

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

3
4 THE GILLETTE COMPANY,

5 Petitioner,

Patent No. 8,125,155

IPR 2014-00477

6 vs.

IPR 2014-00479

7 ZOND, LLC, INC.,

8 Patent Owner.

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13 VIDEOTAPED DEPOSITION OF LARRY D. HARTSOUGH, Ph.D.

14 Berkeley, California

15 Thursday, February 12, 2015

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24 REPORTED BY:

TAVIA MANNING, CSR No. 13294, CLR, CCRR, RPR

25 JOB NO. 90257

1 February 12, 2015
2 9:00 A.M.

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6 Deposition of LARRY D. HARTSOUGH, Ph.D.,
7 taken on behalf of Petitioners at 200
8 Marina Boulevard, Berkeley, California,
9 before Tavia Manning, Certified Shorthand
10 Reporter No. 13294, Certified LiveNote
11 Reporter, California Certified Realtime
12 Reporter, Registered Professional Reporter.
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1 APPEARANCES:
2
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4 LIMITED and TSMC NORTH AMERICA and FUJITSU:
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14 FOR THE GILLETTE COMPANY:
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1 APPEARANCES (CONTINUED):
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4 FOR THE PATENT OWNER ZOND, LLC:
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6 BY: TIGRAN VARDANIAN, ESQ.
7 The Empire State Building
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11 Also present: Sean McGrath, Videographer
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1 BERKELEY, CALIFORNIA;
2 THURSDAY, FEBRUARY 12, 2015; 9:00 A.M.
3

4 THE VIDEOGRAPHER: Good morning.
5 This is the beginning of Disk Number 1 of
6 the videotaped deposition of Dr. Larry D. Hartsough,
7 Ph.D., in the matter of the Gillette Company versus
8 Zond, LLC, in the U.S. Patent and Trademark Office
9 before the Patent Trial and Appeal Board, Cases
10 2014-00477 and 2014-00479.

11 This deposition is being held at 200 Marina
12 Boulevard, Berkeley, California, on February 12th,
13 2015 at approximately 9:00 a.m.

14 My name is Sean McGrath from TSG Reporting,
15 Incorporated, and I am the legal video specialist.

16 The court reporter is Tavia Manning in
17 association with TSG Reporting.

18 Will counsel please introduce yourselves
19 starting with the questioning attorney.

20 MR. MAIER: Cosmin Maier, of WilmerHale, on
21 behalf of The Gillette Company.

22 MR. McCOMBS: David McCombs, with Haynes
23 and Boone, on behalf of TSMC and Fujitsu.

24 MR. VARDANIAN: Tigran Vardanian with
25 Radulescu, LLP, on behalf of patent owner Zond, LLC.

1 THE VIDEOGRAPHER: Will the court reporter
2 please swear in the witness and then we can proceed.

3
4 LARRY D. HARTSOUGH, Ph.D.,
5 having been first duly sworn by the reporter,
6 testified as follows:

7
8 EXAMINATION

9 BY MR. MAIER:

10 Q. Good morning, sir.

11 A. Good morning.

12 Q. Now, you were deposed yesterday in
13 connection the '184 patent; is that right?

14 A. That's correct.

15 Q. And you went over some ground rules at the
16 beginning about how to do a deposition?

17 A. Correct.

18 Q. Would you like me to repeat those or do you
19 remember them from yesterday?

20 A. You can help remind me.

21 Q. So I think the main, most important thing
22 is that we don't talk over each other so the court
23 reporter could -- could, you know, write everything
24 down that we say and your attorney can have a chance
25 to object. I think that we had a bit of a problem

1 with that yesterday, but happens in all -- all
2 depositions.

3 But is that fair that we try to do that?

4 A. I'll try to do that.

5 Q. And then, is there any reason that you
6 can't give your best testimony today?

7 A. No.

8 Q. You're -- you're ready to give truthful and
9 accurate testimony?

10 A. Yes.

11 Q. Okay.

12 Now, did you do anything to prepare for
13 today's deposition in connection with the '155
14 patent?

15 MR. VARDANIAN: Objection; form.

16 Caution the witness not to reveal
17 privileged information. To the extent you can
18 answer without revealing such information, you can
19 go ahead and do so.

20 THE WITNESS: I -- I spent some time
21 reviewing the patent and my declaration --

22 BY MR. MAIER:

23 Q. Okay.

24 A. -- and I met briefly with Mr. Vardanian
25 this morning for about an hour.

1 Q. And you -- you testified yesterday that you
2 prepared, in -- in preparation for yesterday's
3 deposition, you had met with Zond's attorneys as
4 well; right?

5 MR. VARDANIAN: Objection; form, relevance.

6 THE WITNESS: In preparation for
7 yesterday's testimony, I testified that I had met
8 with Zond's attorneys for that; is that what you're
9 asking?

10 BY MR. MAIER:

11 Q. Right.

12 So the preparation in connection with
13 yesterday's deposition did not involve preparation
14 for the '155 patent?

15 A. Well --

16 MR. VARDANIAN: Objection; form.

17 Caution the witness not to reveal any
18 privileged information --

19 THE WITNESS: That's --

20 MR. VARDANIAN: -- to the extent you can
21 answer without revealing such information, you can
22 go ahead and do so.

23 THE WITNESS: To the extent that many of
24 the documents are the same references and -- and
25 cited prior art for both, that was part of the

1 preparation for this deposition as well.

2 BY MR. MAIER:

3 Q. So I'm going to hand you your declaration
4 in connection with the '155 patent.

5 I'm going to give you this red pen as well.

6 A. Could you hand me the -- the '155 patent as
7 well? I'm sure I'll be wanting to refer to it.

8 Q. Well, let's wait until we get there.

9 Could you take the red pen and put a big
10 "A" on the front page of your declaration?

11 MR. VARDANIAN: Objection; form.

12 THE WITNESS: Is that -- what's the reason
13 for that?

14 BY MR. MAIER:

15 Q. Well, it doesn't matter the reason, but
16 could you -- could you comply?

17 I'm just asking you -- we're going to have
18 a lot of papers that don't have exhibit numbers, so
19 I feel like it's going to be easier for us to
20 identify them if we can just say "the one with the
21 big 'A' on it," "the one with the big 'B' on it."

22 A. So --

23 MR. VARDANIAN: Well, I'm going to object
24 to this. There is a court reporter willing to mark
25 the exhibits. This --

1 MR. MAIER: Do you want to mark his
2 declaration?

3 MR. VARDANIAN: Huh?

4 MR. MAIER: You want to mark his
5 declaration?

6 MR. VARDANIAN: So there is a court
7 reporter that typically that -- you know, marks --
8 well, what's -- what's the point of having --

9 MR. MAIER: To make it easier when there's
10 a bunch of papers.

11 BY MR. MAIER:

12 Q. All right. Let's leave it at this. Let's
13 leave it at this: You have your declaration;
14 correct?

15 A. This you can refer to as my declaration.

16 Q. And you'll -- you'll know what I'm talking
17 about?

18 A. Yeah.

19 Q. Okay. So turn to Paragraph 7 of your
20 declaration.

21 A. Yes.

22 Q. Now, you're talking about some of the work
23 that you've done in your career in, you know, plasma
24 processes and equipment here; is that correct?

25 A. That's correct.

1 Q. And you refer to two sputter deposition
2 systems about the middle of the paragraph?

3 A. Right.

4 MR. VARDANIAN: Which paragraph are we
5 talking about?

6 MR. MAIER: Seven.

7 BY MR. MAIER:

8 Q. Do you see where you refer to two sputter
9 deposition systems?

10 A. Yes.

11 Q. Which systems are you referring to there?

12 A. When we -- the system that -- that was
13 developed by Griffin Products, when I was the
14 engineering manager for them. That was our start-up
15 company.

16 And the system for General Signal ThinFilm,
17 we -- they shut the -- I did that for two years, and
18 it was not released to manufacturing because they
19 shut the whole -- they had shut the whole division
20 down.

21 Q. So the system that you worked on for
22 General Signal ThinFilm did not eventually become a
23 commercial product; correct?

24 MR. VARDANIAN: So I just -- just want to
25 caution the witness not to reveal any confidential

1 information that's owed to third parties.

2 To the -- to the extent you can answer
3 without doing so, you can go ahead and do so.

4 THE WITNESS: It -- it did -- it did not
5 become a commercial product.

6 BY MR. MAIER:

7 Q. What about the one that you worked on at
8 Griffin Products; was it a commercial product?

9 A. It was.

10 MR. VARDANIAN: Same caution.

11 BY MR. MAIER:

12 Q. When did you work on the system for Griffin
13 Products?

14 A. Well, in terms of my -- I just want to
15 refresh -- tell you the accurate dates by referring
16 back here.

17 I worked on the system between -- basically
18 between 1981 and '84, when that was in the initial
19 phases of Griffin Products. And it -- it's
20 described there as I led the engineering, the
21 prototyping and the initial testing of the
22 magnetron's sputtering system.

23 Q. And the same question for General Signal
24 ThinFilm, when did you work on that product?

25 A. Between 1990 -- 1988 and 1990.

1 Q. Do you recall the type of power supply used
2 with the General Signal ThinFilm sputtering unit?

3 MR. VARDANIAN: Objection; form.

4 And caution the witness not to reveal
5 confidential information that's owed to third
6 parties. To the extent that you can answer without
7 doing so, you can go ahead and do so.

8 THE WITNESS: It was a DC magnetron
9 sputtering supply.

10 BY MR. MAIER:

11 Q. Was it a pulsed power supply?

12 MR. VARDANIAN: Objection; form.

13 THE WITNESS: No.

14 BY MR. MAIER:

15 Q. Have you ever worked with a pulsed power
16 supply?

17 MR. VARDANIAN: Objection; form.

18 THE WITNESS: No.

19 BY MR. MAIER:

20 Q. So it would follow that you've never worked
21 with a power supply that allowed you to change
22 voltage amplitude; correct?

23 MR. VARDANIAN: Objection; form,
24 mischaracterizes testimony.

25 THE WITNESS: That's not -- not correct.

1 BY MR. MAIER:

2 Q. You've never worked with a pulsed power
3 supply; correct?

4 MR. VARDANIAN: Objection; form, asked and
5 answered.

6 THE WITNESS: That's correct.

7 BY MR. MAIER:

8 Q. And, therefore, you've never worked with a
9 pulsed power supply that could control the amplitude
10 of a voltage pulse?

11 MR. VARDANIAN: Objection; form,
12 mischaracterizes testimony.

13 THE WITNESS: I've never worked with a
14 pulsed power supply.

15 BY MR. MAIER:

16 Q. Including a pulsed power supply that could
17 generate power pulses; correct?

18 MR. VARDANIAN: Objection; form,
19 mischaracterizes testimony.

20 THE WITNESS: It follows. I mean, if I
21 haven't worked with a pulsed power supply, I haven't
22 worked with a pulsed power supply.

23 BY MR. MAIER:

24 Q. Understood. I'm just trying to get the
25 clear record.

1 Now, when you were developing the system
2 for General Signal ThinFilm, what did your work
3 involve? What did you do to develop that system?

4 A. That really gets into some areas that are
5 proprietary, but I managed a team of -- it included
6 a physicist, engineers, software engineers, you
7 know, technical people, and so on, to develop the
8 concepts, which -- some of which were, you know,
9 unusual and new and I -- I can't talk about. But --
10 and to -- let me see if I mentioned it in here, even
11 in the -- yeah, I did mention that it was a cluster
12 tool.

13 The concept of cluster tools was brand new
14 in the late 1980s, and so the development of the
15 concept and actual actualizing of it was part of the
16 challenge as well.

17 Q. So, yeah, I'm -- I'm not interested in any
18 confidential details or anything, I am mostly
19 focused on the word "development" in your
20 declaration.

21 What did you mean -- what do you mean by
22 "developing" --

23 A. That's part --

24 MR. VARDANIAN: Objection; form.

25 THE WITNESS: It was new technology, which

1 needed to be developed.

2 BY MR. MAIER:

3 Q. And how do you develop technology?

4 MR. VARDANIAN: Objection; form, relevance.

5 THE WITNESS: Well, it can take a -- a -- a
6 lot of work to conceptualize what you want to do,
7 figure out how you're going do it, build prototypes,
8 test them, see if they do what you want to do.

9 So it's a fairly -- in this case, fairly
10 long process.

11 BY MR. MAIER:

12 Q. So how do you go about figuring out how
13 you're going to do it, to use your words?

14 MR. VARDANIAN: Objection; form.

15 Objection; relevance.

16 BY MR. MAIER:

17 Q. Do you consult reference materials?

18 MR. VARDANIAN: Sorry. Are you withdrawing
19 the previous question or...

20 MR. MAIER: Yeah, it didn't sound like he
21 understood it, so --

22 THE WITNESS: Well --

23 MR. MAIER: -- just -- okay.

24 THE WITNESS: I have to -- I have to --

25 MR. VARDANIAN: Wait one second.

1 MR. MAIER: Let me -- let me start a new
2 question. Let me just start over.

3 BY MR. MAIER:

4 Q. Sir, how do you go about developing the
5 product?

6 MR. VARDANIAN: Objection; form.

7 Objection; relevance.

8 THE WITNESS: What do you mean "How do you
9 go about"? You mean, all the steps?

10 Well, you know, you -- you -- you get the
11 marketing people to tell you what they think the
12 market wants, you consult with your team, come up
13 with the ideas of the ways to deliver that,
14 conceptualize the technology.

15 That's why I have engineers and physicists,
16 and so on, on the team, and not that I didn't do it
17 myself, but I'm saying that it can be a -- a fairly
18 complicated effort.

19 BY MR. MAIER:

20 Q. I think you mentioned yesterday that you
21 consulted certain textbooks to bring yourself up to
22 speed in the field. Do you recall that?

23 A. Well, it's --

24 MR. VARDANIAN: Objection; form.

25 THE WITNESS: That's not exactly what I

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