defendants desire and demand trial by jury of all issues properly so triable.

Respectfully,

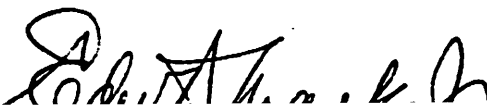
NORTHSIDE ELECTRIC COMPANY  
a Virginia Partnership  
and  
CHARLES MILHISER, II,  
JOSEPH B. GUEDRI, JR.  
CLAIRE M. ROSENBAUM and  
MILDRED M. HELTZER  
Partners trading as  
Northside Electric Company

By Counsel

  
EDW. A. MARKS, JR.  
ALBERT M. ORGAIN, IV  
SANDS, ANDERSON & MARKS  
1420 Fidelity Building  
Richmond, Virginia 23219

CERTIFICATE

I hereby certify that a true copy of the foregoing pleading was mailed, postage fully prepaid, this 8th day of August, 1977 to Howard W. Dobbins, Esquire and John A. Heilig, Esquire, Wallerstein, Goode & Dobbins, 1011 East Main Street, Richmond, Virginia, 23219, counsel of record for the plaintiff.





VIRGINIA :

IN THE CIRCUIT COURT OF THE CITY OF RICHMOND, DIVISION I

VIRGINIA HEART INSTITUTE, LTD.,	)	SEP 25 1978
	)	
Plaintiff,	)	
	)	
v.	)	<u>ORDER</u>
	)	
NORTHSIDE ELECTRIC CO., et al.,	)	Case No. A-808
	)	
Defendants.	)	

This day came the defendants, by counsel, and tendered their Supplemental Grounds of Defense, praying leave to file the same, and it appearing to the Court that notice of the proposed filing of the same was delivered to the offices of plaintiff's counsel on September 22, 1978; and it appearing proper so to do, it is ORDERED that the said amended and additional Grounds of Defense be now filed.

ENTER: 9-25-78

*Marion J. L...*

Judge, Circuit Court of the City of  
Richmond, Division I

*2. ask for this  
Edw A. Mark Jr. p.d.*

*Seen and Objected to:*

*John A. Haly*

SUPPLEMENTAL GROUNDS OF DEFENSE

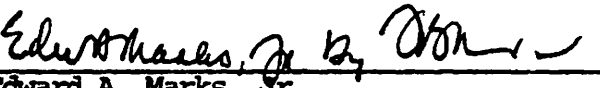
Case No. A-808

Defendants come and say that they will rely upon the defense that the plaintiff's cause of action is barred by the provisions of Section 8:24 of the Code of Virginia of 1950, as amended, in that the acts laid to the charge of defendants all occurred more than one year prior to the institution of this suit and the damages alleged are all consequential in nature, despite the allegation in the Motion for Judgment and the Amended Motion for Judgment that said damages are direct.

RESPECTFULLY,

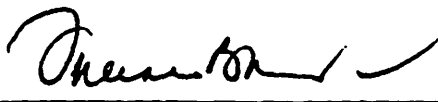
NORTHSIDE ELECTRIC COMPANY  
and the partners therein

By Counsel

  
Edward A. Marks, Jr.  
Sands, Anderson, Marks & Miller  
P. O. Box 1998  
Richmond, Virginia 23216

C E R T I F I C A T E

I hereby certify on this 22nd day of September, 1978, that a true copy of the foregoing Supplemental Grounds of Defense was hand delivered to John A. Heilig, Esquire, Wallerstein, Goode & Dobbins, 1011 E. Main Street, Richmond, Virginia.

  
\_\_\_\_\_

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RICHMOND, VIRGINIA  
PHONE 648-2801

1.

1 VIRGINIA:

2 IN THE CIRCUIT COURT OF THE CITY OF RICHMOND

3 DIVISION I

4  
5 -----  
6 VIRGINIA HEART INSTITUTE, LTD. :

7  
8 vs. :

A-808

9  
10 NORTHSIDE ELECTRIC COMPANY, et al :

11 -----  
12  
13 Transcript of hearing in the above on September 28  
14 and 29, 1978, and October 2, 1978, before Honorable Willard I.  
15 Walker, Judge, and a Jury.

16  
17  
18  
19  
20 APPEARANCES:

21 WALLERSTEIN, GOODE & DOBBINS,  
22 The Ironfronts Bldg.-Suite 400, Richmond, Va. 23219,  
By: Howard W. Dobbins, John A. Heilig, and Robert D. Perrow,  
Counsel for the Plaintiff;

23 SANDS, ANDERSON, MARKS & MILLER,  
24 1400 Fidelity Bankers Bldg., Richmond, Va. 23219,  
By: Edward A. Marks, Jr.,  
25 Counsel for the Defendants.



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\*

5.

CHARLES L. BAIRD, JR., a witness called by  
the attorneys for the plaintiff, first being duly sworn, testi-  
fies and states:

DIRECT EXAMINATION

BY MR. HEILIG:

Q Would you state your name, please.

A Charles L. Baird, Jr.

Q Where do you live?

A 205 Berkshire Road, Richmond, Virginia.

Q Are you a medical doctor?

A Yes, sir.

Q Do you practice any particular specialty?

A Cardiovascular medicine.

Q Are you in private practice presently in  
Richmond?

A Correct.

Q Where do you practice?

A 205 North Hamilton Street, Richmond.

Q Now, the nature of your work, as I described  
it in my opening statement, is that fairly accurate?

A Correct.

Q Now, the Virginia Heart Institute is a  
licensed hospital, is that correct?

A A specialized outpatient facility, correct.

C. L. Baird - Direct

6.

1 Q Now, when you say "specialized," can any  
2 physician open up a--

3 MR. MARKS: If Your Honor please, it's  
4 completely irrelevant.

5 THE COURT: Mr. Heilig, I tried to avoid  
6 this because the Virginia Heart Institute owns that  
7 building, and the building burned, and I don't think  
8 what other physicians can practice makes any differ-  
9 ence at all, does it? Let's just get into the case.  
10 We aren't going into damages, that's the whole point  
11 of it, so let's go to the issues of liability.

12 Q Doctor, I would like to show you these three  
13 photographs and ask you if you can identify them.

14 MR. MARKS: May I approach the bench, if  
15 Your Honor please?

16 THE COURT: Yes, sir.

17 NOTE: At this point a brief side bar discus-  
18 sion is had between the Court and counsel out of the  
19 hearing of the jury as follows:

20 AT SIDE BAR

21 MR. MARKS: Your Honor, I don't know what  
22 these are, but I assume they are of the premises  
23 after the 1975 fire, or before, or just what are  
24 they?

25 MR. HEILIG: Those are the premises before

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C. L. Baird - Direct

7.

1 AT SIDE BAR

2 the fire as it existed on October 16th.

3 MR. MARKS: Before they started the new  
4 construction?

5 MR. HEILIG: That's correct.

6 MR. MARKS: Well, if that's what it is, I  
7 have no problem with it. I didn't know, I had never  
8 seen it that way before.

9 MR. HEILIG: I hadn't either.

10 MR. DOBBINS: You won't ever see it that  
11 way again either.

12 THE COURT: I don't think you need to take  
13 up the witness' time on this. If the parties agree  
14 that these are photographs, marked Plaintiff's Ex-  
15 hibits 1, 2, and 3, that identify the structure  
16 prior to December the 18th, 1975, and indeed prior  
17 to the commencement of any work-- Is that true, Mr.  
18 Heilig, in terms of the construction of the second  
19 floor, these photographs, Plaintiff's 1, 2, and 3,  
20 show the premises after the 1972 construction and--

21 MR. HEILIG: And up to just before the work  
22 that began for the 1975 construction.

23 THE COURT: If you want Dr. Baird to point  
24 out anything particular on the photographs you can,  
25 but they are received as Plaintiff's Exhibits 1, 2,



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8.

1 AT SIDE BAR

2 and 3.

3 NOTE: At this point the side bar discus-  
4 sion is concluded; whereupon the case continues as  
5 follows:

6 END SIDE BAR

7 BY MR. HEILIG: (Continuing)

8 Q Dr. Baird, in 1972 you remodeled your build-  
9 ing, is that correct?

10 A Correct.

11 Q Now, what sort of electrical work did North-  
12 side perform in 1972?

13 A We did two-thirds renovation of the build-  
14 ing in order to house the specialized X-ray unit, or the  
15 catheterization laboratory, so they would be involved with  
16 completely rewiring, providing grounding, the necessary  
17 components of an electrical system that would be equivalent  
18 to a hospital. In addition, a generator that was put in  
19 there as a power source for emergencies.

20 Q Did they do any other wiring?

21 A They did the complete work.

22 Q Did they also at that time install the fire  
23 alarm and intrusion system?

24 MR. MARKS: If Your Honor please, I think  
25 that's a leading question, in the first place, and

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9.

1 in the second place I don't think we did it so it  
2 depends on what he's talking about.

3 MR. HEILIG: Let me rephrase it then, Your  
4 Honor.

5 Q Dr. Baird, did you purchase a fire and  
6 intrusion system in 1972?

7 A Correct.

8 Q When was that installed?

9 A That would be installed in '72, '73, I  
10 can't give you the exact date of completion.

11 Q Do you know who installed that?

12 A Well, Northside Electric was involved with  
13 Century Construction, and Mr. Newman was the architect, and  
14 the seller of the equipment was Mr. Newell.

15 Q Do you know who from Northside installed  
16 that?

17 A Mr. Pulley was the foreman at that time.

18 Q Is that Edward Pulley?

19 A Correct.

20 Q Now, what sort of components made up this  
21 alarm system that you purchased?

22 A Well, two basic components, the intrusion  
23 or burglary system, as well as the fire and smoke detection  
24 system.

25 Q Now, would you explain for the ladies and

C. L. Baird - Direct

10.

1 gentlemen of the jury what the makeup was of the system as  
2 you understood it.

3 A Well, as I understood it, each of the windows  
4 had a wiring that went around the windows so that if the window  
5 or glass was broken the electrical circuit would be activated  
6 and the telephone dialing system would occur to the Communica-  
7 tions Center, and then secondly or concomitantly with it you  
8 have a bell ringing.

9 THE COURT: Is this the intrusion system  
10 that you are describing?

11 THE WITNESS: Yes, right.

12 Q Doctor, what about the fire portion of the  
13 alarm system?

14 A Well, the fire portion, smoke detection,  
15 there were the sensors scattered throughout the building for  
16 both heat and smoke detection, they were on at all times, we  
17 did not turn off the smoke detection system.

18 Q With regard to the control panel and the  
19 dialer, where were they located?

20 A They were located next to the secretary's  
21 office in the front part of the building.

22 Q Were they located in the room, or in a  
23 hallway?

24 A In a room.

25 Q What was in that room besides a control panel



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11.

1 and the dialer?

2 A Patient files.

3 Q Was there any other circuit breakers?

4 A No.

5 Q Any other fuse boxes?

6 A No.

7 Q Now, Doctor, explain to the ladies and  
8 gentlemen of the jury how the alarm system sounded an alarm  
9 if it detected an emergency situation?

10 THE COURT: Excuse me, Mr. Heilig, I think  
11 it's going to be helpful to the jury and me, that if  
12 there is a difference, if you would differentiate  
13 between intrusion and fire. From your opening state-  
14 ment I haven't gotten it clear yet, you say "the  
15 system," and are you talking about both, the whole  
16 system?

17 MR. HEILIG: Well, if Your Honor please,  
18 the system is a combination system.

19 THE COURT: Go ahead.

20 MR. MARKS: If Your Honor please, I have  
21 an objection. I don't know whether it's a valid one  
22 or not, but I am going to ask you to rule on it how-  
23 ever. I understand that the doctor is an expert in  
24 the cardiovascular area, but I don't know that he  
25 is an expert in how these things run and operate.

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12.

1 THE COURT: No, sir, I don't think he is,  
2 but he's being asked at this point what sounds, I  
3 suppose, he hears.

4 MR. MARKS: Well, he's been asked how it  
5 operates, and that's a highly technical question.

6 THE COURT: Yes, but you didn't object to  
7 it at the time. Well, I think it's objectionable,  
8 this man is not an expert.

9 MR. HEILIG: I think he's qualified to  
10 testify on the capabilities of the machine that he  
11 bought.

12 THE COURT: No, I don't think he is, Mr.  
13 Heilig, because unless he can tell me from having  
14 analyzed it because otherwise it would be hearsay.  
15 It's what the man told him who sold it to him what  
16 it would do. Unless he knows, unless he's an  
17 analyst of systems, I don't think he is qualified.  
18 The objection is sustained.

19 Q Doctor, how did this system signal an alarm?

20 A Well, when we walked in the front door we  
21 would turn on a key to turn it off or on. Occasionally you  
22 would get new staff, or I would make a mistake, and we would  
23 fail to turn the alarm system appropriately and open the door  
24 and the bell would ring, and then the police or fire would  
25 be notified, and this would be intrusion. So, it would be

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C. L. Baird - Direct

13.

1 police, and we could run in and deactivate it or turn off the  
2 tape in order that the police would not arrive.

3 Q You are talking about the intrusion portion,  
4 is that correct?

5 A The intrusion system, yes.

6 THE COURT: Excuse me, just a moment, Mr.  
7 Heilig. Doctor, you say that if you did turn it on  
8 you could deactivate or turn off the tape so the  
9 police would not get there?

10 THE WITNESS: And turn the bell off, yes.

11 THE COURT: And if you put it on, you are  
12 talking about the intrusion alarm now, opened the  
13 door, a bell went off?

14 THE WITNESS: That's right.

15 THE COURT: And the police would not auto-  
16 matically come?

17 THE WITNESS: They would come, but you had  
18 a 30-second breather there, 30, 45 seconds, and you  
19 could run in there and turn it off.

20 THE COURT: Before it got to notifying  
21 them?

22 THE WITNESS: And keep the police away from  
23 there, right.

24 Q Doctor, how would you cut off the fire  
25 alarm portion, by your system?

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14.

1           A           The fire system, as far as I know, always  
2 was active.

3           Q           So, there is no way you could cut it off?

4           A           No, there wasn't.

5           Q           Doctor, do you recall the date of the fire?

6           A           Yes.

7           Q           What was that date?

8           A           December 19th, 1975.

9           Q           Sir, from the time that the alarm system  
10 was installed in 1972 up to and through the date of the fire,  
11 do you recall instances when the fire or the intrusion system  
12 sounded other than the times when your staff accidentally set  
13 it off?

14          A           Well, we did have a small fire with the  
15 construction work in I believe '72 or '73, I can't remember  
16 the date, but it was a small fire in one of the mechanical  
17 rooms, and the Fire Department did respond at that time. I  
18 don't recall specifically how they were notified or whether  
19 the system was active, nor do I recall the dates, but when  
20 the system was activated we had one other time in which some-  
21 body was smoking in there and the system went off.

22          Q           Were there any other times when emergency  
23 vehicles responded to your scene?

24          A           Not that I recall.

25                   THE COURT: Were you there on either occa-

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15.

1 sion, Dr. Baird, when the system operated due to fire  
2 or smoke prior to '75? Were you on the premises?

3 THE WITNESS: Yes.

4 THE COURT: You were on the premises?

5 THE WITNESS: Yes.

6 THE COURT: Did the bell alarm also func-  
7 tion?

8 THE WITNESS: That would be hard for me to  
9 recall if I heard the bell because that was '73, I  
10 believe.

11 THE COURT: All right.

12 Q Doctor, directing your attention to Decem-  
13 ber 18th, 1975, did you have occasion to witness emergency  
14 vehicles coming to your premises at 102 Berrington Street?

15 A I was subsequently advised that after we  
16 had the bell-ringing on the 18th, that day, that a police  
17 officer arrived.

18 MR. MARKS: If he was subsequently advised,  
19 I think it's inadmissible.

20 THE COURT: Objection sustained.

21 Q Did an alarm sound on December 18th, 1975?

22 A Yes, it did.

23 Q Would you relate to me the circumstances  
24 and what took place on that day.

25 A Well, it was mid to late morning, and the

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16.

1 alarm bell kept going off, and I inquired as to the problem,  
2 and I was advised that Northside Electric was extending--

3 MR. MARKS: Your Honor, what he was advised is  
4 something else again.

5 Q Just tell the conversations you had, what  
6 you said or what someone said to you.

7 THE COURT: Mr. Heilig, I can't ask you to  
8 invite him to give hearsay. You cannot testify,  
9 Doctor, as to what someone told you unless there is  
10 some exception to it, and I will have to ask you to  
11 only testify as to what you know personally. The  
12 other information has to be given by that witness  
13 who made that statement, otherwise it would be hear-  
14 say.

15 Repeat your question.

16 Q Dr. Baird, did you have occasion to talk  
17 with Mr. Pulley of Northside Electric on that day?

18 A Right. I first contacted the staff and was  
19 concerned why the bell continued to ring, and they asked Mr.  
20 Pulley to come down and explain the situation. He came down  
21 to a group of us and said that he was extending the smoke  
22 detection or the alarm system that day, and I can recall that  
23 the smoke detector over my head when I was in the central  
24 hallway was hanging down two or three inches. Ordinarily it  
25 was secured tightly to the ceiling.

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17.

1 Q This central hallway, is that on the first  
2 floor, or second floor?

3 A We never went up to the second floor.

4 Q And what was Mr. Pulley's response, if any,  
5 to your complaint?

6 A He said he would take care of it.

7 Q And what occurred then?

8 A We didn't have any more problem with the  
9 alarm ringing.

10 Q Did Mr. Pulley indicate to you what he was  
11 going to do to remedy the situation?

12 A He didn't tell me specifically, but I saw  
13 him go into the room where the control panel was located.

14 Q What room was that?

15 A That's off the secretary's room.

16 Q Doctor, following your conversation with  
17 Mr. Pulley and wherever he went, did the bells ring any more  
18 that day?

19 A No, sir.

20 Q Do you recall whether or not you talked to  
21 Mr. Pulley more than once that day?

22 A I only saw him one time.

23 Q Did you ever have occasion to talk with Mr.  
24 Pulley on the second floor?

25 A No, sir.



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18.

1 Q Did you ever have occasion to talk to him  
2 outside?

3 A I used to see him fairly frequently and  
4 communicate with him while he was doing the work.

5 Q The fact is, are you positive that this  
6 took place on the first floor?

7 A Yes, sir.

8 Q Doctor, what time did you leave the Virginia  
9 Heart Institute at the close of business hours?

10 A Approximately 5:00 or 5:30.

11 Q Is that what time you normally leave?

12 A Sometimes it's a little bit later.

13 Q Did you ever return to go inside the  
14 premises again that day?

15 A No.

16 Q Did you ever return?

17 A I came back at approximately 11:15 and  
18 drove by.

19 Q What occasioned your return?

20 A I had a Dr. and Mrs. Deep, and I wanted to  
21 show them the construction, and we came by and didn't go in  
22 and just showed them the second floor.

23 Q Did you notice anything out of the ordinary?

24 A Well, there was a light shining on the  
25 second floor, and that had been done intermittently by the

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19.

1 Century Construction people to leave the light or the lamp on.

2 Q What later occurred?

3 A Well, I went to bed at approximately 11:30,  
4 and then I was awakened later that night, I believe by one  
5 of the Fire Bureau officials, to tell me that my place had  
6 burned down and that they thought that they should advise me.

7 Q Did you go--

8 A I went down, and it had been pretty much  
9 destroyed, so I went back home.

10 Q Now, with respect to the dialer that was  
11 part of your system, do you know whether or not that dialer  
12 was programmed to call your home in case of an emergency?

13 A Yes, it was.

14 Q Do you know whether or not it was programmed  
15 to call anyone else?

16 A My uncle, and of course initially the Com-  
17 munications Center here in Richmond, City of Richmond.

18 Q You stated that you had a social engagement  
19 that evening. Was there anyone at your home to receive a call  
20 that evening if the dialer had functioned?

21 A A baby-sitter and four children.

22 Q Was such a call received at your home, to  
23 your knowledge?

24 A Not to my knowledge, no.

25 Q Dr. Baird, with respect to your alarm system,

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20.

1 to your knowledge did it ever malfunction?

2 A No, to my knowledge it didn't.

3 Q Did it ever require any replacement or  
4 repair?

5 A We had to replace the batteries on an annual  
6 basis.

7 Q Anything else?

8 A Well, we would check it visually, and we  
9 frequently were back there because somebody would activate  
10 the intrusion alarm system, so we would be turning it off,  
11 and it got active use from new staff and things of that type.

12 Q Now, are you aware that at some time prior  
13 to the fire, that some water leaked into the premises?

14 A Approximately two weeks prior to the fire  
15 when they were putting on the second floor, taking off the  
16 roof, it rained, and the tarpaulin blew off and water came  
17 down, particularly in the north end of the building, as I  
18 recall.

19 Q Was that situation repaired?

20 A Well, that was in the process of construc-  
21 tion in '75, and we had water damage, but within a week we  
22 were back to work and they were continuing their work on the  
23 second floor of the construction.

24 Q Following the entry of water into the  
25 premises, did the alarm sound, to your knowledge?

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C. L. Baird - Direct

21.

1 A Not that I am aware of, no.

2 Q Subsequent to the water entering your  
3 premises, to your knowledge did you experience any problems  
4 with the alarm system in whatever way?

5 A No, just that morning that we have described  
6 on the 18th of December.

7 Q Doctor, subsequent to the flooding, did  
8 you have occasion personally to inspect the control panel and  
9 the dialer in the business records room?

10 A I can't recall that. I know we had a lot  
11 of activity on the first floor with the construction people  
12 surveying the damages because I think there was approximately  
13 \$5,000 worth of furniture damage due to the water, so things  
14 were gone over, but I cannot recall specifically going into  
15 that area.

16 Q Well, of course, subsequent to the water,  
17 following the water's entry into your premises, Northside  
18 Electric was on the scene, were they not?

19 A Correct.

20 Q Did they ever inform you that there was any  
21 problem with the circuits or wiring or alarm system?

22 A No. We had the architect and Northside and  
23 Century, had everybody involved, to inspect things after that  
24 water.

25 Q Do you know personally of your own knowledge

C. L. Baird - Direct

22.

1 that Northside did inspect the damage or whatever after the  
2 water entered?

3 A In the control box, I can't say.

4 Q Anywhere, I am talking about the wire all  
5 over the building.

6 A Yes, because that was very important because  
7 some of the water had gotten into the units like this in the  
8 ceiling, and I was concerned about water being in the elec-  
9 trical wires. So that was closely reviewed at my request.

10 Q And you received no discrepancies?

11 A That's correct.

12 Q Just one more question, if I may. Doctor,  
13 can you tell the ladies and gentlemen of the jury where the  
14 bell is located?

15 A The bell is up close to the secretary's  
16 area inside the building.

17 Q Where would that be in relation to the  
18 control panel?

19 A It would be within several feet of it, but  
20 outside the room of the control panel.

21 Q Can you describe it for me, what size it  
22 was?

23 A It's a bell, and I think it was about 6 to 8  
24 inches in diameter. A standard bell. I don't recall specif-  
25 cally.

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23.

1 MR. HEILIG: Okay, that's all I have. Answer  
2 Mr. Marks' questions.

3  
4 CROSS-EXAMINATION

5 BY MR. MARKS:

6 Q Doctor, did the baby-sitter have her own  
7 transportation?

8 A I don't recall.

9 Q You don't remember whether you took her  
10 home or not?

11 A I don't recall that. We were taken home  
12 by Dr. and Mrs. Deep, and presumably it was a neighbor girl  
13 who could walk home or across the street. I don't really  
14 recall.

15 Q Do you know who the baby-sitter was, how  
16 old she was, or anything of that nature?

17 A Well, we generally use people about 18 to  
18 22 years of age.

19 Q Was there any prohibition on the baby-sitter  
20 using the telephone?

21 A No.

22 Q So, she was free to talk if she wanted to?

23 A That's correct.

24 Q Did the alarm system people specifically,  
25 Mr. Newell or anyone from the alarm company, make any inspec-

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C. L. Baird - Cross

24.

1 tion after the water?

2 A I can't really recall. I don't know that.

3 Q Do you know if any batteries were put in  
4 that system and if so who did it?

5 A You mean after the water entered?

6 Q Anytime after it was installed.

7 A The staff would place them in, we would buy  
8 the batteries and put them in there.

9 Q When did you purchase them and put them  
10 in there?

11 A I can't recall that.

12 Q How many times did you purchase them and  
13 put them in there?

14 A I don't know. Several times, whatever the  
15 recommendations were with regard to maintenance, but I don't  
16 have any records, as far as I know.

17 Q You don't have any records at all?

18 A I don't have any recall. There may be  
19 records, but I don't know.

20 Q Did any representative of the alarm company  
21 ever inspect the alarm system after it was installed?

22 A Well, I think Mr. Newell had been there on  
23 several occasions. We inspected it as part of our maintenance  
24 program.

25 Q What was the occasion on which Mr. Newell

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C. L. Baird - Cross

25.

1 was there, and why was he there?

2 A To replace light bulbs, I know, on several  
3 occasions.

4 Q Light bulbs where?

5 A In the front door where we turn on the  
6 alarm system. It was a green and red light, and they were  
7 difficult to get other than through him, so he would bring  
8 them by.

9 Q What function, as you understand it, did  
10 the green or the red light perform?

11 A Well, the green light meant that the system  
12 was activated, so when you left the building and should it be  
13 secure the green light would be on.

14 Q This is the little light that shows outside  
15 the building above the key switch, is that right?

16 A Yes.

17 Q If it was green the thing was on, if it was  
18 red it was off?

19 A That's right.

20 Q There is also a signal light of some kind  
21 on the control box, isn't there, or do you know?

22 A As I recall there was an orange light.

23 Q Do you know what that meant?

24 A That meant the system was active.

25 Q Did you ever see a time when the orange



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C. L. Baird - Cross

26.

1 light was off?

2 A Not that I recall.

3 Q Now, was this one box of stuff back there  
4 in the office, what you refer to as the control system, or  
5 were there two separate units there?

6 A There were two separate units.

7 Q Do you know what they were, which was which,  
8 and so forth?

9 A As I recall, red was pyrotechnics and the  
10 other was the intrusion system. I am not sure if that's the  
11 correct name for the system for smoke and fire.

12 Q Where was the dialer located?

13 A It was down about 5 feet from the floor  
14 right by the door there.

15 Q That was not in the control panel area?

16 A Well, there were two units, and the dialer  
17 was there for the messages.

18 Q Was the dialer programmed, if you know, and  
19 I will not expect you to know if you don't, to distinguish  
20 between an intrusion and fire in connection with its messages?

21 A I don't know that I can answer it. I  
22 thought they were different messages, but I don't recall.

23 Q You think they were different?

24 A I thought they were.

25 Q Now, was there any difference in the sound

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C. L. Baird - Cross

27.

1 of the bell for an intrusion and/or for fire?

2 A Not that I am aware of.

3 Q Now, you were riding with your friends the  
4 night that you went by there?

5 A Yes, sir.

6 Q And you drove by at about 11:15 p.m., and  
7 did they stop the car then?

8 A We may have paused momentarily.

9 Q Did you-all get out?

10 A No.

11 Q How far back from the street was the build-  
12 ing?

13 A I would say 30, 40 feet.

14 Q So that you were a greater distance than  
15 that from the building when you drove by it at 11:15?

16 A Well, the road comes right up to the front  
17 of the building, it's very close.

18 Q But how far was it away from the building?

19 A 30 feet.

20 Q And you were in the car?

21 A Right.

22 Q Do you remember where in the car you were  
23 sitting?

24 A Sitting in the back on the right, I think.

25 Q And that was the position that you were in

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C. L. Baird - Cross

28.

1 when you saw the electric light upstairs?

2 A That's right.

3 Q Did you go directly home after that?

4 A That's right.

5 Q How far away is Berkshire from Berrington?

6 A It's about a 5-minute drive.

7 Q Whereabouts is Berkshire?

8 A It's right off of Cary Street, Commonwealth  
9 and Cary.

10 Q And Berrington is just east of the Belt Line  
11 Railroad, isn't it?

12 A That's right.

13 Q Between Cary and Grove?

14 A That's correct.

15 Q You told us, I think, that on December 18th,  
16 1975, in the middle of the morning or in mid morning I think  
17 was the way you put it, the alarm sounded several times?

18 A Right.

19 Q Do you know, Dr. Baird, whether it sounded  
20 on the intrusion phase, or whether it sounded on the fire  
21 phase?

22 A Just the bell was ringing, that's all I knew.

23 Q You knew just that the bell was ringing,  
24 and that that bothered you and bothered your patients and  
25 bothered your staff?

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C. L. Baird - Cross

29.

1 A Correct.

2 Q It is true, is it not, that Mr. Pulley, as  
3 you tell it, was asked to stop that confounded ringing, or  
4 words to that effect?

5 A That's correct.

6 Q And you don't know where he went to do it  
7 or what he did? You say you saw him go towards the room  
8 where the control panel was?

9 A I saw him go into the control panel room.

10 Q You don't know what he did in there?

11 A No, sir.

12 Q Now, you mentioned awhile ago something  
13 about if the bell was ringing there was some way of cutting  
14 it off and preventing the alarm from being transmitted.

15 A The message from being transmitted to the  
16 Communications Center.

17 Q How did you go about cutting it off to  
18 prevent that from happening?

19 A There was a little switch on the side there  
20 that would stop the dial from moving.

21 Q On the side of what?

22 A Well, on the side of the panel. You have  
23 to open the panel of the communications intrusion system to  
24 stop the call.

25 Q Then once you have done that, I take it the

C. L. Baird - Cross

30.

1 bell has stopped ringing?

2 A Right.

3 Q You have been out there and turned the--

4 MR. HEILIG: If Your Honor please, Mr. Marks  
5 stopped me from going into the functioning of this  
6 system, and now he's back into it, and I would object  
7 to this line of questioning.

8 THE COURT: Mr. Heilig, you were trying to  
9 get testimony from him on direct as an expert. Mr.  
10 Marks has him on cross-examination, and he's asking  
11 him what he knows about the operation, and the  
12 objection is overruled.

13 MR. HEILIG: Well, Your Honor, I think Mr.  
14 Marks ought to let him answer and stop testifying  
15 before he asks another question.

16 THE COURT: He has him on cross, Mr. Heilig.

17 Q You have been out there turning the key and  
18 cut the bell off?

19 A That's correct.

20 Q Do you know any way of cutting the bell off  
21 from inside?

22 A No, I don't.

23 Q But there is a switch of some kind that can  
24 be thrown to prevent the message from being transmitted, is  
25 that correct?

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C. L. Baird - Cross

31.

1           A           Yes, as I recall, you can. Maybe it's the  
2 same switch to do both, I don't know, I can't say specifi-  
3 cally, but you can turn the bell off in there if the system  
4 is activated by mistake.

5           Q           Well, have you ever run the thing yourself  
6 so as to prevent the message from being transmitted?

7           A           Yes.

8           Q           What did you do to prevent the message from  
9 being transmitted?

10          A           Well, you just hit a button and the dial  
11 would stop, and that would be the end of it. We would try,  
12 at times, if we thought that we were a little late getting  
13 there, to call the Communications System or the emergency  
14 police, and of course they wouldn't accept a telephone call  
15 because that could be a burglar there, so after a few times  
16 of the police arriving we tried to get in quick to stop that.

17          Q           What you say you did then was push a button?

18          A           Right.

19          Q           Now, where was the button located, on what  
20 piece of equipment?

21          A           Well, it was located on the intrusion  
22 system there next to the door where the dialer was located.

23          Q           Next to the dialer?

24          A           Yes.

25          Q           Was there a separate dialer for the intru-

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C. L. Baird - Cross

32.

1 sion system and another one for the fire?

2 A I think it was just one dial system there  
3 for both.

4 Q If you cut the dialer off, then how did it  
5 get back on?

6 A Well, I think if you corrected the intru-  
7 sion system fault by activating it at the door and you had  
8 corrected that, then there would be no need for the dialer  
9 to come back on.

10 Q Do you know whether anybody cut the dialer  
11 off on the morning of the 18th when all of this bell ringing  
12 was going on?

13 A I presume the dialer was working because  
14 the police responded that morning.

15 Q Do you know whether anybody on your staff,  
16 you or anyone else, turned the dialer off after that?

17 A I didn't turn the dialer off.

18 Q You don't know whether anybody else did?

19 A That's correct.

20 Q Now, you said, if I remember correctly,  
21 that you sent someone to get Mr. Pulley to come down to talk  
22 with you?

23 A Correct.

24 Q Do you know where he was at that point?

25 A Well, he was working upstairs that morning.

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33.

1 Q Had he been doing any work that you observed  
2 on the lower level that morning?

3 A As I said, the only evidence that I had  
4 that there was any work being done was the fact that the  
5 smoke detector was hanging from the ceiling, which was unusual.  
6 I had no real knowledge until the time we had the conversa-  
7 tion with Mr. Pulley and the staff there what he was doing  
8 that morning.

9 Q Well, let me ask you this question. Did  
10 you call to Mr. Pulley's attention that hanging detector?

11 A No, I did not.

12 Q Do you know how long it had been hanging?

13 A I just noticed it that morning, and later  
14 that afternoon it was back in the ceiling correctly.

15 Q Who was the last person out that evening?  
16 Were you?

17 A No, sir, one of my technicians, Miss Home-  
18 burg (ph.).

19 Q You weren't there, so you don't really know  
20 whether she left after you did or not?

21 A That's right. I mean the building was  
22 secured by her.

23 Q When you left there were there any other  
24 people besides Miss Homeburg in the place?

25 A Yes, there were some people working upstairs,



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C. L. Baird - Cross

34.

1 subcontractors. I don't know who they were.

2 Q Working on the second level?

3 A Right.

4 Q And they had to come down from there, did  
5 they not, somehow to get out?

6 A I think they had a ladder outside the  
7 building.

8 Q Outside the building?

9 A Yes.

10 Q You don't know who they were?

11 A No, I don't.

12 Q How many of your own staff were present  
13 on the premises at the time you left?

14 A I really don't recall, maybe one or two.  
15 I'm not sure.

16 Q Dr. Baird, will you tell us where the high-  
17 voltage equipment that you have described that was wired for  
18 in 1972 was physically located.

19 A It was located in the north portion, north-  
20 east portion of the building. The generator was in the back  
21 in the southwest portion, it was not part of the building,  
22 but was a standard diesel generator.

23 Q This was an exterior piece of standby  
24 equipment?

25 A That's right.

C. L. Baird - Cross

35.

1 Q That was supposed to operate when the elec-  
2 tric current goes off, is that correct?

3 A Yes.

4 Q Now, the northeast portion of the building,  
5 was that covered by the addition, or not?

6 A I think the whole first floor was covered  
7 by the addition. I can't recall specifically what was covered  
8 and uncovered. There was a portion that I think was considered  
9 like a porch in the northeast portion of the building.

10 Q It was not under the addition specifically?

11 A That's right.

12 Q Just what high-voltage equipment was there  
13 in that northeast corner, northeast section?

14 A To generate the X-ray equipment to film the  
15 movies of patients' hearts we needed high-energy voltage to  
16 run that X-ray equipment.

17 Q Do you remember how much amperage was in  
18 there?

19 A How much amperage?

20 Q Yes.

21 A I can't recall it.

22 Q All right, I won't ask you that. Do you  
23 know how much voltage was in there?

24 A It was super voltage.

25 Q How much voltage would that be?

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C. L. Baird - Cross

36.

1           A           I would be afraid to say, it might not be  
2 accurate.

3           Q           Was any precaution taken at the time you-  
4 all left the building to cut that off, or was it left on  
5 continuously? I'm not talking about the equipment itself,  
6 but I am talking about the current in the electric service  
7 to the equipment.

8           A           I don't know if I can specifically say.  
9 I don't think that was routinely cut off.

10          Q           Did you observe exactly what Century  
11 Construction Company and its people were doing that day, the  
12 day of the 18th?

13          A           No, I don't recall specifically what they  
14 were doing.

15          Q           But they had not only Northside Electric  
16 Company's people there, but they also had other subcontractors  
17 there, is that correct?

18          A           I presume that they did. I didn't follow  
19 it that closely.

20          Q           You weren't following it that closely?

21          A           No, sir.

22                   MR. MARKS: All right, Doctor, that's all.

23                   THE COURT: Any redirect, Mr. Heilig?

24                   MR. HEILIG: No redirect, Your Honor.

25                   THE COURT: Thank you, Dr. Baird, you may  
step down.

WITNESS STOOD DOWN

1  
2  
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25

THE COURT: Who is your next witness?

MR. HEILIG: Carolyn Sheffield.

NOTE: The witness is sworn.

CAROLYN S. SHEFFIELD, a witness called by  
the attorneys for the plaintiff, first being duly sworn,  
testifies and states:

DIRECT EXAMINATION

BY MR. HEILIG:

Q Would you state your full name, please.

A Carolyn S. Sheffield.

Q And your address?

A 8700 Queensmere Place.

Q Are you employed?

A Yes.

Q Where are you employed?

A Virginia Heart Institute.

Q And in what capacity?

A A secretary.

Q And how long have you been so employed?

A Five years.

Q Were you so employed on December 18th, 1975?

A Yes.

Q Carolyn, briefly what are your duties at the

C. S. Sheffield - Direct

38.

1 Virginia Heart Institute?

2 A Just general clerical duties, receptionist  
3 duties, phone, medical records.

4 Q And you were so employed on December 18th  
5 of 1975?

6 A Yes.

7 Q And where was Virginia Heart Institute  
8 located at that time?

9 A 102 Berrington Street.

10 Q Now, directing your attention to December  
11 18th, 1975, do you recall what time you got to work that day?

12 A Around 8:30, I think.

13 Q Is that your normal time?

14 A Right.

15 Q When you got there, what was going on with  
16 respect to the building process? Was there any building  
17 process going on?

18 A Yes.

19 Q Where on the premises was your office  
20 located?

21 A In the front as you come in the door, front  
22 door.

23 Q And that of course was on the first floor?

24 A Right.

25 Q Where in relation to the control panel and

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39.

1 dialer and bell, internal bell, was your office located?

2 A Well, the dialer and bell were located in  
3 a small room within my office.

4 Q Was the bell located in the same room as the  
5 control panel?

6 A No. As I remember, the bell was in my  
7 office, and the dialer was in a smaller room.

8 Q Were there any construction people or elec-  
9 tricians or whatever working near you that day?

10 A Yes.

11 Q Now, where were they working? Do you recall  
12 what they were doing?

13 A They were working around the back entrance.  
14 I am not sure, they were doing something with the back door.

15 Q Did you know or have occasion to learn the  
16 names of any of the people that were working on the project  
17 at that time?

18 A Yes.

19 Q Did you know the name of the foreman who  
20 was working for Century Construction?

21 A Yes.

22 Q What was his name?

23 A Cliff Mahone.

24 Q And did you know the name of the foreman  
25 for Northside Electric?

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40.

1 A I don't know who the foreman was.

2 Q Did you recognize him by sight? Do you  
3 know his face?

4 A Well, I know Ed Pulley seemed to be heading  
5 things, I didn't know him as the foreman.

6 Q Did you know Ed Pulley?

7 A Yes.

8 Q Now, on the morning of December 18th, 1975  
9 do you recall seeing either Cliff Mahone of Century or Ed  
10 Pulley of Northside Electric?

11 A Yes.

12 Q Did you ever have occasion to have any  
13 conversations with either or both, that you recall?

14 A Yes.

15 Q Who did you have a conversation with?

16 A Ed Pulley.

17 Q Would you tell the ladies and gentlemen of  
18 the jury what the circumstances were surrounding your conver-  
19 sation.

20 A Well, he came into my office, and he was  
21 letting me know that they were working on the alarm system,  
22 or they were going to disconnect the alarm system, and that  
23 the alarm might go off, just to prepare me.

24 Q Do you recall whether or not the internal  
25 bell sounded that morning?

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41.

1 A Yes, it did.

2 Q Can you tell us an approximation of how  
3 many times?

4 A I remember two times. It could have been  
5 more, but I know of two times that it did go off.

6 THE COURT: Before or after your conversa-  
7 tion with Mr. Pulley?

8 THE WITNESS: After.

9 THE COURT: Any times before your conversa-  
10 tion?

11 THE WITNESS: No.

12 Q Now, Miss Sheffield, when these bells went  
13 off, what did you do?

14 A Well, when they went off somehow we got  
15 them turned off, and then I told Mr. Pulley that we would  
16 have to do something about it, that it was going to send a  
17 message down to the Communications Center and the Police and  
18 the Fire Department would be coming out unnecessarily, so  
19 they would have to do something about that.

20 Q What did Mr. Pulley say to that, if anything?

21 A I don't remember.

22 Q Well, were the bells ringing prior to your  
23 conversation with Mr. Pulley?

24 A No.

25 Q You mean they started ringing after you had



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42.

1 your conversation with Mr. Pulley?

2 A Right.

3 Q And you say he warned you, and what was he  
4 warning you of?

5 A That the bell was going to go off, that it  
6 could possibly go off.

7 Q Did you have occasion to speak with Dr.  
8 Baird that morning?

9 A I don't remember.

10 Q Carolyn, following your conversations with  
11 Mr. Pulley, did the bell ring after that any more?

12 A I can't remember.

13 Q How many times did you talk to him that  
14 morning, do you know?

15 A No, I don't.

16 Q Well, could it have been once, or more than  
17 once?

18 A It could have been more than once.

19 Q Did you have occasion that morning to talk  
20 with or did you ever become aware of the fact that the police  
21 had come to the premises?

22 A Yes.

23 Q How did you become aware of that fact?

24 A I saw him, but I don't remember whether I  
25 talked to him or not. I saw him.

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43.

1 Q Do you know of your own knowledge why he  
2 came?

3 A Because the alarm had gone off.

4 Q Now, these conversations or conversation  
5 that you had with Mr. Pulley of Northside Electric, where did  
6 they take place?

7 A In my office.

8 Q And where is your office located?

9 A In the front of the building.

10 Q Would that be on the first floor?

11 A First floor.

12 Q And you are positive the man you talked to  
13 was Mr. Pulley?

14 A Yes..

15 Q Carolyn, do you know of your own knowledge  
16 how to turn off the bell portion of that alarm system?

17 A No.

18 Q Did you ever have occasion to adjust or  
19 fool with that alarm system in any way?

20 A No.

21 MR. HEILIG: Answer Mr. Marks' questions.

22

23 CROSS-EXAMINATION

24 BY MR. MARKS:

25 Q Miss Sheffield, you say that Mr. Pulley came

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44.

1 to you, and you were then in your office, and he said that he  
2 was going to do some work on the alarm system?

3 A Right.

4 Q That it might go off, is that right?

5 A Correct.

6 Q Do you remember what time of day that was?

7 A No, except the only thing I know was it was  
8 in the morning, but I don't know what time.

9 Q How soon after you got there, if you can  
10 give us some idea?

11 A No, I can't be sure of that.

12 Q Had the alarm gone off that morning before  
13 that conversation occurred?

14 A No.

15 Q Now, after the conversation occurred, did  
16 it go off?

17 A Yes.

18 Q Now, in your answer to one of Mr. Heilig's  
19 questions you said something about "we shut the bell off."  
20 What did you mean?

21 A I am sorry, repeat that.

22 Q "We shut the bell off," what did you mean  
23 by that?

24 A I said that?

25 Q Yes, ma'am.

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C. S. Sheffield - Cross

45.

1 A I don't remember saying that. I don't know.

2 Q You didn't yourself then shut it off?

3 A No, I don't think so.

4 Q Now, about what time was it that the alarm  
5 bell did go off and followed by the police officer's arrival,  
6 do you know that?

7 A No.

8 Q Do you know how long it was after you got  
9 to work when that occurred?

10 A No, I sure don't.

11 Q Did you talk with the police officer?

12 A I don't remember if I did or not.

13 Q Did you talk with Mr. Pulley after that  
14 occurred?

15 A I don't remember.

16 Q You were engaged in stenographic and secre-  
17 tarial and clerical work of various and sundry kinds, correct?

18 A That's right.

19 Q The mechanism that operated the alarm system,  
20 the mechanical parts of it, other than the bell, were not in  
21 your direct office, were they?

22 A No.

23 Q Was the entrance to those places through  
24 your office?

25 A Yes.

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46.

1 Q Did Mr. Pulley go in there at any time during  
2 the morning, that you can recall?

3 A I believe he did, but I can't say for sure.

4 Q Where was the bell with respect to your  
5 desk?

6 A In the upper right-hand corner of the room.

7 Q Of the room in which you were in?

8 A Yes.

9 Q Did he do anything to the bell that morning,  
10 that you saw?

11 A I can't remember.

12 Q Well, when the bell went off, can you  
13 describe whether they were long rings or intermittent short  
14 rings, or what it was?

15 A I don't remember that either.

16 Q But you do know that the police responded?

17 A Right.

18 Q Did any fire truck arrive?

19 A I don't think so.

20 Q You didn't see one?

21 A No.

22 Q Do you remember what the Century Construction  
23 people were engaged in doing that morning?

24 A No, I don't know their specific duties.

25 Q Whereabouts with respect to the building

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47.

1 were they working? You said something about around the back  
2 entrance?

3 A Right.

4 Q Do you know whether or not they were in the  
5 process of removing the then rear door so that it could be  
6 remodeled back in there?

7 A I think that's what I understood they were  
8 doing, yes.

9 Q Now, at that rear door there was a key-  
10 activated alarm system switch, was there not?

11 A Yes.

12 Q Did you come in through that door or through  
13 the front door when you went there that morning?

14 A Through the front door.

15 Q So, you had no occasion to use the back  
16 door?

17 A Right.

18 Q Was the back door available for use up to  
19 that date?

20 A Up to that date, yes.

21 Q You didn't have to do anything to the switch  
22 on the front door because that was showing a green light when  
23 you arrived?

24 A That's right.

25 Q You didn't look at the one on the rear door,

C. S. Sheffield - Cross

48.

1 did you?

2 A No.

3 Q Did you have occasion to go through the  
4 rear hall at any time that morning?

5 A Probably so.

6 Q Do you remember making any observations of  
7 any kind with respect to the condition of a smoke detector  
8 as you went through that hall?

9 A No.

10 Q Now, Dr. Baird had an office of his own,  
11 did he not, in the building?

12 A Yes.

13 Q Where was his own office?

14 A His office was off the hall, the hallway.

15 Q And that would have been farther north than  
16 where you were located?

17 A That's right.

18 Q Where was his office with respect to the  
19 examining room where the X-ray machine and all the other  
20 equipment was located? How close to his office would that  
21 have been?

22 A I don't know exactly. The examining rooms  
23 were right across the hall from his office.

24 Q What about the room with the X-ray equip-  
25 ment and all of the movie cameras and things of that nature?

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49.

1           A           His office was in the center of the building,  
2 and that laboratory was to the extreme north.

3           Q           Thank you for helping me out, I should have  
4 called it the laboratory to start with. Now, were there  
5 patients in the laboratory that morning, or do you know?

6           A           I don't remember.

7           Q           Were there patients in the examining room  
8 that morning, or do you know, or in one or more of the examin-  
9 ing rooms?

10          A           Probably.

11          Q           Do you know?

12          A           I can't remember.

13          Q           What time of day was it that you left, Miss  
14 Sheffield?

15          A           5 o'clock.

16          Q           Did you leave any Virginia Heart employees  
17 on the premises after you left?

18          A           Yes.

19          Q           Who was there at that time?

20          A           I am not sure which nurses were there, but  
21 I am pretty sure they were still there. Well, I know I wasn't  
22 the last one to leave.

23          Q           You were not the last one out?

24          A           No.

25          Q           Was there still work going on when you left



C. S. Sheffield - Cross

50.

1 upstairs?

2 A I don't know.

3 Q You don't remember seeing any workmen around  
4 when you left?

5 A I didn't pay any attention. They were in  
6 the back, they were mostly working the back, and I left  
7 through the front.

8 Q You didn't have occasion to reactivate the  
9 intrusion alarm when you left?

10 A No.

11 Q Somebody else was supposed to do that, the  
12 last one out?

13 A Right.

14 Q Miss Sheffield, did you make a telephone  
15 call on the 18th to Mrs. Houston at the Medical College  
16 cardiovascular lab?

17 A I don't know.

18 MR. HEILIG: Judge, I would object to this,  
19 it's beyond the scope of direct examination.

20 MR. MARKS: It's certainly proper cross-  
21 examination, if Your Honor please.

22 THE COURT: Let me hear the question again.

23 MR. MARKS: I asked her if she had made a  
24 telephone call to Mrs. Houston at the Medical College  
25 cardiovascular laboratory facility on the day the

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C. S. Sheffield - Cross

51.

1 fire broke out.

2 THE COURT: The objection is overruled.

3 Her answer was that she didn't know.

4 Q Let me see if I can improve your memory.

5 Do you recall ever having called Mrs. Houston and asked her  
6 what they did with their X-ray films in the event of a fire?

7 A No, I don't know any Mrs. Houston.

8 Q Who is the head lady down at the cardio-  
9 vascular lab at the Medical College?

10 A I don't know.

11 Q You don't know?

12 A No.

13 Q How about Mrs. Ellen Hall?

14 A I have heard of her, but I don't recall  
15 calling her.

16 Q You don't recall calling her?

17 A No.

18 Q Did you ever call her and ask her how to  
19 protect X-ray film from fire?

20 A I may have, I don't remember. I can't say  
21 yes or no.

22 MR. MARKS: Okay, I have no further ques-  
23 tions for this witness.

24 MR. HEILIG: No redirect.

25 THE COURT: All right, Miss Sheffield, thank

1                   you very much, you are free to go.

2  
3                   \_\_\_\_\_  
4                   WITNESS STOOD DOWN

5                   THE COURT: Who is your next witness?

6                   MR. HEILIG: David Stuart.

7                   NOTE: The witness is sworn.

8  
9                   DAVID L. STUART, a witness called by the  
10                  attorneys for the plaintiff, first being duly sworn, testi-  
11                  fies and states:

12                  DIRECT EXAMINATION

13                  BY MR. HEILIG:

14                  Q           All right, sir, state your full name, please.

15                  A           My name is David L. Stuart.

16                  Q           Sir, what is your address?

17                  A           3420 Old Creek Road, Chesterfield, Virginia.

18                  Q           Your occupation?

19                  A           I'm manager of Distributor Sales for Pyro-  
20                  tronics Incorporated for the area of Virginia and Maryland.

21                  THE COURT: Let me get the name down.

22                  THE WITNESS: Pyrotronics, P-y-r-o-t-r-o-n-  
23                  i-c-s Incorporated.

24                  THE COURT: All right.

25                  Q           Mr. Stuart, what does Pyrotronics Incorpo-

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1 rated do?

2 A Pyrotronics is a fire alarm and life safety  
3 company. We are recognized as one of the leaders in the  
4 industry in special hazards as well as standard building  
5 protection systems. Among the types of buildings we protect  
6 are buildings such as hospitals, schools, and on up to the  
7 level of sophistication that you would find in the NASA Manned  
8 Spacecraft Center, the White House in Washington, things of  
9 that nature.

10 Q Sir, what's the nature of your job specifi-  
11 cally?

12 A My direct responsibility is to serve as  
13 both sales and technical liaison to our independent distribu-  
14 tors that are spread out across the states of Virginia and  
15 Maryland in marketing our products and the proper application  
16 of those products.

17 Q Are you familiar with the operation and the  
18 function of the dialers that you sell?

19 A Of the systems we sell, yes.

20 Q Have you had any technical training with  
21 regard to these products?

22 A Yes. As a part of the prerequisite for the  
23 job that I hold with the company, the company does require  
24 that all of us attend and pass the course, be a certified  
25 technician qualified to certify and inspect and test our

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1 equipment in the field and actual installations.

2 Q Mr. Stuart, are you familiar with the  
3 particular type of alarm system that was installed at the  
4 Virginia Heart Institute?

5 A Yes, the basic system, I am.

6 Q What type was that?

7 A The system--

8 MR. MRAKS: If Your Honor please, this wit-  
9 ness hasn't testified as to how he acquired that  
10 knowledge, and I suspect that it's hearsay.

11 THE COURT: Lay the proper foundation, Mr.  
12 Heilig. In what way does he know the system?

13 Q Mr. Stuart, have you had anything to do with  
14 the sale of this system to the Virginia Heart Institute?

15 A I was not directly involved in the sale of  
16 the system. The components for this system were provided by  
17 one of our independent distributors who I deal with.

18 Q And you supplied those then?

19 A Yes, the equipment was supplied by our  
20 company.

21 Q And have you had experience with the type  
22 of alarm system that you sold?

23 A Yes, sir.

24 MR. MARKS: If Your Honor please, I don't think  
25 that ties it to this.

D. L. Stuart - Direct

55.

1 THE COURT: The objection is overruled,  
2 Mr. Marks. Subject to it being connected up, the  
3 witness is qualified to describe the system that  
4 he understands was furnished by his supplier,  
5 independent supplier, to Virginia Heart. Now, he  
6 didn't supply it, so it will have to be connected  
7 up as to whether his system was the one sold, but  
8 he's qualified to testify at this point as to the  
9 nature of the system. That's what you are after.

10 MR. HEILIG: Yes, sir.

11 THE COURT: Not the truth of whether or  
12 not his system was sold, but what is the nature of  
13 his system. He believes it was sold.

14 Q What was the nature of that system?

15 A The system basically consisted of three  
16 groups of components, one being detection devices both in  
17 the area of fire and smoke detection, and then detection  
18 devices which were not provided by us for use in construction  
19 with the intrusion circuit. The second portion of the system  
20 would have been the control unit, which has the basic capabil-  
21 ity of receiving input from these detection devices and giving  
22 resultant outputs based on the input received. The third  
23 component would be the audible device that was used in the  
24 building, which in this case was a bell.

25 THE COURT: What wasn't sold by you?

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56.

1 THE WITNESS: The contact devices which  
2 were used as monitors for the front and back door of  
3 the building.

4 THE COURT: That's the intrusion?

5 THE WITNESS: Right.

6 THE COURT: The key cut-on-cut-off system?

7 THE WITNESS: The key switch units for the  
8 intrusion circuit were provided by us, but the  
9 magnetic contact devices used on the door were not  
10 of our manufacture.

11 THE COURT: How about the windows?

12 THE WITNESS: No, sir.

13 THE COURT: But did you provide the keys?

14 THE WITNESS: The key switch unit, the ready  
15 lights, green and red ready lights.

16 THE COURT: That was yours?

17 THE WITNESS: That's correct.

18 THE COURT: Panel board?

19 THE WITNESS: Yes.

20 THE COURT: Lights on the panel board?

21 THE WITNESS: Yes.

22 THE COURT: De-energizing switches for the  
23 dialer?

24 THE WITNESS: The dialer was not provided  
25 by us.

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1 THE COURT: Who provided the dialer?

2 THE WITNESS: I honestly can't tell you the  
3 name of the manufacturer. I know that principle of  
4 operation of that type of dialer, but I don't know  
5 who the manufacturer of that dialer was.

6 THE COURT: And you didn't personally  
7 install this system?

8 THE WITNESS: No, sir.

9 THE COURT: All right.

10 Q Mr. Stuart, with respect to the sensor  
11 portion of the system, would you explain the types of sensors  
12 involved in this system.

13 A As far as the fire detection, fire and  
14 smoke detection portion of the system was concerned, in order  
15 to properly understand it possibly I can give you a little  
16 background information.

17 In our industry we basically refer to four  
18 stages of a fire. The first stage being an incipient stage.  
19 At this point in time you have a fire condition basically in  
20 minor development. At this point in time you can and do have  
21 invisible products of combustion that are being generated,  
22 for instance from a piece of wire overheating, paper that is  
23 laying say on a hot place, something of this nature. You do  
24 have a stage in a fire that we refer to as incipient at which  
25 point in time there is no visible product of combustion, but



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1 there are products there.

2 The second stage is when you reach a visible  
3 smoke stage, and this is the black smoke, gray smoke, or what-  
4 ever color based on the chemical composition of the materials  
5 that are in the process of combustion.

6 The third stage is a visible flame stage,  
7 and the fourth stage is based on the visible flame, you now  
8 have high heat generation.

9 Now, the fire and smoke detection devices  
10 that were utilized in this system, one was an ionization  
11 detector which is capable of detecting smoke in a fire condi-  
12 tion in the incipient stage. It can also respond through the  
13 full range of the four stages of the fire.

14 The second type of device utilized was a  
15 rate compensation thermal detector which responds to either  
16 a fire condition reaching a fixed preset temperature in an  
17 area or a rapid rise in temperature of 15°, for instance,  
18 over a one-minute period. These are the two basic devices  
19 used in the facility.

20 Q Now, with respect to the thermal sensors,  
21 what input goes in your decision as to where a thermal and  
22 where an ionization detector would be placed on the premises?

23 A Basically an ionization detector is utilized  
24 in any office, public occupancy area where you do not have any  
25 possibilities, if you will, of a friendly fire condition. In

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59.

1 the instance of medical facility areas, areas where ethers or  
2 some type of a gas are utilized and all that, we will not  
3 recommend this type of detector because it cannot discriminate  
4 properly and therefore you would have unwarranted alarms.  
5 Other areas where we do not recommend ionization detectors  
6 are in areas of heating systems where you could have products  
7 of combustion generated and yet they would be classified as  
8 a friendly type of combustion.

9 We would also recommend very definitely  
10 thermal detection in areas where you basically have a situa-  
11 tion of no other type of detector can be relied upon to give  
12 you 100% capability. A thermal detector is always an excellent  
13 protection device in that area.

14 Q Now, how about the range of these types of  
15 sensors, what is their range, what is their capability?

16 A Most types of detectors used in this  
17 facility are listed by Underwriters' Laboratory for a spacing  
18 not to exceed 900 square feet per detector. In the case of  
19 the facility here, the detectors were--

20 MR. MARKS: If Your Honor please, unless  
21 the gentleman has made an inspection of the place  
22 and knows what's installed, I must renew my objec-  
23 tion.

24 THE COURT: Mr. Stuart, I think it would  
25 probably be helpful if you just answered the question,

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60.

1           you went beyond it when you started talking about  
2           this facility. Let the lawyer ask you the question,  
3           you answered the one that he asked you, and then we  
4           will get along better.

5           Q           Now, Mr. Stuart, did you have an occasion  
6           to examine the plans of the wiring of the premises?

7           A           Yes, sir, I have.

8           Q           Now, with that in mind, do you have an  
9           opinion on whether or not the premises was adequately protected?

10          A           The system as was indicated on the drawings  
11          was adequate for the needs of the building as far as spacing  
12          of detectors and utilization of the proper type of detectors,  
13          yes, it was well within the standards that we recommend.

14          Q           Mr. Stuart, what would be the effect, if any,  
15          on the ionization-type sensor if it were exposed to water or  
16          moisture or dust or sawdust or any foreign-type body?

17          A           In, I would say, 99% of the instances you  
18          list there, rapid application of steam, water, or dust, things  
19          of this nature, will cause the detector to go into alarm  
20          because it's looking for a condition which causes a current  
21          shift, and these conditions can create this situation.

22          Q           Now, Mr. Stuart, you mentioned that another  
23          component was the alarm control panel. Does your company  
24          manufacture that panel?

25          A           Yes.

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61.

1           Q           Would you explain very briefly to the jury  
2 how the control panel of the alarm system functions.

3           A           The control panel that was utilized on this  
4 job has as an integral part of its operation a master control  
5 section which receives and interprets inputs. In this case  
6 of this system there were two basic inputs to be received,  
7 the first being an intrusion alarm signal, and the second  
8 being a fire or smoke detection signal.

9                       The panel is preset to interpret these  
10 inputs and discriminate or decide which of the two inputs  
11 it has gotten and then give a resultant alarm relay activa-  
12 tion as an output.

13                      In the case of an intrusion signal coming  
14 in, an alarm relay would close in the panel for whatever other  
15 use you might require, and in this case it's my understanding  
16 it was to be utilized in conjunction with a telephone dialer.  
17 There is also an audible device in the circuit, which based  
18 on the panel defining which type of alarm coming in would ring  
19 the audible device inside the building in a prescribed manner.  
20 In the case of an intrusion alarm, it would be a steady ring-  
21 ing. In the case of a fire, it would pulse the bell, in  
22 effect turn it on and off to give the occupants of the area  
23 a definition as to what type of alarm was being received so  
24 they could take the proper action.

25                      THE COURT: That's the way the panel board

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1 is set up so that it can be operated?

2 THE WITNESS: Yes, sir.

3 THE COURT: Now, the alarm itself, the  
4 audible alarm, was that part of your installation  
5 that you sold?

6 THE WITNESS: Yes, it is a built-in circuit  
7 of the panel.

8 THE COURT: Of the panel?

9 THE WITNESS: Right.

10 THE COURT: And what does it consist of,  
11 a bell of some size?

12 THE WITNESS: Right, there was a bell. I  
13 believe the particular installation here had a 6-inch  
14 bell, but irregardless of the physical size of the  
15 bell there was one bell on the circuit which was for  
16 use as far as internal alarm to the building.

17 THE COURT: You are saying if this system  
18 is operating properly, that the panel board will give  
19 a different signal to the bell depending on whether  
20 it's a break-in or a fire?

21 THE WITNESS: Yes.

22 THE COURT: What signal would be given for  
23 a break-in, what we have been calling "intrusion," but  
24 I like "break-in"?

25 THE WITNESS: Well, for a break-in type

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1 alarm indication you would have a steady ringing of  
2 the bell, constant ringing, what we call a general  
3 evacuation alarm. In the case of a fire or smoke  
4 detection alarm coming in, the bell pulsed or was  
5 turned on and off automatically at a cyclic rate in  
6 the building.

7 THE COURT: And did you say that the board  
8 will separate between a break-in and a fire as far  
9 as the dialer is concerned?

10 THE WITNESS: It has two outputs in the  
11 form of an automatic relay, one relay being dedicated  
12 to activate only upon an intrusion alarm, and the  
13 second relay being dedicated to activate only upon  
14 a fire or smoke detection alarm.

15 THE COURT: It has that capability?

16 THE WITNESS: Yes.

17 THE COURT: How it's hooked up to the  
18 dialer, you don't know, you didn't supply the dialer?

19 THE WITNESS: No, sir.

20 THE COURT: All right, go ahead, Mr. Heilig.

21 Q Mr. Stuart, with respect to the control  
22 panel, did it possess any type of alarm within itself?

23 A Yes. The panel has as a part of its integral  
24 design supervisory capability. First of all, on the fire  
25 detection circuit, if you can envision leaving the control

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1 panel and going out to the individual ionization and thermal  
2 devices were a pair of wires, and when you reach the last  
3 device on this circuit we have what we refer to as an end-of-  
4 line termination device which completes our circuit. The  
5 panel is constantly looking down these wires by feeding a  
6 very minimal current up and down the wires to ensure that the  
7 detectors are in place and the wiring is complete to be  
8 able to receive an alarm. If it does not see this complete  
9 circuit, it then has an internal trouble audible signal,  
10 which is in the form of a small horn, which automatically  
11 trips to alert personnel in the immediate area of the fact  
12 that there is a problem within the fire detection circuit.

13 Now, on the side of the intrusion circuit  
14 you have a similar function in that you are monitoring again  
15 a circuit going out with your individual intrusion devices  
16 located on a pair of wires, and if for any reason those  
17 wires are interrupted or the panel senses a resistance change,  
18 then it will discriminate either a short circuit or just a  
19 resistance change and give you either a resultant trouble or  
20 alarm condition back at the panel, as well as at a remote  
21 location, which was at the doors in this building on a little  
22 remote station plate.

23 Please understand, it's rather difficult for  
24 me to do this without being able to draw some pictures out.

25 THE COURT: Well, I will leave it up to

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1 counsel, Mr. Stuart, but I think I understand you,  
2 and I hope the jury does, but if you have any visual  
3 aids I wouldn't think it would be inappropriate to  
4 use them by way of diagrams or mock-ups, which most  
5 security people have where they can demonstrate the  
6 situation.

7 MR. HEILIG: Yes, sir, I think that would  
8 be helpful, Your Honor. Could we have about two  
9 minutes?

10 THE COURT: I will give you-all time to  
11 reflect on that. We are not going to finish cross  
12 on this witness before lunch, so we are going to  
13 adjourn for lunch at this time, and that will give  
14 you several minutes.

15 Ladies and gentlemen, we will adjourn for  
16 lunch, and I will ask you all to be back here in an  
17 hour, which would be at 10 minutes to 2:00. Remember  
18 what I told you about discussing the case. Also,  
19 please remember this, at this time and at all recesses  
20 don't allow the case to be discussed with you by any-  
21 one, the litigants, the lawyers, or anyone else, you  
22 have got to keep yourselves detached from the people  
23 at this point and be impartial, as I do, so don't  
24 allow anyone to discuss the case with you.

25 If you will all please come back at about



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1 10 minutes to 2:00 we will continue with the case at  
2 that time.

3  
4 NOTE: At this point a luncheon recess is  
5 taken; at the conclusion of which the case continues  
6 as follows:

7  
8 THE COURT: All right, the jury is all  
9 present, so you may proceed, Mr. Heilig.

10 BY MR. HEILIG: (Continuing)

11 Q Before you approach the board, Mr. Stuart,  
12 I would like to show you this and ask you if you can identify  
13 it for me. Mr. Marks has already seen it.

14 A Yes, sir, this is one of our standard  
15 installation manuals describing the basic operation of the  
16 type panel that was used.

17 Q Would you show the picture of that to the  
18 jury and then open it up.

19 THE COURT: No objection, Mr. Marks?

20 MR. MARKS: No, sir.

21 THE COURT: Plaintiff's Exhibit 4.

22 A This is your basic outside physical appear-  
23 ance of the control unit that was utilized in the building.  
24 Some of the features that you see listed here, and I am sure  
25 represent only small dark spots to you, but the first black

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1 area is a test switch. By means of this switch, by depressing  
2 this switch you can test your audible circuit in the building  
3 to be sure that it's functional. It's an alarm test switch.

4 MR. DOBBINS: Can we let the record show  
5 that Mr. Stuart is pointing to the button at the top  
6 of the picture at the left-hand side as you look at  
7 the--

8 THE COURT: Top part of the panel, and he's  
9 reading from left to right.

10 A The center dark area here is again the same  
11 type of switch, only in this case it's a battery test switch  
12 which enables you, by depressing it, to disable the incoming  
13 AC power that the panel would normally operate from and ensure  
14 that the panel would operate off of the standby batteries that  
15 are installed in the cabinet that are designed automatically  
16 to take over if you lose your primary power.

17 The third switch is a reset switch which  
18 enables you to clear an alarm condition that has been registered.  
19 Once you have responded to the alarm condition you can, by hit-  
20 ting this switch here, clear the alarm condition from the panel  
21 and enable you to go back into a normal mode of operation.

22 THE COURT: Now, before you go beyond those  
23 three that we see there, earlier testimony has dealt  
24 with someone coming in to turn off the alarm or to  
25 stop the dialer from operating. That's not on that,

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1 is it?

2 THE WITNESS: No. As far as turning off or  
3 delaying the dialer, we are only providing an activa-  
4 tion, there is no means of bypass or anything here,  
5 so to speak.

6 THE COURT: All right.

7 Q Go ahead, Mr. Stuart.

8 A The last area here and a little larger in  
9 defined size is actually a fuse holder, and this fuse is  
10 utilized for the AC power circuit coming in the panel. If  
11 you should have a severe overvoltage problem, it will pop the  
12 fuse just as it will in your home to keep from damaging the  
13 control panel.

14 The interior portion of the panel, and  
15 again-- Your Honor, I have a duplicate copy of this, and  
16 would you have any objection to my letting them pass this  
17 back and forth as I am talking off of this one?

18 MR. MARKS: I think I would prefer to  
19 have them looking at his exhibit and hear him testify  
20 from it.

21 THE COURT: I think that would be better.  
22 Maybe the jury would like to move over and get a  
23 little closer look so they can see it.

24 MR. DOBBINS: Can the record show that Mr.  
25 Stuart is now pointing to some diagrams on Page 3?

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1 THE COURT: Page 3 of the brochure.

2 Q Explain that to us, Mr. Stuart.

3 A This is Page 3 of the brochure with the  
4 cover, as you see here, removed from the panel. Again you  
5 can still see your switches and your fuse plate here. All  
6 of your control circuitry is right in behind this unit here.  
7 These are the standby batteries, dry-cell batteries, that  
8 will connect into the system anytime you have an AC power  
9 failure.

10 The wiring you see down this side and on  
11 this side does represent the wiring going out to detection  
12 circuits, bell circuits, and the relay activations for  
13 activation of other devices, in this case a telephone dialer.

14 Now, if we move on to the next page--

15 THE COURT: Page 4.

16 A --under Figure 6 here, this is an ionization  
17 detector. The picture to your far left there shows a complete  
18 unit fully assembled to be mounted on the ceiling. The center  
19 picture depicts the base of this detector, which is actually  
20 mounted on the ceiling, and the wiring is run to it and the  
21 detector itself is plugged into this device.

22 Under Figure 8, again to your left-hand side,  
23 this is representative of the type of thermal detector that  
24 was utilized. This device is responsive too, as I said prior  
25 to our lunch break, a rapid increase in temperature in a

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1 given area or temperature exceeding 135° in any particular  
2 area.

3                   These devices, and I will show this to you  
4 more clearly with a small drawing over here on the board, are  
5 hooked in conjunction with each other so that any one of the  
6 devices registers to the panel an alarm condition.

7                   The devices you see here--

8                   MR. DOBBINS: On the next page.

9                   A           --on the following page, under Figure 10,  
10 represent remote arming and disarming units for the intrusion  
11 portion of the system, and that has nothing, nothing whatso-  
12 ever to do with the fire portion. These devices are normally  
13 mounted, for instance at a door, and you see here the CRS-1  
14 and the CRS-3, those are actually equal units in that they  
15 both accomplish the same function. The CRS-1 through the  
16 switch you see here, the key switch, is capable of bypassing  
17 for daytime operation the intrusion detection devices of the  
18 building so you can come and go in the building without trip-  
19 ping the system. The CRS-3 through its three push buttons  
20 accomplishes the same thing, you can code this that if you  
21 push these in a certain sequence it will turn the device off.

22                   Now, Figure 12 on the ensuing page repre-  
23 sents-- If you will bear with me for just one minute. See  
24 this terminal strip here, I am referring to Figure 2 on  
25 Page 3, you see the terminal strip here, and if we go to

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1 Figure 12, this is that same terminal strip. You can see here  
2 off of Terminal 6 and 7 this is your fire alarm and smoke  
3 detection circuit, this is where your thermal detectors and  
4 ionization detectors would come off the panel and you would  
5 run your wiring out through the building. All supervision  
6 and alarm indications are transmitted back and forth through  
7 this pair of wires into the panel.

8 Directly below that on Terminals 8 and 9 is  
9 the bell circuit, this is for the internal bell to the building  
10 for alerting personnel in the building. This is the circuit  
11 that gives your output for ringing the bells.

12 Now, on the opposite side, on the secondary  
13 terminal strip, Terminals 21 and 22 are your intrusion  
14 circuit, this circuit is the circuit that your doors and  
15 everything would have been wired to. Again, on that same  
16 side you will see also-- Pardon me, I am reading numbers  
17 wrong here. Terminals 18 and 19 are your intrusion circuit,  
18 I apologize for that, it's 18 and 19, and these are the  
19 pair of terminals that all of your intrusion devices, the  
20 contact devices on the door, magnetic tape on the windows  
21 would have been wired into this loop here.

22 Down at Terminals 21 and 22 you have alarm  
23 relay contacts, which I will hopefully depict to you more  
24 clearly on the board. These two terminals are activated by  
25 any intrusion or alarm, and they give you a resultant auxiliary

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1 action out in this case to a dialer. In other words, a  
2 dialer tied into that point. You have a set of terminals  
3 again on the other side for the same function for fire, in  
4 Terminals 10 and 11.

5 Q Mr. Stuart, would you show on that diagram  
6 again where the dialer comes into the control pane.

7 A The dialer actually would be tied into this  
8 set of terminals here, as well as this set of terminals here.  
9 In other words, Terminals 10 and 11 and Terminals 21 and 22  
10 because it's two circuits, we want to be able to differentiate  
11 as between intrusion and burglary or fire because it's impor-  
12 tant that we are able to discriminate between these two.

13 Q Mr. Stuart, you have something you want to  
14 do on that board, and would you please go ahead and proceed.

15 A All right. Just trying to clarify a little  
16 further what we have been talking about here, if you will,  
17 just by a simple block diagram. If we say this is our main  
18 control panel, this panel has, as you saw from looking inside,  
19 it appears to all be one unit, but in actuality, collectively  
20 speaking, you have a section in there that is segregated and  
21 dedicated to fire alarm and supervision, and you have a sec-  
22 tion in there that is dedicated and segregated for burglary  
23 or intrusion alarm and supervision..

24 You also have on a split basis here two  
25 forms of power coming into that, one being AC, which is your

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1 normal house-type current, and you also have DC batteries,  
2 the two batteries I showed you in the lower portion of the  
3 picture, and these provide dual sources of power, the DC to  
4 take over anytime you lose the AC.

5 The next portion we have here coming off  
6 of this circuit and down and off of this circuit and down into  
7 a small logic bank here, and by logic I mean this unit is  
8 capable of discerning the difference between this input or  
9 this input into an audible output circuit.

10 Now, what the audible output circuit does  
11 is, upon a burglary-type alarm being transmitted it says to  
12 this unit down here, I have a burglary, and we go out to our  
13 bells and we ring them on a steady ring basis, they just turn  
14 on and they stay on. It also has the ability of saying, I  
15 don't have a burglary indication, I have a fire alarm indica-  
16 tion, I will again turn this on but this time I will pulse  
17 the circuit so that the people in the building will know that  
18 this is a fire indication rather than an intrusion situation.

19 Now, if at any time the burglary alarm is  
20 coming in and a fire alarm situation develops in conjunction  
21 with this, the panel again automatically will convert to a  
22 pulse because life safety based on a fire condition is more  
23 important than intrusion. So, this is an automatic capability  
24 of the panel.

25 The other portion of the panel down here,

077



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1 coming off of the fire circuit first of all, we come in and  
2 we have a set of normally open dry contacts, and by "dry" I  
3 mean there is no voltage or anything there, it's just like an  
4 open light switch. This is directly affected and only affected  
5 by the fire circuit. You have another set of contacts in the  
6 same area again that are open that are dedicated to burglary,  
7 only again they are dry contacts. Anytime that we get a fire  
8 indication these contacts will close. Anytime we get a  
9 burglary indication, these contacts here will close. In the  
10 case we are talking about here, these two outputs are going  
11 on down to a telephone dialer to give it its discrimination  
12 on the message it's going to transmit.

13 Now, up here on the fire circuit, I want  
14 you to be fully aware of this, I talked to you this morning  
15 about an end-of-line termination device, and in this case it's  
16 a resistor. The panel is looking down this line for a fixed  
17 resistance value. If the panel sees a shorted condition where  
18 in effect you close the circuit here, and these are representa-  
19 tive of the detectors be they thermal or ionization, if it  
20 sees a shorted condition where you are now ignoring the resistor,  
21 it reads this as an alarm. It then does the other activations  
22 I have talked to you about.

23 If you break a wire here, now the panel is  
24 trying to look down and back, but because we have a broken  
25 wire here it can't get all the way back with this signal, and

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1 it will then tell you through an internal audible device that  
2 you have trouble on this circuit.

3 Are you clear on this portion of it?

4 MR. DOBBINS: I don't think you can ask the  
5 jury that.

6 THE WITNESS: I am sorry, you have to for-  
7 give me. I do this from a training standpoint, and  
8 I am trying to train everybody here.

9 Q What type of audible device does the control  
10 panel have within itself?

11 A It has a small buzzer-type unit, and they  
12 normally run between a 75- and 80-decibel output.

13 Q What would be the effective range of that  
14 buzzer?

15 A In an area such as this, with the door open,  
16 you could hear it out in the hallway. With the door closed  
17 and the acoustics of this room, no, it's not going to pene-  
18 trate beyond those doors, realistically speaking.

19 Q Would a person walking by the door be able  
20 to hear it?

21 A In normal conditions, unless you have an  
22 extreme amount of noise outside, yes. It is designed within  
23 the parameters of Underwriters' Laboratories, and other  
24 agencies of this type, they set certain decibel type of out-  
25 puts for alerting purposes.

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1           Q           Then the purpose for the alarm for the self-  
2 contained alarm in the control panel is what?

3           A           It is to advise you of the fact that you  
4 have an interruption in your supervisory fire and smoke detec-  
5 tion circuit.

6                       Now, we have said here that we are looking  
7 for basically a shorted condition in either ionization or  
8 thermal detectors that will give us an alarm back. If we  
9 have a closing either through wiring interruption or removal  
10 through one of these detectors, we get a trouble condition  
11 because we can no longer see our end-of-line device.

12                      Now, in the case of the burglary circuit  
13 we have a little different situation. The burglary circuit  
14 again is a loop, but in this case our contact devices are  
15 around through the loop.

16           Q           These devices now, where would they be placed  
17 in the building?

18           A           These devices would be represented in the  
19 form of a magnetic contact on a door in that when the door is  
20 closed you have a magnetic switch that is kept closed by a  
21 magnet mounted on the door itself. The switch is actually on  
22 the door jamb. When you open the door it loses its magnetic  
23 influence, it will open up here. So here we are looking for  
24 a constant closed loop. If we get an interruption of any kind,  
25 we get an alarm.

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77.

1                   Now, another form of detection capability  
2 in this type of system is what you have all seen on department  
3 store windows, intrusion tape, it's foil tape, you have all  
4 seen it, and they will run it around the outer perimeters of  
5 windows. The concept there is that the tape is actually a  
6 conductor, it will conduct a low current. So instead of having  
7 a switch here, actually let's say this portion of the wire here  
8 is tape on a window, we are just coming off this contact over  
9 to a window and running through the tape and onto the next  
10 device. Again, if you break the tape you have effected the  
11 same thing.

12                   So in this case here, this circuit is look-  
13 ing for a closed loop at all times. With the type of alarm  
14 devices that were utilized here, the condition we are looking  
15 for as far as an intrusion alarm was that the circuit was  
16 broken or opened up.

17                   Now, there is one other feature of the  
18 system, and you will have to pardon me here, things are get-  
19 ting a little jumbled up, but in conjunction with the burglary  
20 circuit I showed you the little key switch and push button  
21 switch units. They can be remotely located oftentimes at  
22 doors, and what this unit does in effect is you come up to  
23 your door in the morning, and if you open that door without  
24 doing anything else the panel can't say, hey, you are friendly  
25 and the person last night was hostile, I will let you in. The

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1 panel just knows that the door is open. So you have this unit  
2 with a special key or a coded push button switch by which you,  
3 and the terminology we use is "shunt," you shunt out this cir-  
4 cuit, you in effect provide a secondary shorted path across  
5 here so it doesn't have to look all the way down through here,  
6 then you can come and go through the day without the system  
7 going into alarm every time that someone comes in or out of  
8 the room.

9 Now, the whole thing about it, at night as  
10 your supervisory position, when you get ready to leave the  
11 building, you lock the door, you arm the system again from  
12 this remote station. If for any reason you have left the  
13 back window open, the back door is open, you immediately  
14 are going to get an alarm so you will again shut it off and  
15 go back in and conduct a survey of the building. So by virtue  
16 of that continuously closed loop it provides its own super-  
17 vision.

18 Now, keep in mind that as far as the alarm  
19 outfits are concerned, there is one common thing, which is the  
20 audible bell circuit, and yet we do discriminate as to the  
21 type of alarm the panel has received either through the steady  
22 ring or the pulse bells. And, we have individual dedicated  
23 dry contact relays, and they are actually there to complete  
24 a circuit in a telephone dialer or any other type of equipment  
25 that you might want to tie into the system.

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79.

1           Q           Now, Mr. Stuart, you mentioned earlier in  
2 your testimony that on the control panel, I believe either the  
3 middle switch or the one to the left, that there was a battery  
4 test button?

5           A           Right.

6           Q           How would one, if I wanted to walk up to the  
7 machine and test the batteries, how would I do it?

8           A           Well, the only thing you have to do is to  
9 press that button because what you do is lock out your in-  
10 coming 110-volt normal house current which this panel operates  
11 off of, you are locking it out.

12          Q           If I press that button what would occur?

13          A           At the point you would press that button  
14 you will get a pulsing tone, and you can also then go to your  
15 other test feature, which is your switch No. 1, which is your  
16 bell test, and by pressing it too you can assure that you have  
17 the current there to operate your bells.

18                   THE COURT: Suppose the battery isn't work-  
19 ing, what do you get?

20                   THE WITNESS: You have a very quiet period.

21          Q           Now, I want you to explain to the ladies  
22 and gentlemen of the jury, you have stated that the fire and  
23 intrusion functions are wholly separate and apart, is that  
24 correct?

25          A           Right.

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80.

1           Q           What effect, if any, on the fire portion,  
2 does my, when I come in the building in the morning, sticking  
3 the key in that key receptacle, what effect does that have, if  
4 any, on that fire portion?

5           A           This has no effect, this is on a totally  
6 segregated intrusion circuit, it has nothing to do with the  
7 fire circuit.

8           Q           How would one go about turning off the fire  
9 circuit?

10          A           Well, you have a common power supply. So if  
11 you want to, for use of a better term, turn off this, then you  
12 are going to turn off the whole panel by disabling both forms  
13 of power that you have, the AC power coming in, and in the  
14 case of the standby battery, disabling the battery input also.

15           THE COURT: Does that type of disabling give  
16 you any type of signal?

17           THE WITNESS: No. Once you have done that,  
18 Your Honor, you have just exceeded the panel's  
19 capability to overcome our own human incompetence,  
20 or whatever term you want to use there. I am refer-  
21 ring to the fact that you always have to have in  
22 this type of system human operation of certain func-  
23 tions in it.

24           Q           Now, one more question, Mr. Stuart. With  
25 respect to this model control panel that your company manu-

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1 factures, if the internal bell were sounding is there any  
2 mechanism on that control panel that would stop that bell  
3 from ringing?

4 A No. Well, the only thing that you could  
5 possibly do, and it would require that you stand there and  
6 hold your finger on it, is hold the reset button down because  
7 you are in effect locking out the circuit.

8 Q So, you would have to disable the power  
9 source?

10 A Well, that's one way of stopping the bells  
11 from ringing, yes.

12 Q Mr. Stuart, you mentioned if for instance  
13 the intrusion system had a break-in and was sounding an alarm,  
14 what effect, if any, would a fire condition have on the type  
15 of signal that was being given internally?

16 A You are saying now if you already had an  
17 intrusion alarm condition?

18 Q Correct.

19 A The fire has a capability of overriding on  
20 your bell circuit and changing the bell alarm mode to notify  
21 people because, as I said before, fire overrides everything  
22 else, that is our primary responsibility to people in the  
23 building. At the same time, as I told you before, you have  
24 two separate relays, one dedicated to burglary, one dedicated  
25 fire, so even though the burglary was activated, the fire relay



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1 would also activate, and then you get into a situation of the  
2 ability of whatever remote equipment you might have attached  
3 to that, its ability to discriminate between the two alarms.  
4 But the circuit in this case would be closed and completed  
5 for both indications to be transmitted.

6 MR. HEILIG: Answer Mr. Marks' questions.

7 MR. MARKS: I don't think you need the dia-  
8 gram for my questions.

9 MR. HEILIG: Judge, could I have that diagram  
10 marked?

11 THE COURT: Yes, sir. Plaintiff's Exhibit  
12 No. 5.

13  
14 CROSS-EXAMINATION

15 BY MR. MARKS:

16 Q Mr. Stuart, do I understand correctly that  
17 in order to silence the bell where it is ringing on intrusion,  
18 you can do so by restoring the intrusion circuit or by elimi-  
19 nating the circuit itself with the key switch?

20 A Yes, sir, on the intrusion side.

21 Q On the intrusion side?

22 A Yes.

23 Q This in itself should have absolutely no  
24 bearing on the fire system?

25 A That's right, they are separate circuits.

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1 Q If anybody tampers with the fire side cir-  
2 cuit, if I understand correctly, you get a buzzer alarm or an  
3 audible alarm of some kind?

4 A If there is anything that is done in connec-  
5 tion with the detector circuit itself, okay, you would get a  
6 trouble indication because you have interrupted a supervised  
7 loop, if you will.

8 Q How often or how long is the battery life  
9 in one of these units?

10 A The batteries of the type that were used  
11 here is normally recommended that at a minimum they be tested  
12 annually, and we do not manufacture the battery, based on the  
13 manufacturer's recommendation, but it is our basic recommenda-  
14 tion that they be tested a minimum, and I am talking about  
15 tested with a meter in addition to the other tests that would  
16 be run on a periodic basis, that they be tested once every 12  
17 months, and strong consideration being given, irregardless of  
18 the condition of the batteries, to the changing of those  
19 batteries because they are a dry-cell battery.

20 Q Did you ever personally see the system as it  
21 was installed at Berrington Street, the Virginia Heart Insti-  
22 tute?

23 A No, sir, I have not.

24 Q Do you know from any records that your  
25 company has exactly what went into the system in the way of

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1 batteries?

2 A We have no direct record of what went into  
3 the system other than records that are maintained by our  
4 distributor who actually sold the equipment.

5 Q So that from your personal knowledge you  
6 have nothing?

7 A No, sir.

8 Q Do you know from your own knowledge how many  
9 thermal detector units there were in the place?

10 A I do not know it right at this moment, no.  
11 We did at one point in time have an opportunity to look at an  
12 engineer's drawing.

13 Q You don't recall how many there were?

14 A No, sir.

15 Q You don't know whether they were all put in  
16 either, do you?

17 A No, sir, I do not.

18 Q Do you know how many of those key operating  
19 switches were actually installed in this situation?

20 A I cannot recall as to the exact number. My  
21 recollection, based again on having seen those prints a con-  
22 siderable number of months ago, was that there was one or two  
23 of them, one sticks in my mind, but I cannot be positive.

24 Q Do you know for a fact that there was any  
25 detection device on the windows?

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1 A No, sir, I do not.

2 Q In your brochure, which I believe was intro-  
3 duced as Plaintiff's Exhibit No. 4, do you have that in front  
4 of you?

5 A Yes, sir.

6 Q Do you know whether in the actual installa-  
7 tion option No. 2 shown on Figure 12, which is the transformer  
8 option, was used or whether this was directly wired on the  
9 high-voltage phase of it?

10 A According to the information that I received  
11 approximately a year ago, this was to have been a direct-wired  
12 installation rather than using the plug-in transformer. I  
13 cannot be positive of that again because I was not physically  
14 in the site.

15 Q Do you know whether or not it was set up on  
16 a basis where it was a plug-in installation or do you know  
17 whether it was directly wired?

18 A No, sir, I do not.

19 Q Do you have any indication as to what the  
20 fusing on the line was that served it?

21 A As far as the circuit breaker, no, sir. The  
22 only fusing information I could provide would be the internal  
23 fuse, which is a standard part of the control panel.

24 Q What function does that internal fuse play?

25 A It is our own personal protection, if you

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1 will, because normally these units are powered off of circuits  
2 that will naturally pass a much higher current than the panel  
3 will withstand, and this is our own circuit protection against  
4 overvoltage or anything like that.

5 Q What effect would the removal of that fuse,  
6 which is integral to the panel, have on its operation?

7 A The panel would sense this from a standpoint  
8 of not having any AC power input anymore and automatically go  
9 to the battery source.

10 Q Would it sound any alarm of any kind?

11 A No, sir.

12 Q Would that have any effect on the bell,  
13 taking that fuse out?

14 A No. Again, the bell is a DC audible device  
15 and it would operate off of the batteries.

16 Q So, one could not then silence the bell by  
17 pulling that fuse?

18 A No, sir, not as long as you have the battery  
19 circuit in there.

20 Q As long as the batteries are in there and  
21 have enough energy in them to activate the circuit, is that  
22 correct?

23 A That's correct.

24 Q These two 12-volt batteries that are shown  
25 on Figure 2 on Page 3, are they wired in parallel, or are they

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1 in series so that you have a 24-volt capacity here?

2 A They are a 24-volt capacity.

3 Q So that the current from one runs through  
4 the other, and they are not independent of each other?

5 A No, sir. The system is dependent on both  
6 units being of an acceptable level of output.

7 Q If one of them is bad, which was my next  
8 question, this affects the operation of both?

9 A Very certainly.

10 Q Now, under what circumstances would the  
11 batteries be called upon to power this system? Would that be  
12 only if the high-voltage current is cut off for one reason  
13 or another?

14 A That is correct, it is to provide protection  
15 in the event of commercial power outage.

16 Q Now, you have told us, I believe, that any  
17 interference in the circuitry of the fire side which affects  
18 the ability of the machine to sense a complete circuit through  
19 that resistor on the end triggers an audible alarm?

20 A Right, at the panel.

21 Q At the panel?

22 A Yes, sir.

23 Q Would, for instance, unhitching one alarm  
24 unit from the ceiling have that effect?

25 A Yes, sir.

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1 Q So that if one of them is not operative  
2 because it has been removed, the panel would know it and  
3 would talk about it?

4 A That is correct, that is one of the primary  
5 purposes of that supervision, to prevent a loss of a device  
6 without knowledge.

7 Q Now, these ionization detectors are elec-  
8 tronic devices, are they not?

9 A That is correct.

10 Q And while I realize that in today's age  
11 of electronics there is less ability to interfere or tamper  
12 or whatever it might be than it used to be years ago, it is  
13 conceivable, is it not, that something could get in here and  
14 mess it up?

15 A Well, you only have two components in that  
16 detector, as far as the detector itself not being operable,  
17 that can enter into its lack of operation. First of all there  
18 are no moving parts in the ionization detector. The two  
19 elements that are utilized in the detector, number one is  
20 americium 241, a-m-e-r-i-c-i-u-m, which is a radioactive  
21 element. The other component is a small power transistor,  
22 and these are the only two components. The americium 241 has  
23 a half life in competence. For our purposes here we can say  
24 very conservatively in excess of 100 years. The transistor,  
25 although it does not have any form of direct supervision on it,

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1 is rated in thousands of firings as far as its ability to  
2 respond.

3 Q It's rated how did you say?

4 A Pardon me, I keep dropping into vernacular  
5 here. We refer to a detector activation as a "firing."

6 Q A firing?

7 A Yes, this comes from-- I won't even get  
8 into where it comes from, but that transistor is rated for  
9 activations well in excess of what you would normally find in  
10 any type of building today here, be it an accidental alarm  
11 or whatever.

12 Q Now, did I understand you to say that if  
13 you had a sudden influx of water into a ceiling, for instance,  
14 and water settles down into some of these systems, that it  
15 might affect them?

16 A Yes, sir, it can.

17 Q What effect can it have on them?

18 A Well, first of all, the detector has two  
19 chambers. One chamber we refer to it as a "reference chamber,"  
20 and what it is in effect doing is sitting there as a judge,  
21 if you will, saying to the other chamber of the detector,  
22 which we call a "sensing chamber," I don't want you to respond  
23 to anything other than this parameter of conditions, I am  
24 smarter than you, if you will, and if you admit into the  
25 sensing chambers steam, water vapor, or a direct stream of



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1 water you will cause a current shift which will in effect  
2 activate the detector because it will in effect overwhelm  
3 the detector. There are a multitude of different products  
4 that can generate an alarm condition. Again, this goes back  
5 to what I was saying this morning about design determining  
6 what you use in any particular area based on what's happening  
7 in that area.

8 Q What happens when one of them gets over-  
9 whelmed?

10 A Well, it would go into an alarm condition.

11 Q It will call for an alarm back on the board?

12 A Yes.

13 Q Now, is there any way in which it could not  
14 or would not call for an alarm back on the board but on the  
15 other hand might just sit there in that situation? Suppose  
16 it gets in the other side, the water gets in the transistor  
17 side of the pickup side?

18 A If it gets into that side, because that side  
19 is on the side where electrical conjunctions are made, your  
20 junction box, in all likelihood you are going to end up with  
21 a panel seeing it short-circuited because of the water con-  
22 ducting between the negative and positive terminals.

23 Q This would activate the buzzer?

24 A No, that would be transmitted as an alarm  
25 because we are looking for a short-circuit type situation,

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1 it is a current shift.

2 Q Now, let's go on from there. Is there any  
3 way to silence the bell so that it will not ring under either  
4 intrusion or fire situations?

5 A Disconnect it.

6 Q And that would require going to the panel,  
7 removing the wires that connect the bell to the panel?

8 A Not removing the wires. The bell is a  
9 plug-in type device, it has a lock screw that locks it down,  
10 and then it's just pulled out. Once it is pulled away from  
11 its mounting plate there are two prongs there just like you  
12 will see in a common household outlet plug.

13 Q In other words, it would be comparatively  
14 simple for me to grab the bell or grab a part of it and pull  
15 it out?

16 A Well, comparatively simple from the stand-  
17 point of first of all you do have a lock screw that is not  
18 labeled as to its function. It would if you had had someone  
19 demonstrate it to you in the past.

20 Q Is it this hexagonal thing on the face of  
21 the audible thing, Figure 4?

22 A No, sir. If you can see on Figure 4, it's  
23 right down at the bottom, it looks like a little imperfection  
24 in the circular of the bell. It's down there.

25 Q Would that take a screwdriver?

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1           A           Screwdriver or small pair of pliers could  
2 be used to turn the screw, obviously.

3           Q           If you do that to take the bell out and the  
4 bell is no longer there on the wall?

5           A           Right.

6           Q           So that if that is done the bell can't ring?

7           A           That's right.

8           Q           If the bell rings, the bell has got to be  
9 there?

10          A           Yes. If it does any other way, I don't  
11 want to be around.

12          Q           Are you knowledgeable at all as to what  
13 effect removing the ability of the bell to ring would have on  
14 the output of your panel to the dialer, assuming that that  
15 was connected?

16          A           The bell circuit is totally segregated from  
17 the alarm relays that I referred to in the drawing up here.

18          Q           So, it should have no problem at all?

19          A           The relays would not in any way be affected  
20 by that.

21                   THE COURT: You stop the bell by either  
22 taking it off physically or stopping the energy  
23 source to the units, both of them, AC and DC?

24                   THE WITNESS: That's correct.

25          Q           If one presses one of these test switches,

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1 whether it be the battery switch or the reset switch, and  
2 then releases it, what happens? Does it snap back?

3 A Yes.

4 Q It is a spring-loaded switch, so it does  
5 not stay depressed?

6 A Right, it is a momentary contact switch.

7 Q In order for it to interfere at all it has  
8 got to be held down?

9 A That's correct.

10 THE COURT: Let me suggest to you whether  
11 there is not a third way to stop the bell. De-  
12 energizing the intrusion system, the burglary system,  
13 and you don't have a fire?

14 THE WITNESS: If you have in effect shunted  
15 out the burglary circuit, yes, and you don't have a  
16 fire condition come in, obviously the bell has no  
17 reason to ring.

18 THE COURT: So, you could be wide open,  
19 door open, if you take the keys off and have taken  
20 the switch and cut out the intrusion system and you  
21 don't have anything to energize the fire system, you  
22 are not going to get a bell?

23 THE WITNESS: That's right.

24 Q Assume that there are two key switches, one  
25 on the back door and one on the front door. Do both of them

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1 have to be opened or shut as the case may be, or do they  
2 operate on a circuit so that opening either will deactivate?

3 A They can be wired in several different ways.  
4 They can be wired so that any number of switches would in  
5 effect shunt the whole circuit out, or they can also be wired  
6 so that they are only shunting out the contact device at that  
7 particular door.

8 Q You wouldn't know what was done in this  
9 particular case?

10 A No. The normal configuration that is  
11 recommended is that the only thing you are shunting out is  
12 the location that you wish to gain entry through at that  
13 particular point.

14 Q Now, going on from there, let's assume  
15 that somebody removes the key activated switch from the rear  
16 door and bundles it up in tape after it has been cut off, or  
17 whatever it might be, and leaves it with its wires still  
18 connected to it however, and gets it out of the way for  
19 purposes of work on that door or removal of the door and  
20 revision of the entrance. What effect would that have on the  
21 system as a whole?

22 A As long as your circuit is complete, as long  
23 as you have all of your wiring still going to the switch,  
24 there is nothing that says that it has to be physically  
25 attached to the building as far as the intrusion portion is

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1 concerned. Again, this switch has nothing whatsoever to do  
2 with the fire portion, so it shouldn't affect it at all.

3 Q It shouldn't affect the intrusion system  
4 at all?

5 A As long as it's properly wired.

6 Q As long as it's hitched up and still active?

7 A As long as all your connections are made,  
8 that's correct.

9 Q Now, I come to one last thing. Are you  
10 knowledgeable as to the various steps that are taken in con-  
11 nection with installation of such devices as these that you  
12 have been describing?

13 A Yes, sir, I am knowledgeable. I have been  
14 a supplier and installer of this equipment prior to my going  
15 to work for Pyrotronics.

16 Q What I am about to ask you, would extension  
17 of the system to new locations affect the old system, provided  
18 it was not connected to it?

19 A No. Let me ask you a question.

20 Q All right.

21 A You are saying if you wanted to add a circuit  
22 totally independent of this panel?

23 Q Yes, sir.

24 A No, it has no effect. It's like saying if  
25 I turn the light off in this room will the light in the next

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1 room go off. They won't, unless they are on the same pair of  
2 wires.

3 Q Now, let's assume that it's connected to  
4 the same panel, would that affect the operation of the part  
5 of it that was there first?

6 A Yes, because now you are adding devices and  
7 components into two closed loops. Whether you are going into  
8 the intrusion portion or the fire portion, it would be  
9 affected from the standpoint of you would have to do it in  
10 the proper way. There is a lot more terminology you could  
11 use, but that in a nutshell says it. It would have to be  
12 installed in a proper manner or you could have trouble indica-  
13 tions, erroneous alarm indications, there are a multitude of  
14 things.

15 Q But there would be an immediate indication,  
16 would there not?

17 A Not necessarily an immediate indication.

18 Q How long would it take for it to indicate?

19 A If I may, in the detection circuit you can  
20 see there on the drawing where I show you two wires coming  
21 out of the panel and going to an end-of-line device, and if  
22 I may approach this--

23 Q That's the transistor, I mean the resistor  
24 thing at the end of the circuit?

25 A Right.

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1           Q           All right, go ahead. That's in that top  
2 loop.

3           A           Here are a couple of things that you can do  
4 and the system will not know about it, and yet it can affect  
5 its ability to respond. If you decide that you want to add  
6 another detector in this circuit, for instance, the rules of  
7 how this circuit operates dictate that you remove the end-of-  
8 line device from here, and when the detector is physically  
9 adjacent to this, electrically you will make it adjacent to it,  
10 you will have your initial detector in here and put your end-  
11 of-line device back in. That's something that can be done,  
12 and you end up then with an unsupervised circuit. There are  
13 instances where it will branch off in this manner and add  
14 another detector up here. If this is done, the panel is  
15 looking this way, it's like a mule with blinders, it will  
16 run right on past this, it won't know if that detector has  
17 been tampered with in any way. So, this is what we call a  
18 branch circuit, and it is a definite no-no, if you will, in  
19 our business.

20                       Now, in the case of this circuit down here,  
21 if you are adding contact devices, any type of contact device,  
22 if you get in here and in some way in adding a device in this  
23 area here, if in the process of wiring it in, because this pair  
24 of wires conceivably could be together, if you create a closed  
25 circuit behind it then everything from here on is rather a



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1 moot point as to what happens with them because you have now  
2 given the panel a new path.

3 Q On the last installation that you gave us,  
4 that was on the intrusion side completely?

5 A Yes.

6 Q It has no effect whatsoever on the fire  
7 side?

8 A No, sir, they are segregated.

9 Q And if you wire the branch circuit, as you  
10 have it up there on the top, on the fire side, that does not  
11 affect the operation of what's below it, does it?

12 A No.

13 Q In any way?

14 A No, sir.

15 MR. MARKS: I have nothing further.

16

17 REDIRECT EXAMINATION

18 BY MR. HEILIG:

19 Q Mr. Stuart, talking about the bell, what is  
20 the power source of the bell?

21 A The bell receives its primary power from a  
22 DC power source within the control panel. Now, upon going to  
23 batteries, what we refer to as battery standby, then that  
24 circuit is taking its 24 volts off the batteries and out to  
25 the bell, but the bell is an AC-DC device.

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1 Q Is the bell being continually fed off--

2 A The bell only receives voltage on an alarm  
3 condition. Those lines are basically dead until such time as  
4 you have an alarm condition.

5 Q Does that mean the batteries, or does that  
6 mean current?

7 A Well, there is no form of output out of the  
8 panel to the bell circuit until you have either a burglary  
9 alarm or a fire alarm. There is no supervisory current or  
10 anything on those wires.

11 THE COURT: Are you asking him what the  
12 original source of that energy is?

13 MR. HEILIG: Yes, sir, Your Honor.

14 THE WITNESS: The AC power that is brought  
15 into the panel is not just fed out to the different  
16 devices. We have a portion of the control panel  
17 that will convert that 110-volt AC input into a  
18 24-volt DC direct current output to these devices.  
19 This is done for purposes of simplified electronics  
20 and ease of installation as far as wiring and hazard  
21 factors and all. So, the detectors, detector circuit  
22 is operating off 24 volts DC. The 24 volts DC is  
23 being fed through that intrusion loop, and when the  
24 alarm condition comes in that same 24-volt power  
25 supply will generate it to the bell.

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1                   Now, if you lose your 110, obviously you  
2 don't have any need to convert, so it's feeding it directly  
3 in point of time.

4                   Q           So, are you saying that batteries are only  
5 called upon to function if the power goes out to the building,  
6 is that correct?

7                   A           That is correct, it is pure and simple a  
8 standby power source.

9                   Q           Now, if you knocked out the power to the  
10 building, you would knock out the power to the control panel?

11                  A           That's correct, and it would automatically  
12 transfer to the standby batteries.

13                  Q           Now, Mr. Marks asked you about the effect  
14 of water or moisture upon the ionization detector, is that  
15 correct?

16                  A           That's correct.

17                  Q           Now, what effect, if any, and given the fact  
18 that we were at that time going through a building project,  
19 what effect, if any, would dust or sawdust or sweeping and  
20 that sort of thing have on these ionization detectors?

21                  A           The detector is designed to in effect save  
22 mankind from himself. Inasmuch as if it is not maintained  
23 properly and it does become dirty through the entrance of  
24 dust particles, dirt particles, whatever in the unit, the  
25 unit will become more sensitive, which basically means that

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1 it would have the capability of responding to a lesser fire.  
2 It will continue to drop in sensitivity to the point that it  
3 will then create what we refer to as nuisance alarms where  
4 you have no fire condition whatsoever and it just goes off.

5 Q So, would it be your testimony that--

6 MR. MARKS: If Your Honor please, that is  
7 certainly going to suggest something to him.

8 THE COURT: It's a leading question, Mr.  
9 Heilig.

10 Q State whether or not it's your opinion that  
11 sweeping in an area and sawing in an area what we would cause  
12 a false alarm with respect to that fire system.

13 A It can, yes, and it has in many instances.  
14 One of the things that we would have to insist upon in many  
15 large installations, as for instance in a hospital, as areas  
16 become finished in the hospital they will want the protection  
17 brought in, but then we have to restrict very carefully any  
18 coming back and working in that area by pipe cutters, power  
19 saws, things of that nature because they will generate through  
20 their friction means products of combustion and the detector  
21 is extremely sensitive but it is not intelligent, it is set  
22 there to respond to a condition, and it doesn't really care  
23 where the condition comes from.

24 Q Now, if I were to disable the bell, what  
25 effect would that have on the dialer?

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1 A None whatsoever.

2 Q So if there were an alarm situation and I  
3 disabled the bell, what would happen?

4 A Well, on the alarm condition coming in, if  
5 you have the bell circuit disabled, you would have no audible  
6 indication within the building, but any auxiliary functions  
7 you have tied into the panel through the auxiliary relays I  
8 pictured earlier, those relays will still function normally.

9 Q Those functions, would they be leading into  
10 a dialer?

11 A They can be used for a dialer, yes, sir.

12 Q Let me ask you this, Mr. Stuart, and maybe  
13 you can and maybe you can't answer it. Would it take any  
14 training in electrical matters for one to disable that bell?

15 A It would not take any training in electrical  
16 matters to do that from the standpoint of once you had seen  
17 it done. The other side would be in a situation where you  
18 are just determined that you are going to do something about  
19 it and you obviously would come up with the solution before  
20 too long. The device is designed for ease of maintenance  
21 and installation and a degree of difficulty in removal, but  
22 it is not tamper-proof or anything of that nature, no.

23 Q Would it take any knowledge of electricity  
24 to effectively disable the dialer or control panel without  
25 damaging the equipment?

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1           A           I would say that the natural inclination  
2 would be to stay out of it if you did not have that kind of  
3 knowledge because again you are talking terminal switches and  
4 terminal strips and voltage and everything there. Maybe I  
5 am interpreting my own feelings, but I have been around the  
6 electronics industry and electrical industry long enough to  
7 know that I don't want to stick my fingers in where I don't  
8 know what's on the terminals, and I think most people are of  
9 that nature.

10           Q           Let me ask you this, Mr. Stuart. We know  
11 that there was a switch on the rear door at the institute,  
12 and if someone were to undertake to remove that key receptacle,  
13 wrap it up in wires and tuck it under the building for storage,  
14 if someone were to do that properly there would be no alarm,  
15 is that correct?

16           A           If it's done properly and carefully, if you  
17 are doing it in conjunction with a live circuit, I would say  
18 your odds of at least one or two alarms are pretty high  
19 simply because of the physical size and everything that you  
20 are working with there.

21           Q           Well, elaborate on that a little for me,  
22 if you would.

23           A           Basically, as I said earlier, the electrical  
24 connections that are made on the back of that remote station,  
25 if they are made properly and properly insulated, that device

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1 can swing in the breeze, swing by its wires. At the same time,  
2 to endeavor to disconnect those wires in order to reconnect  
3 them at another point, first of all in order to disconnect  
4 them you are going to have to put jumpers in there so that the  
5 panel is still seeing a completed circuit. All right, and no  
6 one, I can't conceive of anyone attempting to take that device  
7 off if they were authorized to do it and still leaving the  
8 panel on simply because it wouldn't make sense, the odds are,  
9 I would say, in excess of 80% that you are going to have an  
10 alarm just by reasons of your screwdriver slipping off the  
11 terminal.

12 MR. HEILIG: That's all the questions I  
13 have of this witness.

14 THE COURT: Mr. Marks?

15 MR. MARKS: I don't have anything else.

16 THE COURT: I have one more question I want  
17 to ask you, Mr. Stuart, before you leave. If some-  
18 one were leaving a building that had the system that  
19 you talked about at a door that had one of these  
20 entry switch devices, I take it that based on what you  
21 showed us in this book, that there would be two  
22 lights out there?

23 THE WITNESS: That's correct.

24 THE COURT: Red and either white or green?

25 THE WITNESS: Correct.

1 THE COURT: The white light would mean that  
2 the system was ready to be armed, that is that things  
3 were closed up and you could turn it on successfully  
4 and not set off an alarm, that's the intrusion system  
5 we are talking about?

6 THE WITNESS: Right.

7 THE COURT: And the red light, after you  
8 turned it on, then would indicate that the system  
9 was in fact ready to prevent burglaries or break-ins?

10 THE WITNESS: We may have our light sequence  
11 out of order, but, yes, sir. What you are saying is  
12 you have basically a power light, an arming light,  
13 and an alarm light.

14 THE COURT: Three lights?

15 THE WITNESS: Yes.

16 THE COURT: Now, that's on the intrusion  
17 system only?

18 THE WITNESS: Yes.

19 THE COURT: Now, my question is, what would  
20 the existence of those lights mean with respect to  
21 the power source function, either the 110-volt  
22 reduced to 24-volt DC or the batteries' DC?

23 THE WITNESS: The intrusion circuit is such  
24 that one of those lights being a power monitor light,  
25 if you have your 110-volt AC source coming into the



1 panel, your primary power, you have a constant steady  
2 light. If you are on standby power, it will pulse.

3 THE COURT: Suppose you have no power?

4 THE WITNESS: You will not have any lights.

5 THE COURT: Anything else, gentlemen?

6 MR. MARKS: I have one question.

7  
8 RECCROSS-EXAMINATION

9 BY MR. MARKS:

10 Q If you have power on the line, you have a  
11 light, is that correct?

12 A That's correct.

13 Q And this should be visible to whoever is  
14 using that area and has the key that does the work on the  
15 switch, is that correct?

16 A That's correct.

17 Q And if you have power to that, you have  
18 power to the control panel, is that correct?

19 A That's correct.

20 Q Did I understand you to say, Mr. Stuart,  
21 that if the bell were cut off the circuit, that still wouldn't  
22 affect the lights on the front or back doors?

23 A That bell circuit is an unsupervised circuit.

24 Q That hasn't got a thing to do with the red  
25 and green or white lights on the front?

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1 A No, sir.

2 MR. MARKS: That's all.

3 THE COURT: Mr. Heilig?

4

5 FURTHER REDIRECT EXAMINATION

6 BY MR. HEILIG:

7 Q Mr. Stuart, if there is power and there is  
8 a fire and no one has tampered with the system, what should  
9 occur?

10 A Based on the type of fire condition, after  
11 an indeterminant period of time, and the basic system designs  
12 always strive to minimize this to minutes, you have an  
13 activation of a detector, be it thermal or ionization, on  
14 the circuit which would in turn give an alarm indication to  
15 the panel, your bell circuit would activate for local alarm,  
16 and your relays would close for any remote alarm signal to  
17 go out.

18 Q How long would that process take?

19 A As far as the alarm time?

20 Q Yes.

21 A Really, that's an indeterminant period.

22 The introduction of, for instance, on a thermal detector,  
23 15° shift in temperature or increase in temperature in one  
24 minute, it will alarm. Also, in the situation of temperatures  
25 going up 150° in an area, if that goes up gradually, it could

1 take an hour, it will alarm.

2 In the case of an ionization detector,  
3 minimal particles of combustion going into that detector will  
4 cause an alarm.

5 The variable factors come into considera-  
6 tion as to where the detectors were located in the room and  
7 as to where the fire starts, this is normally in terms of  
8 minutes or seconds though. It should not in any proper  
9 design, and as I said before I have looked at the basic  
10 design that was layed out for this building and it was well  
11 within the parameters of the minimal standards, it should not  
12 have taken, I would say, more than 15 minutes maximum for  
13 a smoldering-type fire to be detected, and this would be  
14 going into really some remote section of the building.

15 Q Was it also your testimony previously that  
16 the capabilities of the ionization detector-- At what stage  
17 can the ionization detector pick up a fire?

18 A An ionization detector can detect through  
19 the full range of fire conditions. The incipient stage was  
20 the first one, on through visual smoke, visual flame, and the  
21 high heat.

22 Q Now, would this time frame also be a short  
23 one, or in minutes, or seconds is what you stated, is that  
24 correct? Or, explain to me the effect of the ability of that  
25 unit to detect the products of combustion if in fact the fire

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1 started above the ceiling or above the place where the ioniza-  
2 tion detector was installed.

3 A If the ionization detector was installed on  
4 the ceiling, anything above that we are really dependent on  
5 how rapidly it develops, what type of fire that it is, and  
6 as to how long it takes to penetrate the ceiling tiles or  
7 whatever there may be to get back in on the, if you will, the  
8 right side of the detector, we have been on the wrong side.  
9 A smoldering-type fire above the ceiling, if we are not get-  
10 ting any products of combustion introduced into the room,  
11 again the detector is oblivious to this fact.

12 The other side of it is, once those products  
13 are generated through the ceiling you are going to have the  
14 capability, again based on particles coming into the proximity  
15 of the detector, you have the ability to respond in a matter  
16 of seconds.

17 MR. HEILIG: All right, thank you very much.

18  
19 FURTHER RECROSS-EXAMINATION

20 BY MR. MARKS:

21 Q Is there any way that you, Mr. Stuart, can  
22 tell how long it would take for a fire that starts above the  
23 ceiling to be sensed?

24 A Given a particular set of circumstances,  
25 yes, but there is no rule of thumb that will stand up on a

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1 day-to-day basis. If you tell me where the fire would start,  
2 where my devices are located in the room below, the type of  
3 material that is in there, there are 15 different variables,  
4 but if we have all of these variables pinned down as to  
5 exactly what they are for this particular situation, yes, you  
6 can sit down, and I would say within 30 to 60 seconds you can  
7 project what your alarm time would be.

8 Q Let me put it this way. Suppose a fire of  
9 unknown origin and it occurs in an unknown location above  
10 the ceiling and ignites first a superstructure that has been  
11 built above the old room, what is the capability of the  
12 ionization detector downstairs?

13 A Until that smoke penetrates that ceiling  
14 barrier, there is none.

15 MR. MARKS: Thank you very much.

16 THE COURT: I've got one more for you to  
17 help us on this, please, if you could, just a hypo-  
18 thetical situation.

19 THE WITNESS: Yes, sir.

20 THE COURT: If you were to take a piece of  
21 paper and put it on fire and walk underneath the  
22 sensor and hold it up, it wouldn't take very long  
23 for it to cause things to happen?

24 THE WITNESS: That's right.

25 THE COURT: The system would then start in

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1 operation, the bell would come on, and if you didn't  
2 stop it the relay would set up the auxiliary dialer?

3 THE WITNESS: Yes.

4 THE COURT: You can go in now and push a  
5 button that will stop the dialer, but you don't know  
6 about the dialer though, do you?

7 THE WITNESS: No, sir, I can't testify to  
8 the dialer.

9 THE COURT: You stop the bell by a button  
10 on this control panel, you can stop the bell?

11 THE WITNESS: By depressing the reset button  
12 and holding it down.

13 THE COURT: And that will cut the bell off?

14 THE WITNESS: Right.

15 THE COURT: Does it also re-energize the  
16 system?

17 THE WITNESS: It is re-energizing it, but  
18 you still have a thermal detector that is above its  
19 temperature maximum, or you have an ionization  
20 detector that is detecting products of combustion  
21 inside and it is still registering an alarm condi-  
22 tion, and as soon as you remove your finger from  
23 the reset button it's going to go back into alarm.

24 THE COURT: So, if you went back and took  
25 the fire and put it back up there you couldn't cut

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1 if off forever at this point, only until the condi-  
2 tion of alarm was suppressed?

3 THE WITNESS: That's correct.

4 THE COURT: Thank you, Mr. Stuart. Do you  
5 need him further, gentlemen?

6 MR. DOBBINS: We might, and I would ask him  
7 to stay.

8 THE COURT: Mr. Stuart, just wait a few  
9 minutes.

10  
11 WITNESS STOOD DOWN

12  
13 THE COURT: Ladies and gentlemen, we will  
14 take a few minutes and stretch and get freshened up,  
15 and we will come back in here in a few minutes.

16  
17 NOTE: At this point a brief recess is taken;  
18 at the conclusion of which the case continues as fol-  
19 lows:

20 THE COURT: Call your next witness, Mr.  
21 Heilig.

22 MR. HEILIG: Mr. James Newell.

23 NOTE: The witness is sworn.  
24  
25

1  
2 JAMES RAYMOND NEWELL, a witness called by  
3 the attorneys for the plaintiff, first being duly sworn,  
4 testifies and states:

5 DIRECT EXAMINATION

6 BY MR. HEILIG:

7 Q Mr. Newell, would you state your full name,  
8 please.

9 A James Raymond Newell.

10 Q And where do you live?

11 A In South Richmond.

12 Q Are you employed, sir?

13 A Yes, self-employed.

14 Q How are you employed?

15 A I am the distributor for several lines of  
16 fire alarm equipment, and as such sell this equipment.

17 Q Do you sell directly to owners of property?

18 A No. Typically we would sell to a contractor  
19 or to an installer.

20 Q Now, do you have occasion to distribute  
21 the line manufactured by Pyrotronics Incorporated?

22 A Yes, sir.

23 Q Are you familiar with the system that was  
24 installed in the Virginia Heart Institute?

25 A Yes, sir.



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1 Q How are you familiar with that?

2 A Well, I am familiar with it in having  
3 basically sold the system components that went into the  
4 building, which consisted of a Model CRC control panel.

5 Q I ask you if you can identify this, Mr.  
6 Newell.

7 A Yes, this is the type control panel that  
8 was furnished.

9 Q Is that manufactured by Pyrotronics?

10 A Yes, it is.

11 MR. HEILIG: I would ask that that be  
12 marked after he identifies it, Your Honor.

13 Q Can you identify that, Mr. Newell?

14 A Yes, sir. There is a slight deviation in  
15 the spec sheet as opposed to what was installed, I believe,  
16 but--

17 Q What was installed?

18 A I believe it was a Model 150S. This is  
19 is basically the same model. There are a number of variations  
20 of course in the model.

21 MR. MARKS: Your Honor, if this is not the  
22 one for the model that was installed, I will be forced  
23 to object to it.

24 MR. HEILIG: If Your Honor please, let me  
25 show this to the witness, and perhaps he can identify  
this.

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1 Q Let me show you that, Mr. Newell, and ask  
2 you if you can identify that.

3 A Yes, sir.

4 Q What is that folder you have?

5 A This is a brochure that we would normally  
6 prepare for the installer that basically describes the equip-  
7 ment that's on the job.

8 Q Did your company prepare that folder?

9 A That is correct, yes, sir.

10 Q Does it reflect what type of equipment was  
11 installed?

12 A Yes, sir, it does.

13 Q What type of equipment was installed?

14 A Well, it was an LSI reporter, a two-channel  
15 device, that is similar to what is reflected in this sheet.

16 MR. HEILIG: I would ask that that be marked.

17 MR. MARKS: Mr. Newell, is that thing that's  
18 in the folder, the LSI unit, identical to the one  
19 that was put in the place?

20 THE WITNESS: To be honest with you, I can-  
21 not swear to that fact. I believe that it is, yes,  
22 sir.

23 MR. MARKS: Which one is identical?

24 THE WITNESS: These, the sheets are identi-  
25 cal.

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1 THE COURT: I am going to receive it into  
2 evidence, subject to those qualifications, as  
3 Plaintiff's Exhibit 6.

4 Q Mr. Newell, did you sell that directly to  
5 the Virginia Heart Institute, or how did you go about selling  
6 that unit?

7 A This item was sold really through basically  
8 a bid process to a contractor. In other words, the price was  
9 quoted to a number of contractors who were bidding on a  
10 particular job, and it was sold based on the lowest bid to  
11 the successful contractor.

12 Q Now, was that Northside Electric?

13 A Yes, sir.

14 Q Who installed that?

15 A Northside Electric.

16 Q Following the installation of that equipment  
17 in 1972, did you inspect it following its installation?

18 A Yes, sir, I did.

19 Q What were the results of your inspection?

20 A Well, the system was simply checked for  
21 function in that it would detect products of combustion,  
22 smoke, on the fire side, and the security portion of it was  
23 checked by opening and closing doors that were protected to  
24 determine that it would function, and it did.

25 Q And following its installation did you have

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1 occasion to instruct any of the personnel or staff at the  
2 Virginia Heart Institute as to the functioning of the alarm  
3 system?

4 A Yes, sir, we did, and of course a brochure  
5 of this type was left with them.

6 MR. HEILIG: I don't have any further  
7 questions, Your Honor.

8  
9 CROSS-EXAMINATION

10 BY MR. MARKS:

11 Q Mr. Newell, did you supervise the installa-  
12 tion of the system?

13 A Yes, sir, we did.

14 Q And did you wire the control equipment?

15 A We probably would have been involved in it,  
16 at least some wiring of the control equipment, yes.

17 Q I hand you a paper, Mr. Newell, and I am  
18 going to ask you to identify it and tell us what it is.

19 A This is the original quotation that was  
20 made to Northside Electric in regard to what was then the  
21 proposed sale of the equipment.

22 Q And the original proposed wiring costs for  
23 the control equipment?

24 A This is correct. The distinction being  
25 there that typically the contractor, whether it be Northside

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1 or any other contractor that we are involved with, would  
2 provide power, AC power to the control panel, and this is  
3 simply a normal way of doing business, and we do not normally  
4 get involved with wiring.

5 Q You did the internal wiring for the panel,  
6 it was the 24-volt wiring?

7 A This is correct.

8 MR. MARKS: We will offer that in evidence,  
9 that proposal.

10 THE COURT: Received as Defendant's Exhibit  
11 No. 1.

12 Q This proposal ripened into a contract, and  
13 you did supply the equipment and you performed in accordance  
14 with it and you were paid?

15 A That's correct.

16 Q After you performed your part of the bargain  
17 and performed the inspection and all the other things, have  
18 you ever been called back out there for any purposes?

19 A Yes, sir.

20 Q For what purposes?

21 A The original callback, I believe, was for  
22 some false alarms that originated, I would say, within the  
23 first week that the system was installed, maybe within the  
24 first several days.

25 Q And what was the problem there?

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1           A           The problem was found to be a detector, a  
2 thermal detector that was installed in one of the mechanical  
3 equipment rooms or the area in which the furnaces were  
4 installed in the rear. It was found to have been damaged.  
5 The damage was very slight. This is a round sphere, say  
6 about the size of a half a tennis ball, and during the  
7 installation this had been struck or hit someplace, and  
8 there is a very sensitive bimetal in it, and it was found  
9 that that had affected the bimetal, and all you had basically  
10 to do was just touch it, and this was replaced.

11           Q           Then after that first series of problems  
12 that you have just described, were you called back on any  
13 other occasions?

14           A           Yes, sir, I was.

15           Q           When was that?

16           A           This was, I would say, maybe 60 to 90 days  
17 later, but I really can't be sure of the time. There was a  
18 problem with some lamps in the remote key stations which  
19 would be used to turn the security on and off.

20           Q           Those are the red and green--

21           A           The status lights, yes, sir.

22           Q           What was wrong there? Did they have to be  
23 replaced?

24           A           They had burned out, and we attributed this  
25 to several factors. One of the things was the fact that during

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1 this time there was construction, heavy construction going  
2 on immediately to the rear of the building in terms of the  
3 construction of the entrance way. There was pile driving and  
4 jackhammering, and this type thing going on, and the lamp  
5 filaments in these particular lamps were again very sensitive,  
6 and I attributed it to the fact of the heat buildup in the  
7 lamps and the vibrations causing them to prematurely fail.

8 Q That would be in the spring of '73 or early  
9 summer?

10 A That's correct.

11 Q After that did you go back for any other  
12 purposes?

13 A I would say after that we went maybe a year  
14 later to replace one of the key locks.

15 Q Have you ever done any changing of the  
16 batteries in there?

17 A I cannot recall changing the batteries in  
18 there.

19 Q Let me ask you this. It's in evidence  
20 that shortly before, a week or so, before December 18th,  
21 1975, maybe two weeks, there was a water problem with water  
22 coming in through the roof and dripping down into the lower  
23 level out there. Were you called upon to inspect the system  
24 after that?

25 A I believe this was during the time of

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1 construction?

2 Q Yes.

3 A No, sir, I was not.

4 Q This is while the work was going on, put-  
5 ting the new addition on.

6 A Right.

7 Q Are you knowledgeable at all, Mr. Newell,  
8 with respect to the status of the new addition as of the 18th  
9 of December, 1975?

10 A Yes, sir.

11 Q What is your knowledge?

12 A Well, I believe, as I can recall, the  
13 second floor was roofed in in terms of the carpentry work  
14 and this type thing.

15 Q How did you learn that?

16 A I happened to be on the job, I am not sure  
17 about this, it might have been 30 days before the fire, I  
18 am not sure of the exact date, to deliver some wire that was  
19 to be used in the addition.

20 Q New wiring and new detectors had been  
21 ordered from you on this addition as well?

22 A Yes, sir.

23 Q And that was what you were delivering?

24 A Yes, sir.

25 Q Had all of the equipment for the new addi-



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1 tion been delivered to the job site?

2 A No, sir, only the wire.

3 Q Only the wire?

4 A Yes, sir.

5 Q No units had been delivered?

6 A No other pieces.

7 Q For that upstairs section there would have  
8 been some heat detectors or some smoke detectors of some  
9 kind, would there not?

10 A Yes.

11 Q Do you recall what they would have been?

12 A I am reasonably sure they would have been  
13 smoke detectors.

14 Q This would be the ionization detectors?

15 A Yes.

16 Q And what about intrusion alarm?

17 A I do not believe that there was any addi-  
18 tional intrusion alarm to be involved.

19 Q Let me ask you this. As originally set  
20 out, were there any intrusion alarm devices on the windows  
21 in the place?

22 A There was the typical window foil which is  
23 used on storefront windows, yes, sir, and there were magnetic  
24 contacts on both the front and rear door, and one interior  
25 office door.

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1 Q What interior office door had a magnetic  
2 contact?

3 A I believe it was the door to an area on  
4 one of the front offices that had the copy machine, I believe,  
5 and the control equipment for the security system.

6 Q Did that have a key switch, that magnetic  
7 switch?

8 A I don't know.

9 Q Would the key to be used in the back or  
10 the front key switch take that one out of the system as well?

11 A Yes, sir.

12 Q Mr. Newell, can you tell us whether you  
13 yourself are familiar with the way in which the control  
14 panel was set up under your supervision?

15 A I don't understand really what you mean.

16 Q Did it have a transformer, or did it have  
17 direct high-line current?

18 A I believe that it had direct high-line  
19 current on the fire line panel itself.

20 Q Did it have any batteries?

21 A Yes, sir, it did.

22 Q Are you familiar with the make, model, and  
23 size of those batteries?

24 A There were two. As far as the combination  
25 fire-security panel, there were two 12-volt batteries, what

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1 typically are called lantern-type batteries, dry cell bat-  
2 teries.

3 Q Plain dry cell batteries?

4 A Yes, sir.

5 Q They were 12 volts each?

6 A Yes, sir.

7 Q Were they wired in series?

8 A Yes.

9 Q So, they supplied then 24 volts?

10 A That is correct.

11 Q And in the dialer which you supplied, I  
12 believe, is there an auxiliary power supply in that?

13 A Yes, sir.

14 Q What does that consist of?

15 A Three dry cell batteries of 6 volts each.

16 Q Are they series, or parallel?

17 A That's series.

18 Q So, it was 18 volts on the dialer?

19 A That is correct.

20 Q That's independent of the high line, the  
21 regular circuit, electric circuit, 115 volts?

22 A They were, I believe, on the same circuit.

23 Q What I am trying to get at, would removal  
24 of the 115-volt service for the dialer have any effect on  
25 those batteries other than to pull them into operation?

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1 A No.

2 Q What function do they serve, assuming they  
3 are called upon to serve any at this point?

4 A They would strictly be designed to power  
5 just the telephone dialer itself.

6 Q It had no bearing on the detection system?

7 A No, sir.

8 Q The detection system had no bearing on the  
9 dialer, is that correct?

10 A That's correct.

11 Q In connection with the dialing system, did  
12 that have 115-volt service to it?

13 A I believe so.

14 Q And it had a means of converting that into  
15 the 18 volts that was needed to operate the interior workings  
16 of it?

17 A That's right.

18 Q How often is it necessary to replace those  
19 three 6-volt batteries?

20 A It's really difficult to say, it would  
21 depend really on how often the dialer may have been exercised  
22 on battery.

23 Q Do they have shelf life?

24 A I am sure they do, but I am not that  
25 familiar with the batteries.

J. R. Newell - Cross

127.

1 Q How often do you recommend checking them  
2 and replacing them?

3 A I would say certainly annually.

4 Q Do you know whether that was ever done in  
5 connection with Dr. Baird's establishment?

6 A I have no--

7 MR. HEILIG: Objection, Your Honor. I  
8 think he can testify as to whether or not he ever  
9 did, but I don't think he can testify as to whether  
10 anybody else did.

11 MR. MARKS: I asked him whether he knew  
12 whether it had been done, and he would certainly  
13 know whether it had been done.

14 THE COURT: The objection is overruled.

15 A I really don't know.

16 Q You don't know, okay. And you don't know  
17 anything about the replacement of the batteries in the control  
18 panel?

19 A No, I do not, sir.

20 Q Would it be recommended that they be  
21 handled on the same annual basis?

22 A Yes, sir.

23 Q What is their appearance, what do they look  
24 like, the batteries in the dialer?

25 A The batteries in the dialer are again three

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1 6-volt cells that are lantern type, but they are of a little  
2 different construction than the 12-volt type.

3 Q Tell us, if you will, how this dialer  
4 operates, assuming it gets a signal saying to do something.

5 A The dialer would simply receive a signal  
6 from something, regardless of whatever it be, a contact  
7 closure or what have you, a meter would start in the dialer  
8 and simply propel a tape, a prerecorded tape, across a tape  
9 head and it would run very much like a tape recorder.

10 Q Let me ask you this question, Mr. Newell.  
11 If I assume that this is an intrusion alarm that is called  
12 upon to activate the dialer, does it know that it's an  
13 intrusion alarm?

14 A Yes, it would.

15 Q How does it separate a message for intru-  
16 sion?

17 A In this particular case it simply said, yes,  
18 this is a recorded message reporting an intrusion as opposed  
19 to a fire.

20 Q How about fire, did it say this is a recorded  
21 message reporting a fire?

22 A That is correct.

23 Q And what happens if when it calls it gets  
24 a busy signal?

25 A It simply would go to the next call. In

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1 other words, it runs for a prescribed period of time.

2 Q How long is that?

3 A Typically five minutes.

4 Q Now, is that five minutes in total?

5 A Five minutes in total.

6 Q So that if it does not get answered in  
7 the first call it then goes to the second call?

8 A That is correct.

9 Q And if it doesn't get answered on the  
10 second call it then goes to a third call?

11 A That's correct, it goes whether it gets an  
12 answer or not.

13 Q It does it in any event?

14 A Yes.

15 Q But it is an automatic thing that lasts a  
16 total of five minutes?

17 A That is correct.

18 Q And then what happens?

19 A It simply shuts off. It has a piece of  
20 metallic tape on the drive which is sensed by the mechanism,  
21 and the inertia of the motor running causes the tape to  
22 actually go beyond this a little bit, but it acts as a break  
23 and resets itself.

24 Q That metallic tape now, you say it resets  
25 itself?

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130.

1 A Yes.

2 Q Does it repeat its effort for five minutes?

3 A No.

4 Q Once that five minutes is up and no tele-  
5 phone has been answered, let us say, you are a dead duck as  
6 far as the dialer is concerned, is that correct?

7 A That is correct.

8 Q Would silencing the alarm bell on the  
9 control panel, the interior alarm bell, have any bearing on  
10 the ability of the control panel to activate the dialer?

11 A No.

12 Q Would it have any bearing on the ability  
13 of the dialer to operate assuming that its current or its  
14 batteries were in proper condition?

15 A No, it would not. I'm not sure that I  
16 follow you.

17 Q Just, say, deactivating the bell, the  
18 interior alarm bell on the entire system.

19 A I am not sure how you would accomplish this  
20 though without really it getting into the system.

21 Q How could you accomplish it?

22 A Well, obviously by removing the bell from  
23 its housing.

24 Q That would be the easiest way, wouldn't it?

25 A Yes.



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131.

1 Q Would the elimination of the 115-volt  
2 current from the dialer have any effect on its ability to  
3 transmit the message, assuming the batteries were good?

4 A None whatsoever, no.

5 Q Would the elimination of the battery power  
6 have any effect on the high-line power?

7 A No.

8 Q Either way?

9 A Either way.

10 Q Now, one last question, sir. These auto-  
11 matic key switches, how many of them were there?

12 A Two. There was one on the front, or out-  
13 side of the front door, and one outside of the rear door.

14 Q And how many lights did they show?

15 A Two lights each.

16 Q And what did they mean, the lights? The  
17 red meant what?

18 A The red would mean during a normal condi-  
19 tion, and say an occupied condition, the red would mean that  
20 there is something open.

21 Q In other words, would that red show if the  
22 key switches were open?

23 A It would not show if the key switches were  
24 open, no, sir.

25 Q Would any light show if the key switch was

J. R. Newell - Cross

132.

1 open?

2 A No, sir. The key switch is a momentary  
3 thing, it's very similar to the ignition in your automobile,  
4 you turn the key to start the car, and when you turn the key  
5 loose it goes back, it's spring loaded.

6 Q It's spring loaded?

7 A Yes.

8 Q But doesn't the operation of the key have  
9 the effect of throwing the intrusion alarm circuit out of  
10 its ability to operate?

11 A Yes, sir, it does.

12 Q Well, what I am trying to find out is this.  
13 I go to the building to the front door of the building and  
14 I have my key in my hand.

15 A All right.

16 Q I see these two lights. Now, what do I  
17 see when I go there if the thing is in normal mode and able  
18 to detect an intruder?

19 A This is assuming the building is secured?

20 Q Yes, sir.

21 A Then a green light is on.

22 Q Green light should be on?

23 A Yes, sir.

24 Q And if I see the green light on I know that  
25 I must use the key?

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133.

1 A That's correct.

2 Q And turn the thing off, is that correct?

3 A Yes, sir.

4 Q Now, if I use the key and turn the thing  
5 off, do I still have a green light, or do I have a red light?

6 A No, if you use the key on a protected  
7 door or whatever might be protected, you would turn off the  
8 lights.

9 Q No lights on then?

10 A No lights.

11 Q In the event that the key is turned?

12 A This is correct.

13 Q Now, reversing the procedure, I am leaving  
14 for the evening, everything is shut, and all of the doors  
15 are locked and the interior doors that have the magnetic  
16 switches on are closed, and I go outside the front door let's  
17 say and look at the lights, are there any on?

18 A No.

19 Q So that if there are no lights on, that  
20 means that there is something open, is that correct?

21 A No, sir. If there were a red light on,  
22 that would indicate that there was something open.

23 Q If I shut the front door then, there are  
24 no lights?

25 A That is correct.

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134.

- 1 Q When does the green come on?
- 2 A Not until you turn the system on.
- 3 Q I have to turn the green on?
- 4 A That is correct.
- 5 Q And if the green comes on, that means the
- 6 system is armed?
- 7 A That is correct.
- 8 Q And it means that there is current to the
- 9 various sensing devices, and it means that there is current
- 10 to your control panel, and by the same token probably to the
- 11 dialer, is that correct?
- 12 A Yes, sir.
- 13 Q Is there any way anybody can tell whether
- 14 there is current to the dialer?
- 15 A No, sir.
- 16 Q There is no device that will sound an alarm
- 17 or do anything if the dialer loses its current?
- 18 A This is correct.
- 19 Q There is, I believe, an alarm that happens
- 20 in some way if the thing goes off, the other thing, isn't
- 21 there an audible alarm or something of this kind?
- 22 A That is correct.
- 23 Q And that is what kind of an alarm, sir?
- 24 A A buzzer.
- 25 Q How loud is that buzzer?

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135.

1 A I would say it's in the neighborhood of  
2 60 decibels, 60 or 65.

3 Q How loud would that be to people working  
4 near it?

5 A I would say it would be heard in the  
6 adjoining office.

7 Q So that if that has a loss of power you  
8 get the buzzer?

9 A No, if it's lost its power to it there is  
10 no power to it, there is no way for the buzzer to run.

11 Q Then if it's on batteries, do you get any  
12 buzzing?

13 A No, because the battery operation would  
14 be considered, as far as the buzzer is considered, a normal  
15 operation.

16 Q Is there any way one can tell from looking  
17 at it whether it's on battery or on 115?

18 A Yes, sir.

19 Q How do you do that?

20 A There is a pilot that is on that would  
21 indicate the normal AC to the device.

22 Q If that's on you have power to it from AC?

23 A Yes, sir.

24 Q If it's not on then you are on battery?

25 A That is correct.

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1 Q Now, what happens if instead of there being  
2 a closure of a detection device, there is a break in the line  
3 on the intrusion circuit?

4 A Well, the intrusion system works basically  
5 from a break in the line.

6 Q If there is a break in the line you get the  
7 bell and you get the dialing?

8 A This is correct.

9 Q How about on the fire side if there is a  
10 break in the circuit?

11 A There would be a trouble signal.

12 Q Not a closure of the--

13 A No, that would give you the trouble buzzer.

14 Q When there is something wrong with the  
15 wiring system itself, but not a detection?

16 A That is correct.

17 Q What components were on order at the time  
18 of the fire for incorporation in the system that had not been  
19 delivered?

20 A I know that there was a Model CRH panel,  
21 a subpanel, that would have been used, and a quantity of  
22 detectors. I am not sure of the quantity of detectors.

23 Q When you have a subpanel of that kind, how  
24 do you put it in?

25 A The subpanel would work basically like the

J. R. Newell - Cross

137.

1 main panel, however the function of this would be to zone or  
2 to sub-zone really the particular area in which you are  
3 going. In other words, we did not really have any additional  
4 capability, and from an installation standpoint this was the  
5 most efficient way to do it.

6 Q What I am trying to find out, Mr. Newell,  
7 is this. The detectors in the new addition, it was contem-  
8 plated that they would lead to a sub-CRH panel, is that cor-  
9 rect?

10 A That's correct.

11 Q They would not go to the main panel?

12 A That is correct.

13 Q Then there would be a connection between  
14 the main panel and the CRH panel, is that correct?

15 A Yes.

16 Q And the sub-CRH panel had not been delivered?

17 A This is correct.

18 MR. MARKS: I have nothing further.

19 THE COURT: Mr. Heilig?

20

21 REDIRECT EXAMINATION

22 BY MR. HEILIG:

23 Q Mr. Newell, first of all, you mentioned the  
24 fact that after a week or so following the installation there  
25 were some false alarms?

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1 A Yes, sir.

2 Q And you investigated those?

3 A Yes, sir.

4 Q And what was the cause?

5 A The cause was a damaged thermal detector  
6 that was installed, in one of the mechanical equipment modes.

7 Q Did you repair that?

8 A It was replaced.

9 Q Did you replace it?

10 A Yes, I did.

11 Q Did the system function thereafter?

12 A Yes, it did.

13 Q Now, you mentioned also that you visited  
14 the premises to replace some bulbs?

15 A Yes.

16 Q What sort of bulbs are we talking about?

17 A These are lamps that were involved with the  
18 security system, basically a status lamp, the red and green  
19 lamps that we were talking about that were associated with  
20 the security simply to give you a visual indication of whether  
21 the system was on or off.

22 Q Did these bulbs normally burn out from time  
23 to time?

24 A They do, yes.

25 Q Does that in any way affect the function of



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139.

1 the system?

2 A No, it just does not give you the status  
3 of whether it be off or on.

4 Q Do you of your own knowledge know how the  
5 tape on the dialer was programmed at the institute?

6 A In general, I do.

7 Q Do you know the individuals that it was  
8 supposed to call?

9 A I know that it was set up to call first the  
10 Fire Department, I think the second call was to Dr. Baird's  
11 home, and I believe the third call was to a relative of Dr.  
12 Baird's.

13 Q You mentioned that you had ordered some  
14 parts for the alarm system in the second addition or the  
15 upper addition, is that correct?

16 A Yes.

17 Q And you say that you delivered some wire?

18 A I delivered a roll of wire, yes.

19 Q When did you deliver that wire, do you know?

20 A I cannot really be sure, but I would say  
21 that it was approximately 30 days before the fire, but I am  
22 not sure, maybe two weeks.

23 Q Who did you deliver that wire to?

24 A I left it on the job with the superintendent,  
25 I believe. At the time Northside Electric had left the loca-

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1 tion for the day.

2 Q What type of wire is that?

3 A It's simply a roll of No. 2 conductor cable.

4 Q Is that what you would call low-voltage  
5 wire?

6 A Yes.

7 Q Low-voltage wire as opposed to what, high-  
8 voltage?

9 A Right.

10 Q What would high-voltage wire be used for?

11 A For power, generally speaking, lighting,  
12 this type of thing.

13 Q You mentioned a pilot light, and that's  
14 contiguous to the control panel, is that correct?

15 A You mean as far as the indication of the  
16 AC power? Yes, sir.

17 Q Is that easily visible?

18 A Yes, I would say so.

19 Q What is the purpose of the pilot light?

20 A To give you a visual indication of the  
21 presence of AC power.

22 Q Now, Mr. Newell, if you wanted to disable  
23 the bell, if an individual wanted to disable the bell and he  
24 wanted to do so at the control panel as opposed to climbing  
25 up and undoing the clapper, or whatever was the makeup of the

J. R. Newell - Redirect

141.

1 bell, is that possible?

2 A By disconnecting the wire that would of  
3 course go to the bell, yes, sir.

4 MR. HEILIG: I would like to see Exhibit 4,  
5 I believe it is, Your Honor.

6 THE COURT: All right.

7 MR. HEILIG: Let the record reflect that  
8 I am referring to Page 3, I suppose, Figure 2.

9 Q For the record, would you identify what  
10 Figure 2 on Page 3 depicts.

11 A Figure 2 is just a photograph basically  
12 of the interior and front of the control panel.

13 Q If you would hold that up so the ladies  
14 and gentlemen of the jury can see. Would you tell me how  
15 one would go about disabling that bell by going in the  
16 control panel.

17 A Well, I would have to refer to the sche-  
18 matic to come up with the terminal number that you would  
19 disconnect. I can't identify the terminal numbers from  
20 this.

21 Q So, in other words, you would have to know  
22 the terminal number in order to know which one to unscrew?

23 A This is correct, but these are labeled.

24 THE COURT: I think you have a schematic  
25 in there.

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142.

1 THE WITNESS: Yes, sir.

2 Q Now, if you consulted a schematic, that  
3 would give you the information?

4 A That's correct.

5 Q And would you have to have a knowledge of  
6 schematics or electrical training in order to locate those  
7 terminals, or could the average person do it?

8 A Well, I would say that theoretically anyone  
9 that can read could do it.

10 Q In other words, you say it's very simple for  
11 someone to locate the proper terminals and disable the bell?

12 A Well, the bell is shown both in this sche-  
13 matic, and there is a copy of the schematic on the door to  
14 the control panel-- I beg your pardon, there is a terminal  
15 designation with the terminals and what these terminals are  
16 for on the back of the door, I don't believe it is a complete  
17 schematic, but again it indicates Terminal 8, Terminal 9, and  
18 from those terminals it shows an audible alarm.

19 Q So would a person just take a screwdriver  
20 and undo it?

21 A Hopefully that's the way you would do it,  
22 yes, sir.

23 Q You wouldn't have to climb up on a wall or  
24 ladder to get to the bell, would you?

25 A You would not have to, no.

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1 Q Now, Mr. Newell, could you go to that  
2 schematic and pick up the same information to disable the  
3 dialer?

4 A Yes, sir.

5 Q And could you just take a screwdriver and  
6 do that, or would you have to have some sort of specialized  
7 equipment?

8 A No, a screwdriver.

9 Q How long would it take for a person who  
10 could read a schematic to determine what two terminals  
11 control the signals from the control panel to the dialer?

12 A Two minutes.

13 Q Now, Mr. Newell, if you had done that,  
14 let's assume that someone did that on the day in question,  
15 that they undid or unscrewed the two terminals and disabled  
16 the bell, and that they unscrewed the other two terminals,  
17 proper terminals and disabled the dialer and left the premises,  
18 and let's assume they were the last one to leave that premises,  
19 and they closed the door behind them and they took out their  
20 key, what would be the condition of the two lights on the  
21 outside receptacle?

22 A It would not have any effect on the lights  
23 on the outside.

24 Q So, suppose a person then stuck the key  
25 into the receptacle, turned it and armed the system, what

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144.

1 would they see then?

2 A A green light.

3 Q One last question, Mr. Newell. When the  
4 system was originally installed, in your opinion was it  
5 installed properly and in accordance with the specified plans?

6 A Yes, sir.

7 Q As okayed by the design architect?

8 A Yes, sir.

9 Q And did it function?

10 A Yes, sir, it did.

11 Q Mr. Newell, in selling this system did you  
12 consult any design architects?

13 A No, I did not. The sale came about really,  
14 I am not saying as a result, but I happened to be in the  
15 particular engineer's office during the stage of design, and  
16 this system had been used before by the engineer, and I was  
17 consulted as to whether the catalog numbers were still good  
18 because in this business catalog numbers do change quite  
19 frequently, models change.

20 Q Who was that design engineer?

21 A This was Mr. Forner with Hankins & Anderson.

22 Q Was that the electrical engineer?

23 A That was the electrical engineer.

24 Q Do you know who had the supervision as to  
25 the electrical wiring design of this project?

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145.

1 A I have no idea. I would assume that he  
2 did, but I don't know that for a fact.

3 Q Do you know the name of the architectural  
4 firm?

5 A Glaze, Newman & Anderson.

6 Q Mr. Newell, have you ever seen that before?  
7 Take a minute to look at it. Can you identify that?

8 A Yes, sir.

9 Q Can you tell the ladies and gentlemen of  
10 the jury what that is and what it depicts, who drew it, and  
11 what connection you had with that drawing and the system?

12 A This is a typical drawing of a design of  
13 an electrical wiring, in this particular case I believe it  
14 includes both the fire alarm, the security, and other elec-  
15 trical components that were required on the job. It was  
16 designed by Glaze, Newman & Anderson, Architects.

17 Q What is the date of that drawing, sir?

18 A It's August the 24th, 1972.

19 Q Now, does that depict, as far as you are  
20 concerned or as far as your knowledge goes, the alarm system  
21 as it was installed at the Virginia Heart Institute premises  
22 at 102 Berrington Street in 1972?

23 A Yes, sir, I would say so.

24 Q Now, sir, who installed that system?

25 A Northside Electric.

J. R. Newell - Redirect/Recross

146.

1 MR. HEILIG: I would like to introduce that  
2 into evidence, Your Honor.

3 MR. MARKS: I have no objection.

4 THE COURT: I believe that would be Plain-  
5 tiff's No. 7.

6 MR. HEILIG: Yes, sir, Your Honor. I have  
7 no further questions of this witness, Your Honor.

8 THE COURT: Any further questions, Mr.  
9 Marks?

10 MR. MARKS: Yes, sir.

11  
12 RE CROSS-EXAMINATION

13 BY MR. MARKS:

14 Q Mr. Newell, referring you to that diagram  
15 which you just had, that diagram calls for, under Code A  
16 down near the middle on the bottom, a parallel line CRS No. 1  
17 control station?

18 A Yes.

19 Q Then it calls for a BR624 alarm bell?

20 A That's correct.

21 Q Then it calls for, under the key A, a TD4  
22 Lectro Systems Model 150S-2 dialer?

23 A Yes, sir.

24 Q Is that what was furnished by you, those  
25 items?



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1 A Yes, sir, that's correct.

2 Q The control panel down there that is  
3 marked CP, does that have anything to do with the alarm  
4 system, or is that a major control panel for the whole opera-  
5 tion, if you can find it?

6 A That is, I believe, the control panel for  
7 the fire alarm and security portion.

8 Q Now, what is the difference between the  
9 control panel and the control station?

10 A The control station is a means by which  
11 the control panel is controlled, it's simply a key station  
12 and a status indication of the panel.

13 Q Are those the door switches that we have  
14 been talking about, control stations?

15 A They are not what I would consider the door  
16 switches, no. The door switches would be the intrusion  
17 devices and are depicted here as an MS.

18 Q These are the things that you turn with  
19 the key?

20 A That's correct.

21 Q So, if we look on the thing and we see an  
22 MS, that means that's where one of those key-operated switches  
23 is, is that correct?

24 A That's correct, yes.

25 Q Does this diagram that you have there before

J. R. Newell - Recross

148.

1 you contain any indication of changes made in preparation  
2 for the new addition upstairs?

3 A No, sir, it does not.

4 Q Now, you have been asked some questions I  
5 think with respect to how you could go about immobilizing  
6 this alarm equipment. Assuming that you wanted to immobilize  
7 the bell in a way other than by removing the bell itself,  
8 that would not affect in any way the dialing system, would  
9 it?

10 A That's correct.

11 Q And you could do the dialing system without  
12 in any way immobilizing the bell?

13 A That is correct.

14 Q And isn't it true that probably the removal  
15 of two screws, one No. 8 let's say on the wiring diagram, and  
16 No. 10 on the wiring diagram, would accomplish that purpose?  
17 You wouldn't have to take out all four, would you?

18 A To remove the bell or to disconnect the  
19 bell I believe that was 8 and 10.

20 Q If it was 8 and 9, all you would have to  
21 do is one to accomplish that?

22 A Yes, sir.

23 Q And if that's 10 and 11, it would be either  
24 10 or 11?

25 A That's correct.

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J. R. Newell - Recross

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1 Q Now, they are all contained within the box  
2 that is shown in Figure 2 on your diagram, is that correct?

3 A That is correct.

4 Q Now, I will ask you this. Your proposal  
5 said that you would wire the alarm controls?

6 A Yes, sir.

7 Q So that would mean, if I understand cor-  
8 rectly, that Mr. Pulley had nothing to do with that, or  
9 Northside Electric had nothing to do but bringing the service  
10 into it?

11 A This is on the original job, yes, sir, and  
12 pulling the wire into the cabinet.

13 Q Yes, sir, I understand pulling the wire  
14 into the cabinet.

15 A Yes, sir.

16 Q All of the interior connections would have  
17 been made by you?

18 A That's correct.

19 MR. MARKS: Okay, nothing further.

20 THE COURT: Thank you, Mr. Newell. You  
21 may step down.

22  
23 WITNESS STOOD DOWN

24

25

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W. C. Newman - Direct

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1 record.

2 MR. MARKS: All right.

3 Q Mr. Newman, where did you receive your  
4 training in architecture?

5 A I have a bachelor's in architecture from  
6 the University of Virginia. Then I came directly to Richmond  
7 in 1960 and worked for Marcellus Wright, and in 1965 I left  
8 and opened my own office.

9 Q From 1960 to 1965 were you an apprentice,  
10 is that what you call them?

11 A I was an apprentice, yes, until I became  
12 registered.

13 Q What kind of work were you performing  
14 during your apprenticeship?

15 A I was what you call a project manager on  
16 such projects as the John Marshall Hotel remodeling in 1962;  
17 a photographic laboratory at Patuxent Naval Air Station; and  
18 several houses.

19 MR. HEILIG: Your Honor, I would move that  
20 Mr. Newman's testimony be accepted as an expert.

21 MR. MARKS: I conceded it a few minutes  
22 ago.

23 THE COURT: He's qualified in the field of  
24 architecture.

25 Q Mr. Newman, are you familiar with the

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1 building that once stood at 102 Berrington Street?

2 A Yes, sir.

3 Q The Virginia Heart Institute?

4 A Yes, sir.

5 Q How are you familiar with that structure?

6 A I was the architect employed for the  
7 remodeling of it in 1972 and again in '75.

8 Q In connection with the remodeling in 1972,  
9 did you have occasion to supervise the design of an alarm  
10 system that was installed in the premises?

11 A Yes, sir.

12 Q Now, Mr. Newman, would you take a minute  
13 to examine this and then tell the ladies and gentlemen of  
14 the jury what that is and what it purports to depict.

15 A This is the electrical plan for the  
16 remodeling in 1972 of the Virginia Heart Institute, at which  
17 time it was changed from a building which housed four separate  
18 suites for different doctors into a building for one doctor,  
19 Dr. Baird. This particular drawing shows the heating and  
20 electrical equipment, and the fire and intrusion alarm system.

21 Q Now, as the design architect, what was your  
22 responsibility with respect to the alarm system and how it  
23 was installed and its placement?

24 A That would be a very specialized type of  
25 design, which I am not trained precisely to handle, and in

W. C. Newman - Direct

153.

1 this case I employed the services of an electrical engineer  
2 to assist me, and he in his turn, since it is so highly  
3 specialized, worked with a manufacturer's representative.

4 Q Did you have the ultimate supervision over  
5 the design?

6 A I instructed the electrical engineer on  
7 what we desired to have, and he produced it and returned it  
8 to me, and I accepted it.

9 Q Was the alarm system installed pursuant to  
10 the specifications as set forth on the blueprint?

11 A Yes, sir.

12 Q Do you have an opinion as to whether or  
13 not the alarm system was adequate to protect that building?

14 A Yes, sir, it is my opinion that it was  
15 adequate.

16 Q Mr. Newman, would you take a look at that  
17 diagram again marked Plaintiff's Exhibit No. 7, and would you  
18 explain to the ladies and gentlemen of the jury the criteria  
19 that comes into play when placing the detection units in the  
20 premises.

21 A Well, there are two types of detection  
22 equipment here. In fact, there are three. One of them is  
23 the intrusion system. I assume you are not talking about  
24 that.

25 Q Well, we are. There is the intrusion

W. C. Newman - Cross

\* 156.

1 design was not in question, Your Honor.

2 THE COURT: I didn't think it was, that's  
3 why we are not getting into that.

4 MR. MARKS: I'm not getting into that. I'm  
5 just trying to find out what his connection was with  
6 it. He's testified to the adequacy of it.

7 MR. DOBBINS: Are you now challenging the  
8 adequacy?

9 MR. MARKS: No, I am not challenging it  
10 at all. If you object, Mr. Dobbins, I will withdraw  
11 the question and he needn't answer it.

12 Q You don't know what happened out there to  
13 cause the fire, do you?

14 A No, sir, I don't.

15 Q Do you know where the fire originated in  
16 the structure?

17 A Only from what I read in the newspaper.

18 THE COURT: Well, don't give us that.

19 Q You don't know anything about it personally?

20 A I have no firsthand knowledge, no.

21 Q Did you design the new addition?

22 A Yes, sir.

23 Q Did you have the same type blueprint plan  
24 for the new addition that you had for the old section?

25 A For the electrical?

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W. C. Newman - Cross

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1 Q Yes.

2 A No, we did not.

3 Q How was that to be accomplished?

4 A As I recall, we were just going to work out  
5 an arrangement with Mr. Newell, and at the time it was going  
6 to go in we were going to work it out.

7 Q It hadn't gone in, had it, at the time  
8 that the fire occurred?

9 A I don't know.

10 Q Well, do you recall, Mr. Newman, whether  
11 you had worked on any arrangement with Mr. Newell as to how  
12 it was going in before the fire?

13 A I can't recall that, no.

14 Q Well, do you know whether the components  
15 for it were on the scene at the time of the fire?

16 A No, sir, I don't.

17 Q Had you made any inspection of that area  
18 of the construction during the work that was going on in  
19 the new addition?

20 A Yes.

21 Q Well, tell us what the state of the addition  
22 was the last time you saw it.

23 A The wood framing had been completed, the  
24 studs and joists. The siding was being installed.

25 Q What kind of siding was it?



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W. C. Newman - Cross

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1 A Redwood siding.

2 Q All right, go ahead.

3 A It was substantially installed, as I recall.  
4 Windows, I don't believe. In fact, I feel fairly certain the  
5 windows had not been installed because we were still working  
6 on shop drawings for the window frames. The work was approxi-  
7 mately 50 percent completed.

8 Q The last time you saw it?

9 A Yes.

10 Q When was that with respect to the 19th of  
11 December, 1975?

12 A It would have been about a week prior to  
13 that, I believe.

14 Q Were you familiar with the progress which  
15 had been made in connection with the mechanical aspects of  
16 that building, such as electrical wiring, plumbing, and  
17 things of that kind, the new addition?

18 A I wouldn't have been aware of the material  
19 that had been installed at that time.

20 Q Well, what was installed in the way of  
21 electric wiring?

22 A Mr. Marks, I can't tell you precisely, I  
23 don't know.

24 Q Do you know whether any of the alarm wiring  
25 had been installed?

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W. C. Newman - Cross

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1 A No, sir, I don't.

2 Q What was to be done with the roof of the  
3 former structure over which this addition was to be erected?

4 A We were going to strip the old tar-and-  
5 gravel roof off and put down underlayment and new tile above  
6 that, and then a new roof of course would go on top of the  
7 second story.

8 Q You say new tile, what do you mean by  
9 that, sir?

10 A Resilient tile, vinyl-asbestos tile.

11 Q Where was that going?

12 A I believe most of the second floor had  
13 vinyl-asbestos as a flooring surface.

14 Q But what happened in the area between the  
15 lower level of the floor and the ceiling of the area below?

16 A Well, the roof construction as it existed  
17 when we started was wood roof joists covered by plywood  
18 sheathing covered by tar and gravel. We were stripping it  
19 back to the plywood sheathing.

20 Q And leaving it?

21 A Leaving that, yes, sir.

22 Q And then building on top of it?

23 A Yes, sir.

24 Q That was not to serve as the floor for the  
25 upstairs though?

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W. C. Newman - Cross

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1           A           No, sir, it would have been covered by an  
2 underlayment, I believe.

3           Q           Then there was a direct connection between  
4 the structure above and the lower level after you got through  
5 taking the roof off, correct?

6           A           It served as the floor of the second floor,  
7 yes, sir.

8           Q           Now, were you at all familiar, Mr. Newman,  
9 with the water damage that occurred out there during con-  
10 struction?

11          A           Yes, sir.

12          Q           What sort of inspections were made and by  
13 whom to determine what effect that water damage had had on  
14 the existing structure?

15          A           I made them myself.

16          Q           Well, just what did you do? Eyeball them?

17          A           Well, I'm not sure I understand what you  
18 are getting at.

19          Q           Just what did you do?

20                      THE COURT: Eyeball means look at them.

21          A           Well, certainly I did that.

22          Q           Well, what else did you do?

23          A           I believe we walked through with the con-  
24 tractor and agreed on what had to be painted and repaired,  
25 and looked at if any Sheetrock had been damaged, and he

W. C. Newman - Cross/Redirect

161.

1 satisfied me that he was going to get it fixed, and there  
2 didn't seem to be any need to make a great issue about it.

3 Q Did you make any careful inspection or do  
4 any tests on the electrical system?

5 A No, sir.

6 Q Or on the alarm system?

7 A No, sir.

8 MR. MARKS: That's all.

9 THE COURT: Mr. Heilig?

10  
11 REDIRECT EXAMINATION

12 BY MR. HEILIG:

13 Q Mr. Newman, to the best of your knowledge,  
14 was there any reason to make a test of the alarm system, to  
15 examine the wiring or the alarm system?

16 A The damage was done primarily on the outside  
17 walls; and the alarm system itself, most of the detectors are  
18 a good 8 or 10 feet from the outside wall.

19 MR. HEILIG: All right, sir, that's all  
20 the questions I have.

21 THE COURT: May Mr. Newman be excused?

22 MR. MARKS: May I ask one more question?

23 THE COURT: All right.  
24  
25

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W. C. Newman - Recross

\* 163.

1 removed?

2 A Yes, sir, the flashing had been stripped  
3 back and it exposed a crack between the roof sheathing and  
4 the wall, and water came down through there.

5 Q Was that roof sheathing solid, or was it  
6 boards?

7 A Pieces of plywood.

8 Q Pieces of plywood with joints?

9 A Yes, sir.

10 Q Now, had the roof been put on the upper  
11 part of the structure the last time you looked at it, or was  
12 that not roofed?

13 A Part of it was roofed with asphalt shingles,  
14 and part of it was roofed with tar and gravel, and I frankly  
15 do not remember.

16 Q It did have a roof on it though?

17 A I know it had sheathing, but--

18 Q But you don't know whether or not it had  
19 that roof covering up on that upper level?

20 A No, sir, I don't remember.

21 Q And you tell us that the windows up there  
22 had not been installed?

23 A That's my recollection.

24 Q Do you recall what method the contractor  
25 was using to prevent the entrance of weather into the place?

W. C. Newman - Recross

164.

1 Polyethylene sheets?

2 A He had polyethylene sheets tacked over the  
3 openings.

4 Q Would you be in a position to tell us what  
5 the weather conditions were on or about the morning of the  
6 19th of December, 1975, whether it was cold or hot or warm  
7 or moderate or what?

8 A I know that the morning of the fire it was  
9 very cold because I remember going by there to look at it,  
10 and the water was still frozen on the ground around the  
11 building.

12 Q Do you remember whether there was wind the  
13 night before?

14 A No, sir, I don't.

15 MR. MARKS: All right, Mr. Newman, I don't  
16 think I have anything further.

17 THE COURT: Thank you, Mr. Newman.

18 THE WITNESS: May I leave, Your Honor?

19 THE COURT: Yes. You may stay, too, if you  
20 want to.

21  
22 WITNESS STOOD DOWN

23  
24 THE COURT: Next witness, please, sir.

25 MR. HEILIG: Clifford Mahone, Your Honor.

1 THE COURT: All right, let me get you to  
2 raise your right hands.

3 NOTE: At this point all the witnesses are  
4 sworn.

5 THE COURT: Gentlemen, while you are here  
6 I am recognizing you to be back in court tomorrow  
7 morning at 9:30. Unless counsel get with you and  
8 make some other arrangement in terms of time, you  
9 will be expected to be back here at 9:30 just as if  
10 you were under subpoena, so treat it just as though  
11 you were under subpoena, but I am going to release  
12 you now, everyone but Mr. Mahone who is going to  
13 testify next. Everyone is free to go until tomorrow  
14 at 9:30.

15 NOTE: At this point the witnesses leave  
16 the courtroom.

17  
18 CLIFFORD EMMETT MAHONE, JR., a witness  
19 called by the attorneys for the plaintiff, first being duly  
20 sworn, testifies and states:

21 DIRECT EXAMINATION

22 BY MR. HEILIG:

23 Q All right, sir, would you state your full  
24 name.

25 A Clifford Emmett Mahone, Jr.

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C.-E. Mahone - Direct

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1 Q Where do you live?  
2 A Route 1, Box 1138, Powhatan, Virginia.  
3 Q Are you employed?  
4 A I am employed at Century Construction  
5 Company.  
6 Q What do you do at Century?  
7 A I am a foreman, supervisor.  
8 Q And in your work with Century have you ever  
9 had occasion to foreman a job at the Virginia Heart Institute?  
10 A I did.  
11 Q Do you know when it was, sir?  
12 A December the 18th, in that area.  
13 Q What year?  
14 A '75.  
15 Q Now, what was the nature on that project?  
16 A It was to renovate a little bit of the  
17 first floor and put a second-floor addition on the top.  
18 Q Now, do you recall a fire at the premises?  
19 A Yes, sir.  
20 Q Do you recall on what day that was?  
21 A That was December the 18th.  
22 Q Now, at the time of that fire on December  
23 18th, how close to completion was the project?  
24 A We were about 75 percent complete, in that  
25 area. We were getting ready for Sheetrocking.



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C. E. Mahone - Direct

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1 Q With respect to December 18th, the day  
2 before the fire, were you on the premises that day?

3 A Yes, I was.

4 Q What were you doing that day?

5 A Was that the 18th?

6 Q December 18th, the day before the fire.

7 A That was the day we removed the lower entry  
8 door partition and were closing in for the stairway and the  
9 landing to go to the second floor.

10 Q Now, the exit that you were relocating,  
11 where was that located in the building?

12 A It was in the rear of the building, to the  
13 south end of it.

14 Q Now, that rear exit, was that on the first  
15 floor, or was it on the second floor?

16 A The rear exit was on the first floor and  
17 it was going up to the second floor.

18 Q Now, on December 18th, 1975, the day in  
19 question, were there any other workers on the project besides  
20 those from Century?

21 A There was Northside Electric, and the  
22 insulation people, and Baker & Hazlewood, the mechanical  
23 people.

24 Q Do you know who the personnel was from  
25 Northside Electric on the scene that day?

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C. E. Mahone - Direct

170.

1 A I know Mr. Pulley.

2 Q Who is Mr. Pulley?

3 A He's the foreman for Northside.

4 Q Now, do you know what sort of work Mr.  
5 Pulley and his workers were engaged in that day?

6 A It was several things, but they was to  
7 work on the fire alarm system. They were waiting on the  
8 wire, but they was pulling in the 110 wire to the receptacles  
9 and was watching us when we was doing the demolition work to  
10 the entry downstairs to make sure that we didn't do any  
11 damage to any of those wires.

12 Q You say they were involved with extending  
13 the system?

14 A Well, the 110 part of it.

15 Q The 110 as opposed to what?

16 A Well, the 110, they didn't have the wire  
17 and stuff for the actual alarm, it came later that evening.

18 Q You mentioned that you were demolishing  
19 something down on the first floor, is that correct?

20 A That's correct.

21 Q And who was watching you do that demolition?

22 A The electricians. Mr. Pulley was supposed  
23 to be watching it to protect his part of his area.

24 Q Was that on the first floor?

25 A That's the first floor.

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C. E. Mahone - Direct

171.

1 Q Mr. Mahone, to the best of your recollec-  
2 tion, did you have occasion to have any conversations with  
3 Mr. Pulley on that morning?

4 A We talked briefly that morning.

5 Q Do you recall the substance of that con-  
6 versation?

7 A The one time was we was talking about the  
8 alarm. The alarm was going off and the bell was ringing,  
9 and the secretary came up and said that the alarm was going  
10 off, that they had been notified by the police, and I went  
11 and talked to him and told him.

12 Q Who was the secretary that you were talk-  
13 ing to when she made that comment?

14 A I don't know her name.

15 Q Where did that conversation with Mr. Pulley  
16 take place?

17 A It took place around 8 o'clock, 8:30, some-  
18 where in that neighborhood.

19 Q Do you know where it took place?

20 A It was right back of the entry that we was  
21 working on.

22 Q Now, you mentioned that an alarm sounded  
23 that morning. What sort of an alarm was it?

24 A Just a small bell was all that rings on the  
25 outside.

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172.

1 Q Now, did Mr. Pulley or anyone associated  
2 with Northside Electric assist you in your demolition at all?

3 A No, they just stood there and watched. The  
4 only thing they did is take their wire on that key switch  
5 and move it back on the partition.

6 Q What key switch are you talking about?

7 A The alarm part that they turned off and  
8 on when they came in in the morning.

9 Q Who performed that removal?

10 A It wasn't removed, it was just taken away  
11 from around where we were working and was set back over a  
12 ways.

13 Q Who did that?

14 A Mr. Pulley.

15 Q Did anyone assist him?

16 A Not that I know of.

17 Q Mr. Mahone, did the secretary come to you  
18 and explain about the bells ringing?

19 A She come and told me the bells were ringing.

20 Q What did you do pursuant to her complaints?

21 A Well, I just went and told Mr. Pulley, and  
22 then the thing would ring for a few minutes and quit. It  
23 wasn't ringing at the time right after she came. I just asked  
24 him if we set it off.

25 Q You said what?

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173.

1           A           I asked him had we set off anything in the  
2 thing. It had been on prior occasions that it has happened  
3 before, before we even demolished that door.

4           Q           Well, pursuant to your conversations with  
5 Mr. Pulley, did he do anything? What did he do about it, do  
6 you know?

7           A           That I can't say, I don't know.

8           Q           You didn't actually see him doing anything?

9           A           No.

10          Q           Well, thereafter did the bells stop ringing?

11          A           It stopped ringing when the secretary came  
12 and told me. This was maybe five or ten minutes after the  
13 bell was ringing, she come and told me that the police had  
14 called or that they had been notified of the alarm.

15                   MR. HEILIG: That's all the questions I  
16 have, Judge.

17  
18                   CROSS-EXAMINATION

19                   BY MR. MARKS:

20                  Q           Mr. Mahone, what time was it would you say  
21 that this conversation with the secretary took place?

22                  A           It had to be right after 8 o'clock, right  
23 in that neighborhood.

24                  Q           What time had your force gone to work that  
25 day?

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C. E. Mahone - Cross

174.

1                   A           7:30.

2                   Q           So, you-all had been on the job for half an

3 hour?

4                   A           That's correct.

5                   Q           Did Northside come on the job at the same

6 time that you-all did?

7                   A           Yes.

8                   Q           Where were they working? Upstairs?

9                   A           They were upstairs and partially down, it

10 was a mixture of two floors.

11                  Q           Let me ask you this. How did you get up-

12 stairs?

13                  A           We had a ladder through that entry that

14 went upstairs.

15                  Q           No stairway?

16                  A           No, sir.

17                  Q           You had to climb a ladder to get up and

18 down?

19                  A           That's right.

20                  Q           I believe you said that you didn't see Mr.

21 Pulley move the door switch at all?

22                  A           No, I didn't.

23                  Q           But you do know that it was not removed

24 from the circuit, it was just pushed back somewhere and re-

25 fashioned, or something to that effect?

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C. E. Mahone - Cross

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1 A Right.

2 Q When was that done with respect to the time  
3 the alarm went off?

4 A This had to be around 9:00, 9:30, in that  
5 area.

6 Q In other words, it was after the alarm went  
7 off that this switch was moved?

8 A Right.

9 Q During the time the switch was being moved,  
10 was there any alarm sounded?

11 A Not to my knowledge.

12 Q Were you on the premises the whole time  
13 that day?

14 A I was there from quarter after 7:00 until  
15 about 3:30.

16 Q And during the time you were there, did  
17 you hear the alarm go off at any time, the bell go off?

18 A I heard a bell that morning when we were  
19 upstairs with the insulators, and it was prior to that, and  
20 then she called me downstairs.

21 Q When did you hear the bell upstairs when  
22 you were upstairs with the insulators?

23 A It was around 8 o'clock, maybe ten minutes  
24 after 8:00.

25 Q Then after that time she came and talked

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1 to you?

2 A Right, she called me downstairs.

3 Q And after that you were on the premises,  
4 and did you hear the bell sound any more?

5 A No, I didn't.

6 Q How long did it ring there somewhere around  
7 8 o'clock?

8 A Maybe two minutes at the most when I heard  
9 it.

10 Q Now, you yourself, I know you were the  
11 foreman of the Century Construction Company crew, did you work  
12 with your hands on the job as well?

13 A No.

14 Q Well, what were your men actually engaged  
15 in during the day?

16 A They were closing in and tearing out the  
17 step part or the entry around the closet, the paneling that  
18 was around the door and tore out the door frame and jamb  
19 itself.

20 Q Did you see them doing it?

21 A Yes.

22 Q Were you there while they were doing it?

23 A Right, I was alternating between there and  
24 the upstairs.

25 Q You went upstairs some more and saw what



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177.

1 the insulators were doing, or whatever?

2 A Right.

3 Q And you say that Northside Electric people  
4 were upstairs pulling the 115-volt wiring?

5 A Right.

6 Q What was upstairs for lights?

7 A We had temporary lights hanging in the  
8 ceiling.

9 Q Were they a porcelain receptacle with a  
10 pigtail, a wire, or what?

11 A I think it was a couple porcelains with  
12 a light bulb in it.

13 Q How did you-all get power up there for your  
14 drills and power saws and things of that nature?

15 A We had a receptacle right under the panel  
16 on the second floor that we were using.

17 Q That was energized?

18 A Right.

19 Q Was that permanent, or was that temporary?

20 A It was part of the permanent.

21 Q That was part of the permanent work?

22 A Right.

23 Q You used that receptacle for your power  
24 tools?

25 A Right.

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178.

1 Q And when you had to get too far away from  
2 it you used an extension, didn't you?

3 A Yes, we always use extension cords.

4 Q Did you tell us a while ago that the wires  
5 for the low-voltage alarm system came about 3:00 that after-  
6 noon?

7 A It was about 2:30, 3 o'clock, yes. I put  
8 it in the building.

9 Q You put it in the building?

10 A Yes, I did.

11 Q I believe you told us, and correct me if  
12 I am wrong, that when you spoke to Pulley you wanted to know  
13 whether you-all had set off anything with the work you were  
14 doing?

15 A That's right.

16 Q Did he give you any response?

17 A The only conversation was that he didn't  
18 think so.

19 Q He didn't think so.

20 A Right.

21 Q You didn't ask him to do anything about  
22 the bell ringing itself?

23 A No.

24 Q Were you around there somewhere around  
25 11 o'clock or a few minutes later that day?

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1 A Yes.

2 Q Was there any amount of bell ringing going  
3 on at that time, that you know anything about?

4 A Not that I know of.

5 Q Did you see any police cruiser or Fire  
6 Department personnel around that time of day?

7 A No, I didn't.

8 Q Can you tell us whether or not the control  
9 box and the detectors and other things of that kind for the  
10 upstairs alarm had been delivered earlier?

11 A That's what I took in.

12 Q That's what you took in?

13 A Right, part of the wiring and the detector  
14 units. It was in a box, that's what the gentleman told me  
15 it was that brought it in.

16 Q Do you remember who brought it in?

17 A Not right off.

18 Q Does the name Newell mean anything to you?

19 A No.

20 Q Did it come by delivery truck, or did some-  
21 body bring it in an automobile, or do you know?

22 A I really don't know. I know he brought it  
23 in and stuck it right in that lower part below the ladder,  
24 and we just handed it upstairs.

25 Q Just handed it upstairs at this point, and

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180.

1 this was sometime after 3:00 that afternoon?

2 A Around 3:00.

3 Q What time did your crew leave, Mr. Mahone?

4 A 4 o'clock.

5 Q Did you leave anybody on the premises?

6 A Yes, I had one man that was there because  
7 the insulators were still there, and he locked up after they  
8 left.

9 Q He was still working upstairs somewhere?

10 A Right.

11 Q And you say he locked up after they left.  
12 What do you mean by that?

13 A We had temporary doors in the window open-  
14 ings where the windows would go, and the new entry door  
15 would have been. We had a temporary door and a padlock on  
16 that.

17 Q That's what he locked?

18 A Yes.

19 Q Do you know whether the Heart Institute  
20 ladies were still there when he left, or not?

21 A I don't know about when he left, but they  
22 were there when I left.

23 Q Were the windows in upstairs?

24 A Yes, all but one.

25 Q And that was covered with film?

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- 1 A Polyethylene.
- 2 Q Was the trim on them?
- 3 A The outside trim.
- 4 Q How about the inside trim?
- 5 A No, the inside wasn't. The outside cornice
- 6 was.
- 7 Q Let me ask you this. Had any of the Sheet-
- 8 rocking on the walls been done upstairs?
- 9 A No, it hadn't been delivered.
- 10 Q It hadn't been delivered, so that the up-
- 11 stairs was wide open, just the studs?
- 12 A Right, and the insulation.
- 13 Q Now, the redwood siding on the outside was
- 14 there, and what was the state of the roof at this point?
- 15 A The state of the roof was about, I would
- 16 say, 100 percent finished as far as shingles.
- 17 Q It was all covered, was it?
- 18 A Yes.
- 19 Q And what was under the shingles?
- 20 A Tar paper and plywood.
- 21 Q What was under the tar paper?
- 22 A Plywood.
- 23 Q Now, the floors up on that second level,
- 24 what were they?
- 25 A Plywood.

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182.

1 Q No finished flooring there at all?

2 A No. We had the particle board was up there  
3 for it to go down there on the floor.

4 Q You were going to put particle board on top  
5 of the plywood?

6 A Yes, sir.

7 Q And that was stored up there?

8 A Yes, sir.

9 Q But it had not been laid?

10 A No.

11 Q And then some sort of finished floor cover-  
12 ing was going on top of the particle board, is that correct?

13 A Carpet, and tile in some places up there.

14 Q Were any fixtures, electric fixtures up  
15 there other than the porcelain sockets that you say were  
16 temporary?

17 A I don't believe so.

18 Q Had they been delivered to the job, as far  
19 as you know?

20 A I don't believe so.

21 Q Now, I believe there was a second panel up-  
22 stairs, was there not, for the regular wiring in the building?

23 A Yes, there was a panel upstairs for that  
24 with the breaker switches and all in it for the wires.

25 Q Had that been completed?

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183.

1 A That was what we was pulling out of.

2 Q Were the breakers in?

3 A Yes.

4 Q So, you were pulling out of it how? What  
5 do you mean?

6 A The one that we had, it just dropped down  
7 from that.

8 Q I see, all right. Was the 115-volt wiring  
9 up there hitched into the power box, or do you know?

10 A I don't recall if it was hooked up. I know  
11 they were pulled over to the panel box. I don't know if it  
12 was hooked up to the breakers or not.

13 Q Well, had the receptacle been installed?

14 A Just that one had.

15 Q Just the one that you-all were using?

16 A Yes.

17 Q There were supposed to be some others  
18 around through the various rooms?

19 A There were supposed to be, but I don't  
20 believe they were hot.

21 Q By "hot," you mean you don't believe they  
22 had current to them?

23 A Right.

24 Q Do you remember the name of the gentleman  
25 for the insulating people who was the last man there that

C. E. Mahone - Cross

184.

1 supposedly locked up?

2 A No, I don't.

3 Q When you got back there the next day-- Well,  
4 did you go back there the next day?

5 A Yes, sir, 3 o'clock in the morning.

6 Q What did you find to be the situation then?

7 A It was fully involved with flames and the  
8 Fire Department was there fighting it.

9 Q How did you get the word?

10 A My boss called me and asked me did I know  
11 it was on fire.

12 Q So, you went over?

13 A Yes.

14 Q And about what time was that?

15 A About 2 o'clock, 2:30.

16 Q What was the weather that night?

17 A It was definitely cold.

18 Q Real cold?

19 A Yes.

20 Q Was there any wind?

21 A It felt like a little wind, yes.

22 Q Do you know which direction?

23 A No.

24 Q I am trying to find out whether it was  
25 coming from the north, from the south, from the east, or from



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185.

1 the west.

2 A Call the weatherman.

3 Q Was there much wind? You could tell there  
4 was wind there, couldn't you?

5 A There was wind at my house.

6 Q Where is your house?

7 A Powhatan.

8 Q Was there wind blowing down there on  
9 Berrington Street when you got down there at 3 o'clock?

10 A I don't know. It was so cold I couldn't  
11 hardly tell as many clothes as I had on.

12 Q The water from the hoses was freezing,  
13 wasn't it?

14 A There was definitely freezing.

15 Q There was right much ice around in various  
16 locations?

17 A Right, the whole street was nothing but ice.

18 Q Did you get out of your car?

19 A Right.

20 Q You walked around?

21 A Yes.

22 Q How close to the building did you get?

23 A I circled all the way around the building,  
24 then left and went back to the office.

25 Q What did you see with respect to the then

C. E. Mahone - Cross

186.

1 condition of the building with respect to fire damage at  
2 3 o'clock?

3 A The whole upstairs was gutted, it was down  
4 flat.

5 Q The new construction?

6 A Right, the new construction. There were  
7 maybe two corner posts sitting up there, or three, and there  
8 were firemen up there, and they was down inside fighting  
9 from the inside.

10 MR. MARKS: I don't think I have anything  
11 more for this witness.

12  
13 REDIRECT EXAMINATION

14 BY MR. HEILIG:

15 Q Mr. Mahone, did you or did you authorize  
16 any of your workers to fool with the alarm system that day?

17 A No, I didn't.

18 Q To the best of your recollection, was the  
19 current on the premises ever cut off that day for any reason?

20 A No, it wasn't.

21 Q In other words, when you are pulling, you  
22 said he's pulling 110-voltage wire, that's the internal wiring  
23 for the premises, is that it?

24 A No, that's just the wire that comes from  
25 the panel down to the receptacle.

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1 Q When you are pulling those wires, does an  
2 electrician have to cut off the current?

3 A No, the breaker is already off to where he  
4 is going to.

5 Q Now, after you received the complaint from  
6 the secretary and you approached Mr. Pulley about the com-  
7 plaint, what did you say to him?

8 A Just is there anything we had done to mess  
9 up the alarm or set it off. We had started tearing the wood  
10 off of the wall, and he said he didn't think so because we  
11 weren't quite in that area.

12 Q Did you direct him to do anything about it?

13 A No, I didn't. It had already stopped, the  
14 alarm had gone off previously.

15 Q Let me ask you this. When you left the  
16 premises at the close of the workday, was the current on?

17 A Right.

18 Q Now, was there any temporary lighting in  
19 the second floor addition at that time?

20 A Yes, we had a couple light bulbs up there  
21 in about three or four of the rooms.

22 Q Were those light bulbs supposed to be turned  
23 off at the close of the workday?

24 A Yes, they were.

25 Q Do you know whether or not any of them had

C. E. Mahone - Redirect

188.

1 ever been left on by accident?

2 A Not right off. I have heard it was, but I  
3 ain't seen them myself.

4 MR. HEILIG: That's all the questions I have  
5 of this witness.

6 MR. MARKS: Nothing further.

7 THE COURT: Thank you, Mr. Mahone.

8 MR. HEILIG: He may be excused, Your Honor.

9 MR. MARKS: Yes.

10 THE COURT: Thank you, Mr. Mahone, you may  
11 step down.

12  
13 

---

WITNESS STOOD DOWN

14  
15 THE COURT: Now, did you have any other  
16 people outside that we haven't either recognized  
17 or called?

18 MR. DOBBINS: I don't believe so, Your  
19 Honor.

20 THE COURT: There were some other names  
21 that I had not called.

22 MR. DOBBINS: They were for damages.

23 THE COURT: All right. Ladies and gentle-  
24 men of the jury, we will let you go home and get a  
25 good start on supper so that we can get moving

1 THE COURT: Good morning, glad to have you  
2 back.

3 Call your next witness, Mr. Heilig.

4 MR. HEILIG: Chief Costin.

5  
6 WILLIAM WADDEY COSTIN, a witness called by  
7 the attorneys for the plaintiff, first being duly sworn,  
8 testifies and states:

9 DIRECT EXAMINATION

10 BY MR. HEILIG:

11 Q All right, sir, would you state your full  
12 name and your address, please.

13 A William Waddey Costin, 10123 Garfield Road,  
14 Richmond.

15 Q What is your occupation?

16 A I am the chief of the Bureau of Emergency  
17 Communications, Department of Public Safety, Richmond.

18 Q And how long have you been so employed, sir?

19 A I have been with the Bureau of Emergency  
20 Communications since 1972. I have been employed by the City  
21 of Richmond for 26 years.

22 Q Now, where is the Bureau of Emergency Com-  
23 munications?

24 A It's located in the basement of the Safety,  
25 Health and Welfare Building.

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193.

1 Q What's the function of that bureau?

2 A We take all incoming calls of an emergency  
3 nature, that would be for police or fire or any type of  
4 emergency, and we dispatch all police and fire equipment for  
5 the city.

6 Q Are you aware that on December 19th, 1975  
7 the Virginia Heart Institute was destroyed by fire?

8 A I understand there was a fire. I am  
9 familiar with the fire, yes.

10 Q In December of 1975, Chief, how was your  
11 bureau organized? How was your bureau set up, very briefly?

12 A We operate, of course, 24 hours a day,  
13 365 days a year, with a minimum of, in 1975, it was a minimum  
14 of 11 people on duty at any one time. That would be a com-  
15 munications supervisor, communication officers 1 or 2 class,  
16 and during the daytime an office staff.

17 Q Would your records reflect whether or not  
18 the Virginia Heart Institute in December of 1975 was equipped  
19 with an alarm system that was tied into your bureau?

20 A We had an alarm system tied in through a  
21 C&P telephone line using an automatic telephone dialer to  
22 dial a number that had been assigned by me to that associa-  
23 tion.

24 Q Let me show you this and ask you if you  
25 can identify it.

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194.

1           A           Yes, sir, this is a copy of the card that  
2 we keep on these alarm systems.

3           Q           What does that card reflect as far as your  
4 bureau is concerned?

5           A           It reflects that they met the requirements  
6 of the city ordinance, it had been tested, the tapes and the  
7 other equipment that was used was satisfactory, and we  
8 approved this system and notified them on December 21st,  
9 1973 that they had such approval.

10                   MR. HEILIG: I ask that that be marked,  
11 Your Honor.

12                   MR. MARKS: No objection.

13                   THE COURT: All right, that will be Plain-  
14 tiff's Exhibit 8.

15           Q           Chief, do you know of your own knowledge  
16 or from the records of your bureau whether or not the dialer  
17 system at the Heart Institute contacted your bureau say after  
18 5 p.m. on December 18th, 1975 to report a fire?

19           A           I have no record that it did.

20                   THE COURT: Let me get a clarification  
21 from him, Mr. Heilig. You-all have used in this  
22 trial two dates, the 18th and the 19th, I think  
23 that's because the night spanned midnight. Does  
24 your answer extend into the early morning hours of  
25 the 19th of December?

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195.

1 THE WITNESS: Yes, sir.

2 Q Chief, would you take a look at that and  
3 tell me what that is.

4 A This is a Xerox copy of what we call a  
5 Fire 1 card. It is a report that we use within the Communica-  
6 tions Bureau to record complaints of fire alarms and the  
7 assignment of fire equipment, the time of the dispatch, the  
8 time of arrival of the fire equipment at the scene, and the  
9 time that the unit is cleared from the scene.

10 Q Now who would have the responsibility for  
11 filling out that report?

12 A The communications officer that received the  
13 call, the original call, would fill out the initial portion  
14 of it, and then the officer assigned to the fire radio console  
15 would indicate the units and the time stamp when they were  
16 cleared out or when they arrived on the scene.

17 Q Does that form indicate how your bureau was  
18 ultimately informed of this fire?

19 A Yes, it does.

20 Q How was your bureau informed of the fire?

21 A At 1:07 on December the 19th we received a  
22 call from a citizen via one of the emergency reporting tele-  
23 phone system call boxes.

24 Q Does it say where the call box was located,  
25 by any chance?



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196.

1           A           It gives a number. The call box number was  
2 2414. If my memory is correct, that box is located at Thompson  
3 son and Floyd.

4           Q           Now, Chief, mechanically speaking, how are  
5 the dialers, not only this dialer and every other dialer, how  
6 are they tied into your bureau?

7                   MR. MARKS: If Your Honor please, he's  
8 already testified that they come in on a C&P telephone  
9 line.

10           THE COURT: Well, he has. Do you want to  
11 explore that further?

12           MR. HEILIG: Yes, sir, Your Honor.

13           THE COURT: Go ahead.

14           Q           Go ahead, Chief Costin.

15           A           An automatic telephone dialer is a device  
16 using a tape very similar to a cassette tape that you would  
17 use on a tape recorder. This has sensing tape at the beginning  
18 of the cartridge, and when a sensing device or alarm  
19 device activates the dialer, it starts the tape to turn, and  
20 the sensing tape dials a predetermined number, telephone  
21 number, and in this particular case the number that was  
22 assigned was 649-9117. This is a trunk line assigned to the  
23 Bureau of Emergency Communications. After the number is  
24 dialed it starts a recording stating the nature of the emergency  
25 and the location. After it dials the first number, the

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197.

1 dialer would stop, and then it's programmed to continue on to  
2 dial up to three additional numbers. In this case my records  
3 indicate it was programmed to dial two additional numbers.

4 Q Now, if the dialer would initiate the call  
5 into the bureau, how does it come into the bureau? In other  
6 words, what are the chances of the dialer getting a busy  
7 signal at your bureau?

8 A It would be a very slim chance. I won't  
9 say none, but very small. We have four numbers assigned to  
10 dialers, the number 9117, -18, -19, and -10, and these are  
11 in rotary so that if the first number is busy it automatically  
12 goes to the second number, and to a third, or to a fourth  
13 number. The chances would be very slim that we would get a  
14 busy signal.

15 Q To your knowledge, has a dialer or an emer-  
16 gency call ever gotten a busy signal?

17 A To my knowledge, no.

18 Q Would the amount of activity at a particular  
19 hour during an evening have any effect on the chances of a  
20 busy signal?

21 A I would say yes. Of course, our type of  
22 work has peaks, and during peak periods there would be more  
23 likelihood, even as slim as it would be during our slower  
24 periods.

25 Q Chief, let me ask you this. Do you know

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1 or have any idea what the average length of time one of your  
2 operators would be on a particular emergency call?

3 A You are speaking now of fire calls, incoming  
4 complaints of fires?

5 Q Yes, sir.

6 A We just recently did a survey on fire dis-  
7 patching, and--

8 MR. MARKS: If Your Honor please, we are  
9 talking about December of '75, not just recently.

10 Q Could you relate your answer to 1975, Chief?

11 A I would have to, because of my work there  
12 I see not that much difference now than it was three years  
13 ago in the matter of handling these types of calls, and I  
14 would have to say it would be about the same or approximately  
15 the same, very, very close. The best estimate I could give  
16 would be 16 to 20 seconds of actual talk time on an incoming  
17 fire complaint.

18 Q Now, with respect to the message on the  
19 tape at the Virginia Heart Institute, do you know how long  
20 that message would last, the preprogrammed message?

21 A I cannot answer on that particular tape.  
22 The ordinance says that the message cannot last longer than  
23 30 seconds. Most are shorter than that.

24 Q Let's assume for a moment, Chief, that the  
25 operator at your fire console receives an alert of a fire at

W. W. Costin - Direct

199.

1 some address. Now what would he do then? What does your  
2 operator do?

3 A In 1975 the operation was slightly different  
4 in the dispatching of fire equipment. At that time we were  
5 using a system that we rented from C&P Telephone called a  
6 vocal paging system. The operator that answered an incoming  
7 ERTS box in this case would have also dispatched the fire  
8 equipment from the same location, same position. He would  
9 look up the address in a book that we have all addresses in  
10 the city with predetermined fire response, preplanned fire  
11 response.

12 Q What do you mean by that, preplanned fire  
13 response?

14 A Every address in Richmond is given the  
15 equipment to respond on a first-, second-, or third-alarm  
16 fire. He would look this address up, determine the equipment  
17 to dispatch, fire equipment to dispatch, and he would then  
18 have pushed buttons on the switchboard that would have  
19 activated amplifiers within the fire houses involved, and  
20 that would activate speakers in the fire house, and he would  
21 broadcast the address and the nature of the fire to those  
22 companies to respond.

23 Q Now, with respect to the address of the  
24 Virginia Heart Institute, what was the first preplanned unit  
25 to respond?

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200.

1           A           The companies that did in fact respond were  
2 those that are assigned to that location, and they are Engine  
3 Company 18, Engine Company 12, Truck Company 47, and a bat-  
4 talion chief for the West End battalion.

5           Q           How far is Engine Company 18 from the Vir-  
6 ginia Heart Institute premises?

7           A           No. 18 is on Thompson Street just south of  
8 Patterson. Berrington is just off of Thompson also, just  
9 south of Grove.

10          Q           Chief, do you have any knowledge of how  
11 long it would take a fire unit to arrive at the scene in  
12 answer to the first preplanned alarm given by your bureau?

13          A           I can tell you how long it took this night.  
14 Engine Company 18 arrived on the scene at Berrington Street  
15 at 1:10 a.m.

16          Q           What time did they get the call?

17          A           1:07.

18          Q           So, that was in 3 minutes?

19          A           We received the call at 1:07, and they  
20 arrived at 1:10. This 3-minute period included the time it  
21 took us to talk or the communications officer to talk to the  
22 citizen, get the address, dispatch the equipment, for them to  
23 make their run and arrive at the scene.

24                   MR. HEILIG: That's all I have, Your Honor,  
25 of this witness.

W. W. Costin - Cross

201.

CROSS-EXAMINATION

BY MR. MARKS:

Q Chief Costin, from what you have advised us, there are four lines connected to this automatic dialer in rotation, 649-9117, 9118, -19 and -10?

A Yes, sir.

Q Do intrusion alarms come in on those same lines?

A Only automatic telephone dialers.

Q I am talking about if the automatic telephone dialer is tuned to send an intrusion alarm.

A Yes, sir.

Q That would come in on one of those alarms as well as a fire alarm?

A I assign the numbers, and I try not to overload a system of numbers, but I do have a number of intrusion alarms, or burglary alarms as we call them, as well as fire alarms assigned to that same telephone number.

Q And you also have some instances in which intrusion alarms alone are used and not fire alarms, don't you?

A That's correct.

Q If I understand you correctly, according to the way the system is set up based on your knowledge of its operation as far as your bureau is concerned, the equipment

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W. W. Costin - Cross

202.

1 of the C&P Telephone Company is an essential link between the  
2 automatic dialer and your department, is that correct?

3 A Yes, sir.

4 Q And a malfunction in the C&P equipment  
5 could affect very readily the ability of the dialer to reach  
6 you, couldn't it?

7 A Correct.

8 Q Are you aware of what exchange in the tele-  
9 phone setup this dialer reached first? Would it be 35, 64,  
10 or what?

11 A It would go through the Stuart Avenue  
12 central office or wire center, from Stuart Avenue to Grace  
13 Street wire center, and then to my office.

14 Q So that it's a rather circuitous route,  
15 isn't it?

16 A No, sir, not as far as the telephone  
17 system is concerned.

18 Q If it goes from Berrington Street to Stuart  
19 Avenue and then to Grace Street and then to you, there is  
20 plenty of opportunity for malfunction en route, isn't there?

21 A I could not answer. As far as the routing  
22 of calls through two wire centers, that is not unusual. In  
23 fact, that is a short run as far as that.

24 Q I understand that. Do you have any idea  
25 how many automatic machines are involved in a telephone system

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W. W. Costin - Cross

203.

1 to complete a call of that kind?

2 A No, sir, I do not.

3 Q I suppose, like everybody else, you have  
4 had an occasion to be unable to get a dial tone on your own  
5 personal telephone?

6 A Yes, sir.

7 MR. DOBBINS: Your Honor, I object to what  
8 he may have done on his own personal telephone, that's  
9 going beyond the scope of direct examination.

10 THE COURT: No, sir, I don't think it is  
11 beyond the scope. The objection is overruled.

12 Q Would you say that that's not an infrequent  
13 thing in the City of Richmond at large, that you can't get  
14 a dial tone?

15 THE COURT: I don't think he can speak as  
16 to anybody but himself.

17 MR. MARKS: All right, I will take it back.

18 Q You have four lines. Is that one operator  
19 for four lines?

20 A No, sir, that would be up to eight people  
21 that could answer that line.

22 Q Who normally would be assigned to answer  
23 one of these four?

24 A I have a minimum of two people on duty at  
25 any one time that have the primary responsibility, but any of



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W. W. Costin - Cross

204.

1 the eight could do so in case of it being busy.

2 Q Four calls from other sources would tie up  
3 this trunk, wouldn't it, so as to prevent Berrington Street  
4 from getting through?

5 A Yes, sir, if we had four dialers to come  
6 in at the same time, the fifth would get a busy signal.

7 Q Do you know what would happen in the event  
8 the dialer got a busy signal? Would it automatically go on  
9 to the next number, or what would it do?

10 A It goes to the second number and continues  
11 on.

12 Q And that in turn is a telephone system num-  
13 ber?

14 A Yes, sir.

15 Q And again involves the automatic equipment  
16 of the telephone company?

17 A Yes, sir.

18 Q You say that the preprogrammed dialer mes-  
19 sage is limited by law to 30 seconds?

20 A Yes, sir.

21 Q And you also have said that the average  
22 time based on your study in your department, if I understand  
23 it correctly, is taking a call and hanging up again perhaps  
24 is 16 seconds?

25 A 16 to 20.

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W. W. Costin - Cross

205.

1 Q 16 to 20?

2 A Yes, sir.

3 Q Let's assume that the dialer, if you can  
4 tell us this answer, if the dialer reached a busy signal  
5 first and that's all it got, what would happen in the event  
6 that your line later cleared within the 30-second interval?

7 A I am afraid that I would have to know the  
8 precise type of equipment involved. Most of the dialers would  
9 go to the second number once it had gotten past the sensing  
10 tape of the first number. There are automatic dialers that  
11 would then still continue on and dial to the office. These  
12 are the exceptions rather than the general rule.

13 Q Well, the one that's on this card shows  
14 three numbers, is that right?

15 A Yes, sir.

16 Q Would you say that based upon the informa-  
17 tion in your office it would go to the second number if it  
18 got a busy signal the first time?

19 A That would be an assumption I would have to  
20 make, yes, sir.

21 Q Then if your four trunks are busy at the  
22 time it hits you and the dialer gets a busy signal, it's not  
23 coming back to you?

24 A No, sir, it is not.

25 Q That's what I thought I understood. Now,

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W. W. Costin - Cross

206.

1 I believe the second thing that you were shown deals with the  
2 19th fire, right?

3 A Yes, sir, it's a copy of that.

4 Q It comes in at 1:07 and is answered by fire  
5 units from Company 18 who arrive three minutes later at 1:10?

6 A Yes, sir.

7 Q And then it goes on and outlines the history  
8 of the fire as it goes, and what units respond, and all other  
9 things, it shows the equipment, is that correct?

10 A That's correct.

11 Q How do you monitor such things on the 18th,  
12 let's say?

13 A Excuse me?

14 Q Do you have a log of calls for the 18th?

15 A Yes, sir, my office maintains records of  
16 all fire dispatches.

17 Q How about intrusion dispatches?

18 A We have a working arrangement with the  
19 Bureau of Police so that at 8 a.m. the following morning we  
20 send the previous 24 hours' work to the police records section  
21 where it is entered into the computer. That information is  
22 available to me, but not maintained by my bureau.

23 Q Can you tell us whether or not on the 18th  
24 day of December, 1975 any alarms of any kind were received  
25 from Berrington Street?

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W. W. Costin - Cross

207.

1 A I could check to find it.

2 Q You are not in a position to do so from  
3 your own knowledge at the moment?

4 A No, sir.

5 Q Now, can you tell us, Chief, whether or  
6 not that automatic dialer at Berrington Street has the capa-  
7 bility of distinguishing between an intrusion alarm and a  
8 fire alarm?

9 A No, sir. My records are for a fire alarm,  
10 I do not know if it was an intrusion alarm or not. I did  
11 not check that prior to coming here.

12 Q Well, if it did have an intrusion alarm  
13 factor connected with it, and I will tell you now that the  
14 evidence is that it did, would that have also come into your  
15 bureau?

16 A Yes, sir.

17 Q So, there should be a record on December  
18 18th then if it sent a message on December 18th, shouldn't  
19 it?

20 A If it sent a message and it was received,  
21 we would have a record of that, yes.

22 THE COURT: What kind of a record, Chief?  
23 Is this a manual entry by an individual, or an elec-  
24 tronic impression, or what?

25 THE WITNESS: We have both, Judge. If we

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208.

1           dispatch a unit, we have a written record that is  
2           done by one of the communication officers, a manual  
3           record. If the alarm came in on the switch board,  
4           at that time we should have had a printed record  
5           also. I don't know if I still maintain those records  
6           that far back, but we would've had one.

7                     THE COURT: Printed how?

8                     THE WITNESS: We have a device called a  
9           digitamatic recorder that is attached to the C&P  
10          system, and it prints out an incoming number on a  
11          paper tape. Also we would have had, if we had voice  
12          contact, a telephone call of this type, it would've  
13          gone on magnetic tape recordings. These are no  
14          longer available, we keep these for six months and  
15          use them again. But, at the time we would've had  
16          three records.

17                    THE COURT: And this would be true even  
18          if the customer called up and said cancel it, that  
19          was a mistake? Or, they can't do that, I believe.

20                    THE WITNESS: Then we would have the  
21          recording, magnetic tape recording, and we should  
22          have some entry on the original document. I won't  
23          guarantee if we put it on there or not, but we  
24          should have an entry there also, but we would have  
25          the magnetic tape recording.

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209.

1 THE COURT: But as far as the record that  
2 was put in evidence a moment ago of dispatching  
3 equipment, the one that was introduced I think as  
4 Plaintiff's Exhibit No. 8, that would be filled out  
5 by people when you did in fact dispatch equipment?

6 THE WITNESS: Yes, sir.

7 MR. MARKS: It seems to me that there was  
8 a subpoena issued some time ago for the records on  
9 the 18th, and nothing was produced in connection  
10 therewith.

11 THE COURT: I haven't looked at the records.

12 MR. MARKS: Mr. Heilig, you would know,  
13 isn't that right?

14 MR. HEILIG: Judge, I don't have any idea,  
15 I did not subpoena the records of the Bureau of  
16 Communications, I subpoenaed the records of the  
17 Fire Bureau.

18 THE COURT: The Fire Department, that's all  
19 I saw in the folder here.

20 MR. MARKS: I am sorry, I misunderstood  
21 him.

22 THE COURT: I saw a subpoena duces tecum  
23 from the Fire Department.

24 MR. MARKS: Okay.

25 MR. HEILIG: Yes, sir.

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W. W. Costin - Cross

210.

1 Q Sir, you can't tell us whether or not there  
2 actually was an alarm on the 18th because you don't have a  
3 record of it?

4 A No, sir, I could not answer that.

5 Q In your operation is there a Centrex phone  
6 of some kind?

7 A We have several Centrex phones. I have a  
8 total of 600 trunk lines terminating within our center.

9 Q What is the function of the Centrex phone?

10 A The Centrex is a city telephone system to  
11 be used within our own city operations.

12 Q And does that involve transferring com-  
13 munications from your division to the Fire Bureau?

14 A Not as a normal procedure, no, sir, not  
15 for emergency messages.

16 Q I see.

17 A We use Centrex for routine administrative-  
18 type calls.

19 Q So, if the Centrex is out of order, that  
20 wouldn't have any bearing on the emergency call?

21 A No, sir.

22 MR. MARKS: Okay, that's all I wanted to  
23 know. That's all the questions I have.

24 MR. HEILIG: I have no further questions  
25 of this witness, Your Honor.

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W. W. Costin - Cross

211.

1 THE COURT: Thank you, Chief Costin. Can  
2 he be excused?

3 MR. HEILIG: Yes.

4 THE COURT: All right, you may be excused.

5

6

WITNESS STOOD DOWN

7

8

9

10

MR. HEILIG: We would offer that, Your Honor,  
as Plaintiff's Exhibit 9, the record as to the time  
of dispatch and so on.

11

12

THE COURT: All right, this will be Plain-  
tiff's Exhibit 9.

13

14

15

THE COURT: Call your next witness.

MR. HEILIG: Mr. Kemper Smith.

16

17

18

R. KEMPER SMITH, a witness called by the  
attorneys for the plaintiff, first being duly sworn, testifies  
and states:

19

DIRECT EXAMINATION

20

BY MR. HEILIG:

21

22

Q Mr. Smith, would you state your full name,  
please.

23

24

25

A R. Kemper Smith.

Q Where do you live, sir?

A 3807 Dover Road.



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R. K. Smith - Direct

\* 214.

1 man here," did you point to Dr. Baird?

2 MR. HEILIG: I am pointing to Dr. Baird.

3 THE COURT: Let the record show that.

4 Q Did you have any relation or connection  
5 with the alarm system at the Virginia Heart Institute?

6 A Yes. I was supposed to, if the alarm goes  
7 off, I was supposed to get a call.

8 Q You were supposed to get a call from what?

9 A From the tape on the police and fire alarm  
10 system.

11 Q Now, were you home during the evening of  
12 December 18th and the morning of December 19th?

13 A Yes, I was.

14 Q Was the telephone at your home available  
15 for use?

16 A Yes.

17 Q To the best of your knowledge, was it in  
18 operating order?

19 A Yes.

20 Q Did you ever receive a call from the Vir-  
21 ginia Heart Institute dialer to the effect that there was a  
22 fire in progress?

23 A No, I did not.

24 Q Did you subsequently respond to the scene  
25 of the Virginia Heart Institute?

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R. K. Smith - Direct

215.

1 A Yes, I did.

2 Q Would you tell the ladies and gentlemen of  
3 the jury what occurred then.

4 A Well, when I looked out of the window and  
5 saw the flames, as I previously stated, and made the remark  
6 to my wife that either the A&P or the Virginia Heart Institute  
7 was on fire, because I could see the flames and that I was  
8 going to go over there, I did go over there, and when I  
9 arrived the first thing I looked for was for my nephew, Dr.  
10 Baird, which I did not see him. I asked one of the police  
11 officers on the scene if Dr. Baird had been notified that his  
12 place was burning, and the officer said: No, we are trying to  
13 locate the contractor. Then I said: Well, would you go in  
14 this house with me, one of these homes, and we can get on the  
15 phone and I will call Dr. Baird.

16 So, we went in, and of course the phones  
17 were out on account of the wires having been burned in two.  
18 So then I asked the police officer if he would contact the  
19 dispatcher and ask them if they would call Dr. Baird. So the  
20 dispatcher did take the call and called Dr. Baird.

21 Q Mr. Smith, do you recall whether or not you  
22 had had occasion to use your telephone say prior to 7 o'clock  
23 on the evening of December 18th?

24 A No, I did not.

25 Q How about 7 p.m. and the time you heard the

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R. K. Smith - Cross

\* 217.

1 Q But you do know that when you got over there  
2 you couldn't get service?

3 A After the officer and I went into the home  
4 and we dialed, picked up the receiver, it was dead.

5 Q No dial tone, is that right?

6 A No dial tone.

7 Q You wouldn't happen to recall what exchange  
8 that number was on, would you? Would it have been 35, or  
9 what?

10 A No, sir.

11 Q When you got over there and took a look at  
12 it, Mr. Smith, was it cold out, the weather?

13 A Yes, sir.

14 Q Was there any wind?

15 A Normal wind, yes. It was raining.

16 Q It was raining and it had a wind?

17 A I don't mean it was raining, the water from  
18 the hoses and so forth, that's what I mean, because I remember  
19 it froze on my raincoat.

20 Q I see. Do you remember the direction from  
21 which the wind was coming, the normal wind?

22 A No, sir.

23 Q What was the extent of the fire when you  
24 reached it?

25 A The roof had caved in.

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R. K. Smith - Cross

218.

1 Q That was the very top?

2 A Yes, sir, and part of the two sides were  
3 down.

4 Q On the very top?

5 A Of the upper portion.

6 Q The newer part?

7 A The new addition, yes.

8 Q Was there any fire downstairs when you got  
9 there?

10 A There was plenty of smoke coming out of  
11 there, so I imagine there was fire.

12 Q Did you see any flames through the windows  
13 of the downstairs?

14 A No.

15 Q But you did see smoke?

16 A Yes.

17 Q Where did most of the burning seem to be  
18 when you were there?

19 A Up on the second floor.

20 Q Up on the top?

21 A The new addition.

22 MR. MARKS: Thank you, sir, that's all I  
23 have.

24

25

R. K. Smith - Redirect

219.

REDIRECT EXAMINATION

BY MR. HEILIG:

Q Mr. Smith, tell me again, what was the condition when you arrived? How long after the fire equipment arrived did you arrive, can you estimate?

A I would say it was a very short while because when I arrived there I parked in the lot back of the ABC Store, and Chief Finnegan was arriving at the same time that I did, and I spoke to him, I knew him, and I spoke to him because we both walked up together. I would say ten or fifteen minutes.

Q When you looked out of your window, could you see flames?

A Yes.

Q And when you got there, was the building totally involved in flame?

MR. MARKS: If Your Honor please, he's already answered that question.

THE COURT: Well, he can answer the question, but you are leading, Mr. Heilig. Just ask him what he saw.

Q What did you see?

A The roof had practically caved in, and the upper story, there was plenty of fire there, and what I was really interested in was I was trying to find Dr. Baird

1 MR. HEILIG: Chief Williams.

2

3 MELVIN E. WILLIAMS, a witness called by the  
4 attorneys for the plaintiff, first being duly sworn, testi-  
5 fies and states:

6 DIRECT EXAMINATION

7 BY MR. HEILIG:

8 Q All right, sir, would you state your name,  
9 please.

10 A My name is Melvin E. Williams.

11 Q And your occupation?

12 A I'm retired at the present time.

13 Q And what was your occupation before your  
14 retirement?

15 A Chief of Fire Prevention for the Bureau of  
16 Fire, City of Richmond.

17 Q How long before your retirement had you  
18 been a member of the City of Richmond Bureau of Fire?

19 A 39 years.

20 Q Would you briefly summarize your career  
21 with the Richmond Bureau of Fire?

22 A Having started as all people do as a private  
23 firefighter, I worked my way up through the ranks to battalion  
24 chief and was assigned to the Fire Prevention Division.

25 Q During your tenure with the Fire Bureau

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M. E. Williams - Direct

222.

1 were you ever engaged with fire investigation, that is their  
2 origin, causes, that sort of thing?

3 A Yes, I was.

4 Q How often did you engage in fire investiga-  
5 tions?

6 A Well, from the time I went into fire preven-  
7 tion up until the time I retired, that would have been from  
8 1953 until 1977.

9 Q Now, can you estimate for me how many fires  
10 you investigated during your career?

11 A The best I could give you would be hundreds  
12 of them over the period of time.

13 Q As chief of the fire prevention area in the  
14 Bureau of Fire, what were your duties?

15 A Well, to enforce and administer the Fire  
16 Prevention Code for the City of Richmond, to investigate all  
17 fires of suspicious origin, all fires of any great monetary  
18 loss, and all fires in which people were injured or killed.

19 Q And with respect to fire investigation  
20 techniques, did you ever attend any schools?

21 A I have attended many schools over the  
22 country throughout the entire time I have been associated  
23 with the bureau.

24 Q In your capacity as a fire investigator,  
25 did you ever have occasion to investigate the fire that

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M. E. Williams - Direct

223.

1 occurred at 102 Berrington Street on December 19th, 1975?

2 A Yes, sir, I did.

3 Q Now, when did you first come on the scene?

4 A Within just a short period of time after  
5 the initial alarm was sounded.

6 Q Now, what was the condition of the building  
7 when you arrived?

8 A It was totally involved in fire and smoke.  
9 The roof in particular was burning from one end to the other.  
10 The interior, of course, was on fire.

11 Q Now, what parts of the building were on  
12 fire?

13 A Basically the ceiling, the interior offices,  
14 the corridors, and the portion that was new construction that  
15 was at that time under construction.

16 Q When you say the corridors and the interior  
17 offices, are you talking about the first floor, or the second  
18 floor?

19 A First floor.

20 Q Now, do you recall approximately what time  
21 the blaze was extinguished?

22 A It was well into the morning, into the day  
23 of the 19th. This fire occurred during the early hours of  
24 the morning, and the fire was not totally extinguished until  
25 sometime well after light.



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M. E. Williams - Direct

224.

1 Q Now, in investigating the fire, when did  
2 you commence your investigation?

3 A Well, it's normal to immediately begin  
4 your investigation on your arrival at the fire scene. What  
5 I had done in this particular case was to take a tour of the  
6 exterior of the building and attempt to determine where most  
7 fire was burning at that time and try to pinpoint the point  
8 of origin, where the fire originally originated, and then  
9 I began talking with the officers in charge of the fire who  
10 were on the scene at the time and had been since it was  
11 reported initially.

12 Q Did you have any occasion to interview  
13 any witnesses at that time?

14 A In talking with the officer in charge of  
15 the fire, Chief Rigby, he referred me to a man by the name  
16 of Small who was the first one to the scene of the fire and  
17 he is the one that reported the fire.

18 Q At the time the fire was extinguished, did  
19 you have an opportunity to examine the inside of the gutted  
20 building?

21 A Well, even before the fire was totally  
22 extinguished I did enter the building and continued the  
23 investigation from the inside of the building.

24 Q Now, do you know whether or not any offi-  
25 cial pictures were taken by the Fire Bureau pursuant to the

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1 investigation?

2 A Yes, sir, we did take pictures.

3 Q Were these pictures taken at your direc-  
4 tion?

5 A That is correct.

6 MR. MARAS: May I ask one question? The  
7 pictures represent the condition after the fire, not  
8 during the fire?

9 THE WITNESS: After the fire.

10 MR. MARAS: No objection.

11 THE COURT: Do you want these in any  
12 particular order, Mr. Heilig?

13 MR. HEILIG: No, sir, Judge.

14 THE COURT: All right, these pictures will  
15 be introduced as Plaintiff's Exhibits 10, 11, 12, 13,  
16 14, 15, and 16.

17 Q Chief, would you take a look at those  
18 pictures.

19 A Yes, sir.

20 Q Chief, if you turn those pictures over you  
21 will see a number on the back of them.

22 A Yes, sir.

23 Q Now, what number are you looking at now?

24 A Well, No. 10 is the first one.

25 Q Would you take a look at that and tell the

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1 ladies and gentlemen of the jury what that represents.

2 A This photo No. 10 represents the roof in  
3 which the fire actually began. This is determined by the  
4 fact that your joists or rafters in the ceiling have burned  
5 tremendously in this area here. In fact, you see some of  
6 them have burned totally in two.

7 Q Chief, just one second. Are these offi-  
8 cial pictures taken by the Fire Bureau?

9 A Yes, sir.

10 Q At your direction?

11 A Yes, sir.

12 Q Now, you say that you are referring to this  
13 room. What room are you talking about? What room does that  
14 picture depict?

15 A The room by name as given to me from the  
16 people at the Heart Institute was known as the viewing room.

17 Q And where in the building was that viewing  
18 room located?

19 A That would be located on the far north end  
20 or the end closest to Broad Street.

21 Q Okay, go ahead with your explanation.

22 A And this is where the fire actually broke  
23 through the roof at this point.

24 THE COURT: Which roof are you referring to?  
25 Didn't the building have two roofs before it burned?

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1 THE WITNESS: Yes, one on the second floor  
2 and one on the first floor. This would be the ceiling  
3 of the first floor where it had gone through,  
4 and your uprights are the portion of stud that were  
5 left that were under construction on the second floor.

6 MR. DOBBINS: Pass each one of them to the  
7 jury as you finish so that they can see.

8 THE COURT: Now, Mr. Heilig, I think these  
9 pictures are big enough, and the Court has no objection  
10 to having the witness come out in front of the  
11 jury box and hold the picture in front of him and  
12 identify objects, and that way all seven jurors can  
13 see it at one time.

14 Q All right, Chief, why don't you do that.

15 A Okay.

16 Q Chief, would you look at the number on the  
17 back,

18 A This is No. 16.

19 MR. DOBBINS: Wouldn't it be better to take  
20 them in order?

21 MR. MARKS: It doesn't make any real difference,  
22 let him take them in any order he wants to  
23 take them.

24 THE WITNESS: I am just taking them as they  
25 come.

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1 MR. DOBBINS: I don't think it makes any  
2 difference.

3 THE COURT: Just identify them by number.

4 Q Go ahead, Chief.

5 A This is No. 16. This is basically the same  
6 thing looking through a door, and you see the upright piece  
7 of timber here.

8 MR. DOBBINS: Let the record show that the  
9 Chief is showing the upright piece of timber on the  
10 left-hand side of the photograph.

11 THE COURT: Yes.

12 A It's nowhere near as severely burned as the  
13 others between there and the door, which is proof beyond a  
14 doubt that the fire came out of--

15 MR. MARKS: If Your Honor please, I don't  
16 mean to interfere at all, and I have the most respect  
17 for the Chief, but the jury has got to determine  
18 what it proves.

19 THE COURT: That's just a way of expressing  
20 an affirmative opinion. You are right, the obligation  
21 to resolve the issues is with the jury, but he's  
22 expressing an opinion as to the origin of the fire  
23 as he is qualified to do.

24 A The fire came in through the door, and it's  
25 a scientific fact that fire or heated air is lighter than the

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1 normal air that we are in, and that it will rise. You will  
2 notice that it comes from the bottom up, and as it came for-  
3 ward there was less burning on this particular piece of  
4 studding than there was on these other two back here, those  
5 in between the door.

6 THE COURT: Now, where are we looking now?  
7 What is the location of this in the building?

8 THE WITNESS: This is looking down the  
9 corridor into the viewing room.

10 Q So, Chief, that would be looking from south  
11 to north?

12 A Yes, sir. This is No. 15, this is also the  
13 viewing room. This is the viewing room, and you see the  
14 alligatoring effects on the studs that have burned and pulled  
15 away from the wall. This is some distance from where the  
16 fire originated, and you can tell this by the roof rafters  
17 here are still intact, although they have suffered heavy  
18 alligatoring effect.

19 Q Would you explain that term, Chief.

20 A When I say alligatoring effect, if you will  
21 look at this photo closely you can see that it resembles the  
22 knots or lumps or humps on an alligator's back, it's not  
23 burned completely through like the other ceiling joists were  
24 burned through in the other photograph that I showed you, but  
25 it did show that there had been intense burning in this area

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1 to bring about this alligatoring effect on these pieces of  
2 timber.

3 The next one is 14. This is a close-up in  
4 the corner of the room known as the viewing room, and again  
5 I call your attention to the heavy burning and eating away  
6 of the timbers in their entirety where there had been exten-  
7 sive long periods of burning to burn completely through to  
8 get up into the second-floor portion of this particular build-  
9 ing. You will also notice the upright pieces on the outside  
10 here.

11 MR. DOEBINS: Outside on the second floor,  
12 is that it?

13 THE WITNESS: This would be the studding  
14 for the second floor.

15 Q Please continue, Chief.

16 A You notice the taper in the burning from  
17 the bottom to the top of this photo. It shows that the fire  
18 came up and consumed these timbers from beneath.

19 This is No. 13. Here again we had the same  
20 thing. We have the cabinet here that the tapes were in that  
21 was used in the viewing room. The studding or rafters across  
22 the top, they are burned completely away, and I might point  
23 out that it takes a considerable amount of time and a con-  
24 siderable amount of heat to burn a piece of timber this size  
25 completely through as it shows in this photograph.

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1 Q Chief, what size is that timber?

2 A If my memory serves me correctly, this is a  
3 2x6 or 2x10, certainly no less than 2x6, that is two inches  
4 thick and eight inches wide.

5 Again we come back to the viewing room  
6 storage cabinet.

7 MR. DOBBINS: Does that have a number?

8 THE WITNESS: I am sorry, it's No. 12.

9 Q Go ahead, Chief.

10 A We come to the viewing room storing cabinets  
11 where the tapes were stored. While there was a tremendous  
12 amount of heat in this room, you can see the studding on this  
13 side of the photograph--

14 MR. MARKS: That's on the left side?

15 A That would be on the left side looking at  
16 the picture, and they suffered extensive burning, and the  
17 right portion shows what was at one time paneling on the  
18 outside wall, it had burned totally away from the top which  
19 is indicative that the fire came out and up, which is the  
20 natural path of travel for any fire. The lower portion is  
21 still intact, although it is burned and has an alligatoring  
22 effect on it, but the top portion of it is burned completely  
23 away.

24 This one is No. 11. This is one that was  
25 taken from the corridor back through the viewing room showing



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1 the disks and all that were on the floor that had fallen  
2 from the cabinet or either been knocked from the cabinet  
3 during the process of fighting the fire. Again it shows a  
4 complete burning away of the paneling on the wall and the  
5 extensive burning that occurred to the studding and other  
6 structural members within the building during the course of  
7 burning.

8 Q Now, Chief, based on your investigation  
9 following the fire, do you have an opinion as to where the  
10 fire started?

11 A The fire definitely started in the ceiling  
12 of the viewing room, which is located at the north end of  
13 the building near the center.

14 Q Now, Chief, if the fire started in the  
15 north end of the building, could you describe for the ladies  
16 and gentlemen of the jury the path that the fire thereafter  
17 took?

18 A Actually, while it was burning, and you have  
19 to understand something about fire to begin with-- Well, as I  
20 explained earlier, your heated air and gasses naturally go  
21 up, and when they hit an object such as a ceiling they begin  
22 to spread out and fan out. Once they do this, they are heat-  
23 ing the air and the materials of anything they come in contact  
24 with. As soon as the air pressures are heated to the point  
25 where they will give off some vapor, anything that is in the

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1 presence of this vapor will ignite, and this is what happened  
2 in this particular case. After the pressure had built up in  
3 the viewing room and it had heated the materials, paneling,  
4 office furniture, et cetera, that was in the viewing room  
5 and in the adjacent corridor, the fire came down and went out  
6 through the door, down the corridors, and expanded itself  
7 into the various offices, examining rooms, waiting rooms,  
8 et cetera, that were attached to the corridor. This is proven  
9 by high burning in the corridors, your paneling was intact on  
10 the lower floor, and all your high burning took place in the  
11 corridors. Where it entered the various rooms it entered at  
12 a high level and not a low level.

13 So what I am saying is the air normally is  
14 cooler closer to the floor during the course of a fire than  
15 it is up high. I am sure that all of you have heard at some  
16 time during your life that if you are involved in a fire that  
17 you are supposed to get as close to the floor as you can  
18 possibly get and crawl to the nearest exit because when you  
19 stand up you are exposing yourself to much higher degrees of  
20 heated air than you would be if you stayed on the floor.  
21 This is how we trace the high burning versus the low burning.

22 Q Now, Chief, based on your examinations,  
23 observations, and investigations of the fire, do you have an  
24 opinion as to what started the fire?

25 A From what I could determine, there was an

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1 electrical conduit that came into this viewing room--

2 Q Chief, if you would pick up Plaintiff's  
3 Exhibit 10, I would ask you to again identify that and tell  
4 the jury what that depicts.

5 A Your conduit--

6 Q Tell them what room we are talking about  
7 there, Chief.

8 A We are again back in the viewing room where  
9 the fire originated. Your conduit came through just like I  
10 am holding this pen, with your electrical wires coming through  
11 it. This furnished the source of electrical energy in the  
12 viewing room for the lights, for the equipment that they  
13 had in that particular room that was operated by electricity  
14 through the use of wall receptacles, et cetera.

15 Q Now, Chief, your opinion is that that was  
16 the point of the origin of the fire?

17 A Most positively, yes, sir.

18 Q You say most positively--

19 THE COURT: I'm not sure that's what he  
20 said.

21 THE WITNESS: Yes, it's positive in my  
22 mind.

23 MR. MARKS: Positive in your opinion that  
24 it started in the conduit?

25 THE WITNESS: Yes, sir.

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1 Q On what factors do you base that positive  
2 opinion?

3 A Again, we go back to the tremendous burning  
4 that had to take place to burn the roof rafters or the joist  
5 completely through. This took a long period of extremely  
6 high temperatures to burn through either the eight- or ten-  
7 inch thickness or width of this particular piece of lumber.

8 Q Chief, would you have an opinion as to how  
9 long it would take the heat to burn through a ceiling joist  
10 of that size?

11 A Depending on the amount of heat that was  
12 present in the area, I would say certainly three to five hours.

13 Q Now, Chief, did your investigations of the  
14 fire reveal whether or not the premises were protected by any  
15 sort of detection equipment?

16 A Yes, they had a dual type of protection  
17 device in there, one for intrusion or burglaries, and the  
18 other was a fire detection system which was designed to detect  
19 the odor of smoke, gasses, this type of combustion that is  
20 emitted from fires.

21 Q Now, were you aware of whether or not this  
22 system was equipped with an automatic dialer or not?

23 THE COURT: Mr. Heilig, there is no need  
24 to examine ten witnesses on the same issue, it's not  
25 disputed. We have thoroughly established in the

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1 case what system was in the building. The Chief  
2 can't add a thing to that, it's just repetitive  
3 testimony. Move on to something else.

4 Q Chief, is it true or is it not true that  
5 fire passes through different stages during its development?

6 A I think I could best explain to the jury  
7 that a fire would actually pass through four different phases,  
8 and you may get a better idea of this if I were to say that  
9 if you were to take a heated object, whether it be a cigarette  
10 or a soldering iron or a piece of steel or whatever, and put  
11 it on a mattress, the first phase that you'll get will be the  
12 scorching of the material on which the heated object is laid.  
13 The second phase would be where the object begins to smolder  
14 and emit visible smoke. The third phase would be where actual  
15 flame comes into production, and the fourth phase of course  
16 would be where the fire spreads and continues to burn from  
17 this point.

18 Q Chief, with respect to this fire, how long  
19 would it take a fire to pass through those stages, do you have  
20 an opinion?

21 ME. MARKS: If Your Honor please, unless  
22 he's going to go into all the factors upon which his  
23 opinion is based, and I don't think the foundation  
24 has been laid for the opinion at this point.

25 THE COURT: Well, I don't think so either,

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1 Mr. Heilig, not the way the question was phrased.  
2 It's not relevant how long it would take a fire to  
3 go through these stages, I don't think.

4 MR. HEILIG: That's fine, he testified  
5 three to five hours. That's fine, Judge.

6 Q Chief, let me ask you this. Based on your  
7 observations, would you have an opinion as to how long that  
8 fire was in the incipient stage?

9 A Well, it could have been for a long, long  
10 period of time before it got hot enough to begin to emit  
11 smoke or any visible means of burning, and I would say in a  
12 matter of 30 minutes or something of this nature, but when  
13 you get beyond that point it could've burned, as I stated  
14 earlier, anywhere from three to five hours.

15 THE COURT: Of the four phases you described,  
16 Chief Williams, which one is the incipient stage?

17 THE WITNESS: That is the one where I first  
18 begin to notice or detect a scorching.

19 THE COURT: The very first phase?

20 THE WITNESS: Yes, sir.

21 Q Chief, could you tell us how long it  
22 smoldered?

23 A It was bound to have smoldered for quite  
24 some time.

25 Q Do you have an opinion as to a time period,

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1 approximation within any reasonable degree of hours?

2 A I would certainly say within one or two

3 hours.

4 Q Chief, did your investigations reveal which  
5 fire units were on the scene first?

6 A Well, No. 18, which is I believe just about  
7 five blocks from there, they were the very first ones on the  
8 scene, that's 18 and No. 7 truck who were just a few blocks  
9 away.

10 Q Chief, would you take a look at that, and  
11 I would like for you to tell the ladies and gentlemen of the  
12 jury what that is and what it depicts.

13 A This would be commonly referred to as a  
14 daily activity sheet of the activities that occur within any  
15 given fire station. Every fire station within the City of  
16 Richmond keeps one of these on the desk at all times. All of  
17 the activities that concern that particular company are  
18 recorded on this day sheet. As you see here, they had an  
19 alarm, and for instance--

20 Q Chief, what fire house does that log con-  
21 cern?

22 A This is from Engine--

23 MR. MARKS: I will concede that it's Thomp-  
24 son Street No. 18.

25 Q And what date does that cover then, Chief?

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1           A           That is Thursday, December the 18th, from  
2 8 a.m. in the morning until Friday, December the 19th, at  
3 8 a.m. in the morning.

4                   MR. HEILIG: I would like to have that  
5 marked, Your Honor.

6                   THE COURT: That will be No. 17.

7                   MR. MARKS: I have no objection to it. I  
8 fail to see the relevancy of it, it's purely cumulative,  
9 but let it come in.

10                  MR. DOBBINS: If Mr. Marks wants to object,  
11 let him object, but let's not let him comment editorially  
12 on the exhibit.

13                  THE COURT: The jury will judge that.

14                  MR. DOBBINS: I think that's right, I think  
15 he can argue his case when he gets to the point of  
16 argument.

17           Q           Chief, do you have the document?

18           A           Yes, now I have it.

19           Q           Chief, what does that log reflect about the  
20 activities of Engine Company 18 say after 5 p.m. on December  
21 18th, 1975?

22           A           Well, it shows that they responded at 10:15  
23 p.m. to 4616 Hanover Avenue where a furnace was involved in a  
24 fire. They cleared up from that particular fire and were  
25 back in their quarters at 10:30.



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1 Q P.M.?

2 A P.M.

3 Q So, the total time say before midnight that  
4 they were out of there house was what?

5 A Well, they returned to their fire station  
6 at 10:30 p.m. and did not move again until 1:07 a.m. on the  
7 morning of the 19th.

8 Q Do we know where they went at 1:07 on the  
9 morning of the 19th?

10 A To 102 Berrington Street.

11 Q Does it reflect on there what time they got  
12 the call or what time they returned?

13 A They got the call at 1:07 a.m. and returned  
14 at 1:31 p.m. the next afternoon.

15 Q So, they were actually out from 1:07 in the  
16 morning until 1:31 in the afternoon?

17 A Yes.

18 Q Chief, from that record, except for that  
19 10:15 call, were they in the fire house, or were they not?

20 A They were in the fire station from 10:30  
21 until 1:07.

22 Q Chief, you mentioned earlier that this fire  
23 smoldered approximately three to five yours in your opinion,  
24 or burned--

25 MR. MARKS: That isn't what he said.

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1 THE COURT: Don't try to characterize the  
2 evidence, Mr. Heilig, unless you know what it is.  
3 Just ask your questions.

4 Q Do you have an opinion, based on your  
5 investigations, Chief, as to what time the incipient stage  
6 of this fire began?

7 A I would guess--

8 THE COURT: No, sir.

9 A I would estimate between 9--

10 THE COURT: No, I am not going to let it  
11 go from guess or estimate. Rephrase the question.

12 Q Based on your observations and investiga-  
13 tions, do you have an opinion with a reasonable degree of  
14 certainty as to what time in the evening this fire began?

15 A Around 9 p.m.

16 THE COURT: What's that based on, Chief?

17 THE WITNESS: The time it takes to burn  
18 through a heavy timber like that, and the condition  
19 of the timbers when I saw them.

20 THE COURT: Be more explicit than that. You  
21 said it took from three to five hours to burn through  
22 a ceiling joist, and you have already assumed that  
23 the fire began or you have given an opinion that it  
24 began in the ceiling above this viewing room.

25 THE WITNESS: Right.

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1 THE COURT: And you arrived at the fire  
2 how long after the fire truck responded?

3 THE WITNESS: I was what now?

4 THE COURT: How long was it after the fire  
5 truck arrived that you arrived? You never told us  
6 the time, you said it was sometime after the fire  
7 trucks arrived that you arrived.

8 THE WITNESS: Well, I drove from my home in  
9 Mechanicsville to Highland Park, and I picked up the  
10 city vehicle there, and drove immediately to the  
11 fire. So I am saying that I was on the fire scene  
12 within 15 to 20 minutes after the first piece of  
13 apparatus arrived there.

14 THE COURT: From Mechanicsville?

15 THE WITNESS: Yes, sir.

16 THE COURT: With a stop to pick up a piece  
17 of equipment?

18 THE WITNESS: To pick up my own vehicle.

19 THE COURT: Do you have any record of the  
20 time that you actually arrived at the fire?

21 THE WITNESS: No, sir.

22 THE COURT: And what was the status of the  
23 fire when you arrived in terms of what was involved?

24 THE WITNESS: The building was totally  
25 involved in flame in the roof section from the north

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1 to the south end. There was heavy, dense smoke in  
2 the street covering the entire perimeter of the  
3 neighborhood, I would say for at least half a city  
4 block. The fire could be seen through the narrow  
5 windows that were in the building. A truck that  
6 was located at the south end of the building that  
7 belonged to the contractors who were doing some  
8 work there was totally involved in fire.

9 THE COURT: So what you are basing your  
10 opinion on is what you saw when you arrived plus  
11 your opinion as to how much time it would take to  
12 burn through a ceiling joist, is that where you come  
13 up with the 9 o'clock?

14 THE WITNESS: No, due to the past experience  
15 that we have had with purposely burning such materials.

16 THE COURT: All right, sir.

17 Q Chief Williams, does that log of Engine  
18 Company 18 reflect where it was at 9 p.m.?

19 A At 9 p.m. it was in the station.

20 Q Had Engine Company 18 received an alarm,  
21 based on your experience and knowledge, how long would it have  
22 taken them to respond to 102 Berrington Street?

23 MR. MARKS: If Your Honor please, I believe  
24 that's already in evidence, and the people that were  
25 there and doing it are the best evidence in this case.

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1 we don't need an opinion from Chief Williams regard-  
2 less of his ability.

3 THE COURT: Objection sustained, it's purely  
4 speculation on his part, and we already know it took  
5 them three minutes.

6 MR. HELLIG: Yes, sir.

7 THE COURT: Now, Chief, when you say you  
8 would estimate the fire started around 9 p.m., you  
9 are referring to the incipient stage?

10 THE WITNESS: Yes, sir.

11 THE COURT: And when, in your opinion, would  
12 it convert from that into other stages, smoldering  
13 and the visible flame?

14 THE WITNESS: It should have been in the  
15 smoldering stage where there would have been some  
16 products of combustion present such as smoke, soot  
17 particles, et cetera, within a matter of 30 minutes  
18 at the most.

19 THE COURT: And how about into an open-flame  
20 stage?

21 THE WITNESS: Well, that could have followed  
22 within another 30 minutes.

23 MR. MARKS: If Your Honor please, he said  
24 it could have followed, and I am forced to object.

25 THE COURT: Well, I think he's just giving

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1 an opinion. So from approximately 10 o'clock on it  
2 would have been in a flaming state and building up  
3 the heat necessary to burn through the ceiling joists.

4 THE WITNESS: Correct, yes, sir.

5 THE COURT: All right.

6 Q Chief, what's involved in putting out a  
7 fire in an incipient stage or a smoldering stage?

8 A Well, it would simply be a matter of getting  
9 in, locating the point of origin, and extinguishing it either  
10 with water or chemicals.

11 Q Chief, a fire during its smoldering stage,  
12 would there be flames present at that time?

13 A Not necessarily. I would say in the  
14 smoldering stage there would not be flames present because,  
15 as I explained earlier, in the incipient stage we have  
16 scorching. In the smoldering stage we have just what the  
17 name implies, a smoldering effect where smoke is being pro-  
18 duced and products being released from the smoke.

19 Q Well, do you have an opinion based on your  
20 investigations how much damage would have been caused if this  
21 fire could have been extinguished in the incipient or the  
22 smoldering stage?

23 A Well, this would be the same as any fire.  
24 If this fire had been discovered and reported and attacked in  
25 its incipient stage or early stages, the damage would certainly

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1 have been minimal, maybe within the range of one hundred or  
2 a couple hundred dollars.

3 Q Well, Chief, let me ask you this about the  
4 incipient and the smoldering stages. Would products of combu-  
5 stion be given off during those stages of the fire?

6 A Yes, sir.

7 Q Would typically the ionization detector be  
8 able to pick up that type of product of combustion?

9 A Yes, sir.

10 MR. HEILIG: Okay, that's all I have.

11  
12 CROSS-EXAMINATION

13 BY MR. MAPKE:

14 Q Chief Williams, did you actually see the  
15 joist depicted in Exhibit 10 at the time of your arrival on  
16 the scene?

17 A Did I see what?

18 Q The joist that is pictured in Picture No. 10  
19 that you say took three hours or so to burn through?

20 A Not at the time I arrived, no.

21 Q Were they burned through at the time that  
22 you arrived?

23 A I would have to answer yes to that question.

24 THE COURT: If he didn't see them, how would  
25 he know?

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MR. MARKS: I agree.

1 THE COURT: If you didn't see this, how can  
2 you say that they were burned through from your own  
3 observation?

4 THE WITNESS: Because they had extinguished  
5 one just a few minutes after the men got there.

6 Q Chief, if you didn't see them, how do you  
7 know that they had been extinguished?

8 A I am assuming from the fire report--

9 THE COURT: No, sir, you do not base it on  
10 someone else's report. Answer the question based  
11 on what you know.

12 MR. DOBBINS: He can say of his own knowl-  
13 edge if he was there.

14 THE COURT: If he's going to say that, yes,  
15 sir, but that's not what he is saying.

16 MR. DOBBINS: He needs to have an oppor-  
17 tunity to say it.

18 THE WITNESS: What I am saying--

19 THE COURT: Just wait and let the question  
20 be asked.

21 Q This electrical conduit which you put the  
22 finger on as the source of the problem is located above the  
23 ceiling and in the joist area, is it not?

24 A Yes, sir.

25 Q What is immediately above that conduit in



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1 the way of roof covering at that location?

2 A Well, that would have been where your second  
3 floor was applied over the ceiling of the first floor.

4 Q Do you know what that surface was to which  
5 that conduit was exposed above it?

6 A It would be the subflooring.

7 Q Do you know what that was?

8 A Wood.

9 Q Now, did the plywood subfloor above burn  
10 through before the joist did?

11 A I can't answer that.

12 Q Well, do you know that it didn't burn  
13 through before?

14 A It burned through, but I don't know when  
15 it burned through.

16 Q You don't know when it burned through?

17 A No, sir.

18 Q Once this burned through, the upper level  
19 becomes involved, doesn't it?

20 A That is correct.

21 Q Now, is it possible or probable from your  
22 investigation, Chief, that the upper level became involved  
23 before those joists burned through?

24 A I would have to answer that in accordance  
25 with the statement that was made to me by Mr. Small.

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1 Q No, sir, your knowledge is what we are  
2 exploring, sir.

3 MR. HEILIG: Judge, I think he can testify  
4 as to the results of his investigation, and part of  
5 his investigation was the examination of witnesses  
6 present on the scene.

7 THE COURT: No, sir, he can't give hearsay  
8 testimony just because it's part of the investiga-  
9 tion any more than a police officer can at the scene  
10 of the accident.

11 MR. DOBBINS: No, I don't intend that he  
12 should give hearsay testimony, but he should be  
13 permitted to answer the questions in view of his  
14 entire investigation. If Mr. Marks wants to ask him  
15 did you of your own knowledge irrespective of your  
16 investigation say when such and such--

17 THE COURT: The question asked of the wit-  
18 ness was is it possible, and he said he could only  
19 answer in reference to what he was told by Mr. Small,  
20 therefore he can't give that information, therefore  
21 he can't answer the question. The objection is over-  
22 ruled.

23 Q Now, Chief, this new structure on the top of  
24 the building, are you aware of the fact that below it the  
25 flashing which had formerly been on the roof structure had been

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1 removed, the roof coating had been removed prior to the fire.

2 A Yes, sir.

3 Q This left how much of a layer of plywood at  
4 the former subsurface of the roof? How thick was it?

5 A I would say half an inch to three quarters  
6 of an inch thick.

7 Q And do you know whether it was completely  
8 impervious to air, or whether it created a draft through it-  
9 self?

10 A As I understand--

11 Q No, did you see?

12 A I did not see.

13 Q You don't know?

14 A But normally in constructions of this type  
15 it is sealed down very tightly to the joists.

16 Q Now, when would that have been, at the time  
17 the thing was put on?

18 A At the time the plywood was applied.

19 Q Now, that was when, in 19--what, do you know?

20 A I don't know.

21 Q Do you know what had been done to it after-  
22 wards?

23 A No, sir.

24 Q Do you know whether any holes had been  
25 drilled in it?