IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

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LG ELECTRONICS U.S.A., INC., and LG ELECTRONICS, INC.,	:	Civil Action
Plaintiffs,	:	
v.	:	
WHIRLPOOL CORPORATION,	:	
Defendant.	:	08-234(GMS)
WHIRLPOOL CORPORATION, WHIRLPOOL PATENTS COMPANY, WHIRLPOOL MANUFACTURING CORPORATION, and MAYTAG CORPORATION,	:	
Counterclaim Plaintiffs,	:	
v.	:	
LG ELECTRONICS U.S.A., INC., LG ELECTRONICS, INC., and LG ELECTRONICS MONTERREY MEXICO, S.A., DE, CV,	:	
Counterclaim Defendants.	:	

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Wilmington, Delaware
Tuesday, March 9, 2010
9:00 a.m.
Trial - Day Seven

- - -

BEFORE: HONORABLE GREGORY M. SLEET, Chief Judge,
and a Jury

APPEARANCES:

RICHARD K. HERRMANN, ESQ.
Morris James
-and-
PATRICK J. COYNE, ESQ.,
ANAND K. SHARMA, ESQ.,
JEFFREY W. ABRAHAM, ESQ., and
WALTER D. DAVIS, JR., ESQ.
Finnegan, Henderson, Farabow,
Garrett & Dunner, L.L.P
(Washington, D.C.)

Counsel for Plaintiffs and Counterclaim Defendant

FREDERICK L. COTTRELL, III, ESQ., and
ANNE SHEA GAZA, ESQ.
Richards, Layton & Finger, P.A.
-and-
SCOTT F. PARTRIDGE, ESQ.,
PAUL R. MORICO, ESQ.,
AMANDA M. WOODALL, ESQ.,
GENE SPEARS, ESQ., and
ROBINSON VU, ESQ.
Baker Botts L.L.P.
(Houston, TX)

Counsel for Defendant and Counterclaim Plaintiffs

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THE COURT: Good morning. I understand there are some issues.

MR. PARTRIDGE: A couple of issues, Your Honor. With respect to the first two witnesses, Dr. Mellinger and Dr. Rao. But before we get to that, I want to be sure, we have reached agreement on how we manage the exhibits, and I want to make sure it is acceptable to Your Honor. We have gone through --

THE COURT: Mr. Partridge, I am sure it is acceptable.

MR. PARTRIDGE: Very well. Thank you, Your Honor.

Mr. Morico will address the first issue.

MR. MORICO: Yes, Your Honor, thank you. This relates to an issue that was brought up yesterday in connection with the testimony relating to the GE HotPoint unit, which is the subject of Dr. Vannoy's testimony. And it relates to the prior art status of that refrigerator.

Counsel for LG has indicated that Dr. Mellinger is going to testify to prove up that prior art as prior art. There are a --

THE COURT: We discussed this at sidebar. There was a representation made as to what the doctor's testimony would be. I permitted some -- I forget who was on. I permitted some testimony to go forward as a result of that

in advance of what might be the typical order of things. What is the issue?

MR. MORICO: The issue is, Your Honor --

THE COURT: Let's get to the point.

MR. MORICO: The issue is, Your Honor, Dr. Mellinger, No. 1, was never identified as a fact witness to testify with respect to the prior art.

THE COURT: Why wasn't that mentioned? I didn't do when we had the discussion at sidebar. I don't hear you on that point.

MR. MORICO: The other issue is, Your Honor, during his deposition when he was asked about these specific units, in terms of his ability to date those units, he said that he got that information from individuals at GE. Therefore, the testimony is based on hearsay. And that goes to a critical fact in this case as to whether they can establish those units as prior art. And he is relying on hearsay to get there.

MR. COYNE: He is an expert, Your Honor. And the expert may rely on --

THE COURT: Respond to Mr. Morico's point. His contention is that the gentleman is a fact witness. Maybe he is wearing two hats. What he is talking about in this particular instance is facts and not what one would typically put under the rubric of what an expert relies

upon. You are trying to establish a chain of custody through certain factual representations that you want to adduce before this jury. I don't believe, based on what we have heard from Mr. Nawrocki, I don't believe that you can do that through an expert. Go ahead.

MR. COYNE: Your Honor, the unit has a manufacturing date on the label.

THE COURT: From the sidebar, I know that.

MR. COYNE: Your Honor, he was at GE making these units, Your Honor. That is the basis for his knowledge. It's disclosed in his reports.

THE COURT: Give me a good criminal trial any time, they know how to establish a chain of custody, because they do it every day. Once you learn how to ride a bike, you know how.

MR. MORICO: The additional point I wanted to add with respect to that specific unit here in the courtroom, that specific unit was never identified in Dr. Mellinger's expert report.

THE COURT: I know that. I know that from the conversation yesterday.

So your position, Mr. Coyne, is that you should be able to establish a chain of custody for this particular unit, which is being challenged, this specific unit, not the model line, through the opinion-based testimony of the

gentleman, Dr. Mellinger. Is that your position?

MR. COYNE: Your Honor, we have a chain of custody from the time we acquired it, yes, Your Honor. We do not have a chain of custody from the time it was manufactured until we bought it, which was about a year ago. That is the way we would establish it. He was making these units at GE.

THE COURT: Do you have any authority that you want to share with me that that would suggest that is an acceptable way to establish a chain of custody? I think it would be the Third Circuit, that they would accept under these circumstances.

MR. COYNE: Not off the top of my head, Your Honor.

THE COURT: I am going to sustain the objection.

MR. MORICO: Thank you, Your Honor.

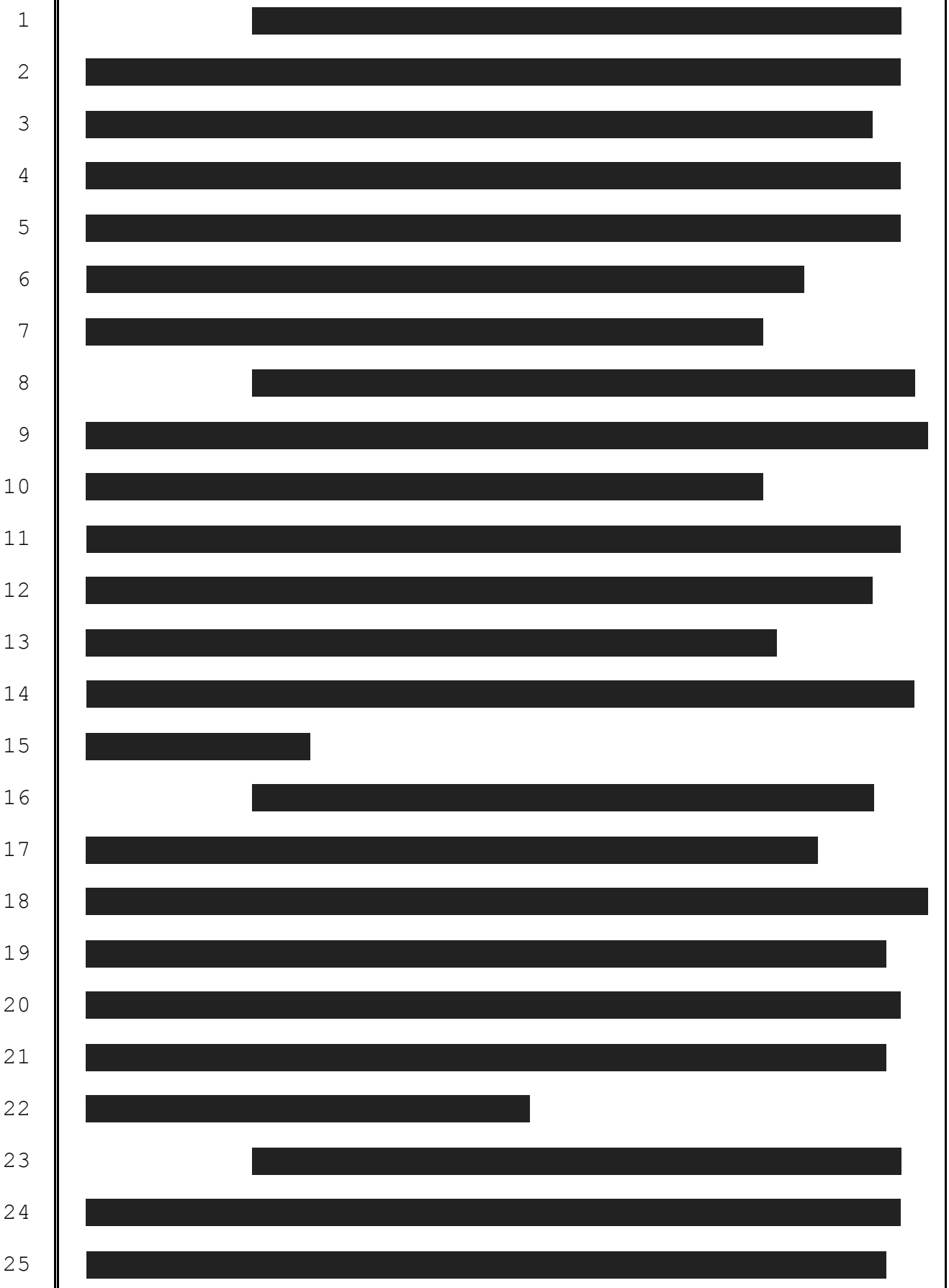
MR. PARTRIDGE: Very briefly, Ms. Woodall has one issue.

THE COURT: Yes, Ms. Woodall.

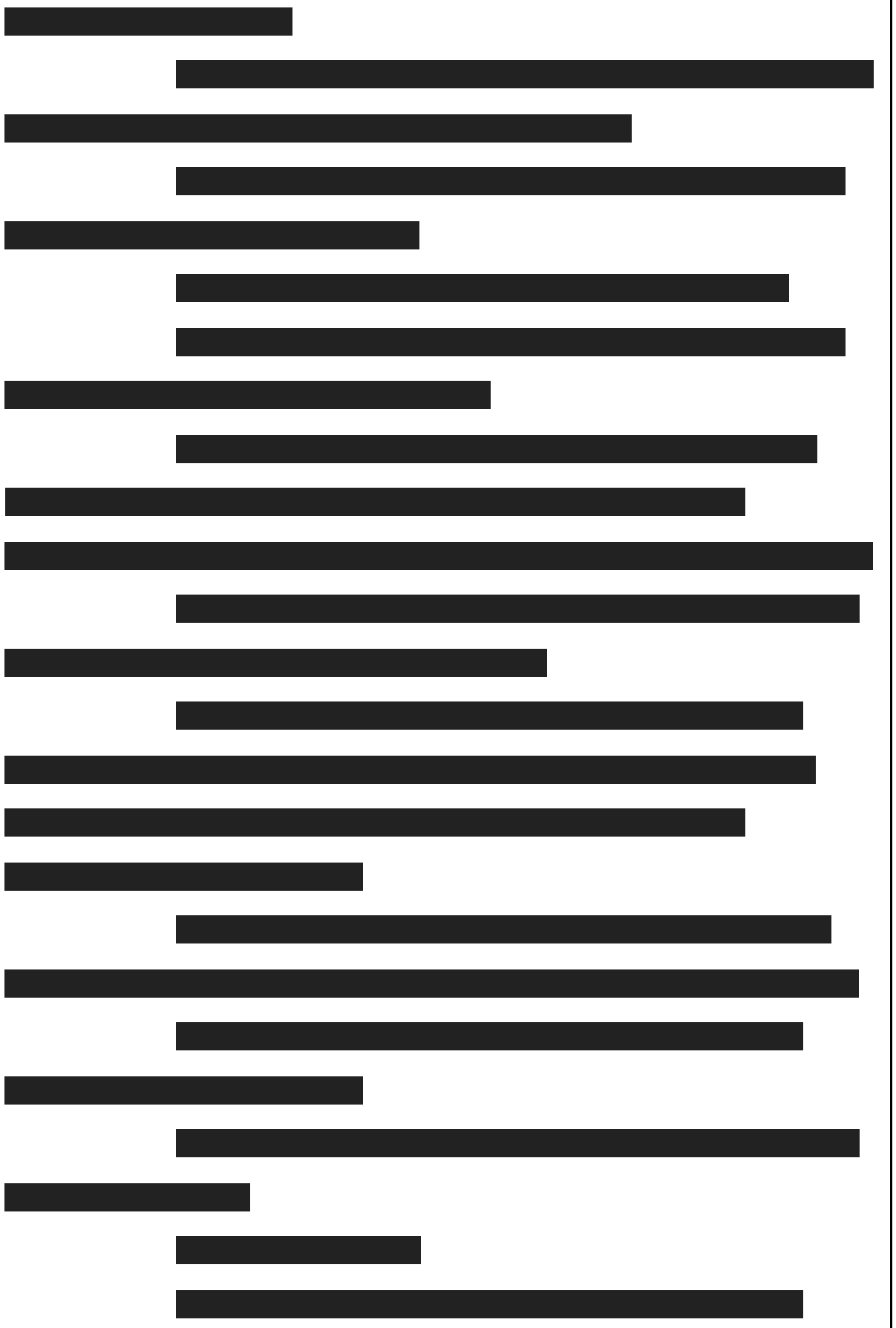
MS. WOODALL: Good morning, Your Honor. Our issue relates to certain demonstratives exhibits that were served on us over the weekend, as well as what they purport to show with respect to the scope of Dr. Rao's testimony.

To get right to the point, it appears that LG is intending to provide through Dr. Rao's testimony regarding

















[redacted]

MS. WOODALL: It was, Your Honor.

THE COURT: And the Court's ruling is correctly restated by Ms. Woodall, Mr. Coyne. I am at a loss to explain how you are able to make the assertions you have.

I am not going to ask you to respond any further. I am going to grant the motion.

Any other issues?

MR. PARTRIDGE: Nothing further, Your Honor.

THE COURT: Mr. Coyne, any issues?

MR. COYNE: Your Honor, there were two other objections raised last night by Whirlpool. But I think we resolved all of them.

Yes, Your Honor. That is it.

THE COURT: All right. Go get the jury.

We will take a brief recess.

(Recess taken.)

THE COURT: Ms. Walker.

(Jury enters courtroom at 9:10 a.m.)

THE COURT: Good morning, members of the jury. Please take your seats.

Mr. Sharma, your next witness?

MR. SHARMA: Good morning. For LG's next witness we would like to call to the stand Dr. Gary Mellinger.

... Gary Mellinger, having been duly sworn as a witness, was examined and testified as follows ...

DIRECT EXAMINATION

BY MR. SHARMA:

Q. Good morning, Doctor.

A. Good morning.

Q. Have you testified in court before?

A. No, I have not.

Q. Have you ever been in a court before?

A. Actually, twice. But you both times in the jury box.

Q. Can you tell the jury about your education after high school?

A. Yes. I went to Northwestern University in Evanston, Illinois, in chemical engineering and got my Bachelor's degree in 1966. Then I went on to graduate school at MIT, Massachusetts, and I got my Master's degree in chemical

engineering in 1968. And I continued on and got my Ph.D. or doctorate from MIT in 1971.

Q. **What did you do after you got your Ph.D.?**

A. **My wife said it was time to get a job. I got one with General Electric.**

Q. **How long were you at General Electric?**

A. **Overall, 30 years.**

Q. **What did you do at GE?**

A. **Worked in the area of plastics and mainly in the design of refrigerators and refrigerator components.**

Q. **Can you explain how your experiences at GE relate to plastic liners in refrigerators?**

A. **Sure. When I first started at GE at our corporate research center, I was evaluating some of the plastic materials that were going to go into our first plastic liners being introduced. As a result of that, in 1977, I moved to Louisville, Kentucky, which is the headquarters of our refrigeration business, and there I headed up the plastics processing technology area, where one of the things we did was in charge of how do you make the plastic liners.**

Q. **Now, when you were working at GE with refrigerator liners in the 1970s and '80s, did those liners have anything on them?**

A. **Yes. They had plastic plaques.**

Q. **What is a plaque?**

A. **A plaque is an indentation put into the plastic liner.**

Q. **What effect did those plaques in those GE refrigerators in the '70s and '80s have, if at all?**

A. **Well, yes, they improved the appearance of the liner, and they also much improved the handleability of the plastic liner in the factory, because they are like big bathtubs that are floating around within the factory. And they helped to reduce bowing.**

Q. **Now, Dr. Mellinger, are you an inventor on any patents?**

A. **Yes. Five U.S. patents.**

Q. **What technology areas are they in?**

A. **In the plastic blends.**

Q. **What do you do today?**

A. **I am mostly retired. Companies call me up to do some consulting. I also do some traveling and spend time with my grandkids.**

MR. SHARMA: Your Honor, LG would like to offer Dr. Mellinger as an expert in refrigerators and refrigerator wall structures.

MR. MORICO: No objection.

THE COURT: Dr. Mellinger is accepted in those fields.

BY MR. SHARMA:

Q. **You were talking about refrigerator liners in GE in**

the '70s an '80s and you were talking about the plaques in those refrigerator liners. Do you recall that?

A. **Yes.**

Q. **You mentioned three features in those plaques. What were the three features?**

A. **Appearance, handleability, and reducing bowing.**

Q. **Can you explain what you mean by "appearance"?**

A. **Appearance, if you take a flat plastic sheet to form the inside of the liner, it shows all the imperfections, the waviness. If you can break that up by indentations or protrusions, it hides the imperfections from the consumer. It looks much better.**

Q. **You talked about, increased handleability. Can you explain what that means?**

A. **That means by basically increasing the stiffness of the liner, it is much easier to handle in the factory.**

Q. **Can you explain what you mean?**

A. **Sure. Could I have a couple pieces of paper, possibly?**

MR. SHARMA: Your Honor, may I give Dr. Mellinger a couple pieces of paper?

THE COURT: Sure.

THE WITNESS: Thank you. You see, just a flat sheet of paper doesn't have much strength to it. But, if, in fact, we followed this paper up to kind of show what a

plaque is like that has been put into this flat sheet of paper, you sort of get a structure that looks like this (indicating).

As you can see, the flat sheet is fairly flimsy, whereas putting this plaque in this flat sheet makes it much more rigid, therefore much more easy handleability in the factory. Also, you will notice it tends to make for a little more elongation in this direction.

Q. **I believe you also mentioned the feature of reduced bowing. Can you please explain?**

A. **Yes. Well, the same feature of the plaque in the refrigerator provides stiffness in one direction, more elongation in the other, which inherently reduces bowing of the plastic in the liners.**

Q. **Can you show me how the paper plaque that you simulated on paper compares to a plaque in an actual refrigerator?**

A. **Sure.**

Judge, may I go over to one of the refrigerators?

THE COURT: Yes, you may.

A. **Thank you very much.**

(Witness steps down from stand.)

THE WITNESS: I am going to go over to one of the GE refrigerators here which has plaques in it. And I

have put some red tape around those plaques so that you could clearly see them from over there in the jury box, because they are a little hard to see with the white on white.

BY MR. SHARMA:

Q. What is the PTX number on that refrigerator?

A. This is PTX-425.

MR. MORICO: Your Honor, I have an objection to the use of that refrigerator.

THE COURT: Sidebar.

(The following took place at sidebar.)

MR. MORICO: They never identified that as a demonstrative. It is a regular physical exhibit, Your Honor. I have an objection.

THE COURT: Don't you guys have a protocol on identification of demonstratives prior to their use?

MR. MORICO: We do. That wasn't identified as a demonstrative. It was only identified as a physical exhibit.

MR. SHARMA: It was only identified as a physical exhibit, Your Honor. I just wanted to have Dr. Mellinger show that the plaques he was making on the paper he wasn't just making up. They actually do compare to something.

MR. MORICO: There are plaques in the

refrigerators that are already of record. The LG refrigerators he could use for that purpose.

THE COURT: But he has gone to the trouble of playing an illustration for the jury. Another way to do it, if you want to push this objection, is to have the jury come down and examine the LG unit. Whichever one is not objectionable.

MR. MORICO: I will withdraw the objection.

THE COURT: So long as he doesn't go into anything about its prior art status.

Mr. Morico Mr. Sharma is an officer of the Court. He knows the rules.

(End of sidebar conference.)

THE COURT: You may continue, Mr. Sharma.

Go ahead, Mr. Sharma.

BY MR. SHARMA:

Q. Dr. Mellinger, if you could continue to show us how that paper simulation of a plaque compares to a plaque in an actual refrigerator?

A. Sure. As you can see, the refrigerator, the plaques I have actually put in here and you can see the plaques on the top.

Let's look in particular to the three in the back, the three indentations.

Basically, it looks essentially just like this,

the indentation of plaque into that plastic liner.

Q. **Dr. Mellinger, if you can return to your seat, please.**

THE COURT: Members of the jury, are you able to see?

(Witness resumes stand.)

BY MR. SHARMA:

Q. **Could you pull up Dr. Caligiuri's slide 8?**

THE COURT: The record should reflect that the jurors nodded affirmatively.

BY MR. SHARMA:

Q. **Were you in the courtroom when Dr. Caligiuri presented his opinion why all plaques did not prevent bowing? I am referring to the top half of this drawing.**

A. **Yes, I was.**

Q. **What was your reaction to that?**

A. **That's just not the way that the plastic refrigerator liners are made.**

In particular, Dr. Caligiuri shows a distinct difference in thickness between the plaque and the liner.

Liners are made by the vacuum-forming process, which starts with a uniform plastic sheet, heats it up and draws it down into various configurations, so the cross-section would look somewhat the same thickness all the way along, rather than much different.

Q. **Mr. Brooks, can you go to the full slide.**

Is the cross-section you are referring to shown on this slide?

A. **Yes. It would look more like this, and stretched out more like that. It would not look like you are cutting a chunk out of a piece of plastic.**

Q. **Dr. Mellinger, you have a binder in front of you, if you can go to tab 1 of that binder. It's Exhibit PTX-15.**

If you could bring up PTX-15, Mr. Brooks.

Have you seen PTX-15 before?

A. **Yes. That is the '601 patent from Whirlpool.**

Q. **Are you familiar with the '601 patent?**

A. **Yes, very much. Read it many times as well, the file history associated with this patent.**

Q. **What is the file history?**

A. **The file history is essentially a document showing all the negotiations, the concessions back and forth between Whirlpool and the U.S. Patent Office, so basically, the bargain that they have agreed to on what the patent claims are actually going to be.**

Q. **When did Whirlpool file the '601 patent?**

A. **This was filed in May of 1992.**

Q. **What did the claims of the '601 patent say about bowing?**

A. **Yes. If we could have actually claim 1 of this patent, please, I will show you.**

This is claim 1, which is the heart, which shows the boundaries of this invention. If we look near the bottom here, you can see that it uses the term preventing bowing of said interior plastic layer. That means that the liner is not going to bow.

Q. **Dr. Mellinger, in your binder there is also a tab 2. It has a pretty thick set of pages in the document. Can you turn to tab 2 and tell me what that is?**

A. **Yes. That is the file history that I was just talking about.**

Q. **How did the language, the "prevent bowing" language, get into the '601 patent claims?**

A. **Sure. Mr. Brooks, if you could turn to page 21, please, of that file history.**

This shows the initial claim 1 as Whirlpool represented it. You notice, it talks about bowing reduction, only bowing reduction.

So they submitted this patent to the U.S. Patent Office, and the patent examiner said, no, this is rejected. You can see, he drew a line through it, sent it back to Whirlpool. Whirlpool then made some small modifications, reapplied to the Patent Office. The Patent Office once again said, no, rejected it. So they went back yet again to submit it.

MR. MORICO: Objection, Your Honor. Sidebar.

(The following took place at sidebar.)

MR. MORICO: The purpose of this testimony is to elicit and what the term prevent means. Your Honor has already ruled prevent, like all the other language of the claim, was not subject to Markman. It has its ordinary meaning.

THE COURT: Is the purpose of the testimony that which is being asserted by your opponent, is that the purpose of the testimony?

MR. SHARMA: It is with respect to the file history and indicating what the purpose --

THE COURT: Mr. Sharma, I asked a straightforward question.

MR. SHARMA: He is going to indicate, after going through the patent and file history, what a person of ordinary skill in the art would understand the claim language, the plain meaning, he is going to explain what the plain meaning would be to one of ordinary skill.

THE COURT: Your position is?

MR. MORICO: I think the plain meaning should be open to the jury. You already ruled what the plain meaning is.

THE COURT: Isn't the plain meaning the view of one of skill in the art?

How would the jury know the plain meaning, given

that definition, if someone of skill in the art doesn't tell them, if that is an issue in the case.

MR. MORICO: He can do that without reference to the file history, Your Honor. I think it will be confusing to the jury.

THE COURT: What is the purpose of taking him through the file history?

MR. SHARMA: This is part of how a person of ordinary skill in the art would understand the word preventing. It is in the claim. He is talking about how it got in the claim.

THE COURT: Why is it necessary to go through that? Number one, he is not a so-called patent law expert, which I don't permit in my courtroom in the first place. So both sides have run afoul of that in previous examinations of witnesses.

You have and they have talked about PTO process.

Secondly, why can't you get more directly to the point of the real reason you have called the witness. That is, as you say, to testify how one of skill would view the meaning of the word prevent. Can you do that?

MR. SHARMA: Yes, Your Honor.

(End of sidebar conference.)

BY MR. SHARMA:

Q. **Dr. Mellinger, how would a person of ordinary skill in**

the art understand the term preventing bowing that's in the claims of the '601 patent?

A. **I think they would take its meaning as to mean eliminate bowing. So no bowing.**

Q. **What do you base that opinion on?**

A. **Well, that's what I think preventing bowing means. And since Whirlpool argued that -- from the reduced bowing language, the preventing bowing language, it's clearly more than producing.**

Q. **Do you believe your opinion as to what you believe is consistent with what one of ordinary skill in the art would believe?**

A. **Yes. You read it and it says preventing bowing. That's what you would expect. Elimination.**

Q. **Dr. Mellinger, do you have an opinion as to whether the accused LG refrigerators -- let me rephrase the question. I gave you a poorly worded question.**

Do you have an opinion whether the LG refrigerators that are accused of infringing the asserted claims of the patent, do you have an opinion on the infringement, whether there is infringement of those claims?

A. **Yes. I believe that the LG refrigerators do not infringe the '601 patent.**

Q. **What did you consider in reaching that opinion?**

A. **Well, I considered, I looked at the patent, the patent**

claims, the file history we were just talking about, Judge Sleet's claim construction. Of course, I looked at the accused product. I looked at all the test data that was provided by Dr. Vannoy, Mr. Dapkunas, Dr. Caligiuri. As well as a lot of the other depositions, et cetera.

Q. **Dr. Mellinger, why do you believe that the accused LG refrigerators do not infringe?**

A. **Basically, because the LG refrigerators bow.**

This is the test data of Whirlpool's expert, Dr. Caligiuri, that shows that they bow. If they bow, they cannot infringe.

Q. **Are you aware of Dr. Caligiuri's position on the meaning of the claim phrase preventing bowing?**

A. **Yes, I am.**

Q. **What is his view?**

A. **His view is that preventing is something less than preventing: only some degree of reduction or reducing bowing.**

Q. **What is your reaction to that?**

A. **I disagree.**

If the word preventing -- they did not use the word reducing. They used preventing in the claim. Preventing to me means eliminating.

Q. **Do you know if there is anything in LG refrigerators that help to reduce bowing of the plastic liner?**

A. **Yes. Actually, yesterday we heard Dr. Lee talk about and we actually saw pictures of the metal structure that is placed on the plastic liner. We also, I think, saw some data to show that that, in fact, reduced bowing of their refrigerators.**

Q. **Dr. Mellinger, I would like to shift to validity of the '601 patent. Do you have an opinion on the validity of the '601 patent?**

A. **Yes.**

Q. **What is that opinion?**

A. **If you take preventing bowing to mean total elimination, then possibly that patent would be valid. But if you take preventing to mean only reducing, which is what Dr. Caligiuri says, then there is a lot of prior art examples that have reduced bowing, and therefore, the patent would be invalid.**

Q. **Now, Dr. Mellinger, Tab 16 of your binder, PTX-403, if you could bring that up on the screen. What is PTX-403?**

A. **That is a catalog published by Gold Star, LG, showing their refrigerators.**

Q. **Were you in the court when Dr. Ching Ho Lee of LG testified that this brochure was distributed in 1988?**

A. **Yes, I was.**

Q. **Can you please turn to the last page of the brochure?**

A. **Okay.**

Q. **Do you see a date on that page?**

A. **Yes, I do. In the very last page, which ends in 62, it says here, Copyright reserved by Gold Star, 1988.**

Q. **I would like to take you to a particular page in this catalog, it is LGE205045.**

A. **Yes.**

MR. SHARMA: Your Honor, if we could switch to the Elmo, it's not coming up very well on the big screen.

Your Honor, it is not coming up very well on the Elmo, either. Can I publish this to the jury? This is the original Gold Star catalog. Can I publish this to the jury as Dr. Mellinger talks about it?

MR. MORICO: No objection.

MR. SHARMA: There is no Bates number, so I just flagged the two pages.

(Document published to jury.)

BY MR. SHARMA:

Q. **Mr. Brooks, just zoom in on the box on the right here.**

Dr. Mellinger, you have the hard copy in front of you. Can you please explain to the jury what is shown on this page of the brochure?

A. **Yes. This is a picture of the inside of a Gold Star refrigerator. And notice specifically on the side here these indentations all the way along. Those ar plaques or indentations into the plastic liner of the Gold Star or the**

LG product at that time.

Q. **Now, Dr. Mellinger, have you prepared any materials to summarize prior art that you have reviewed in relation to plaques?**

A. **Yes. I have reviewed a lot of prior art from GE, Montgomery Ward, Hitachi, Mitsubishi, et cetera. But I have prepared a chart that is specifically only showing three of the prior art examples.**

Q. **If you can go to tab 4 of your binder, PDX-163?**

If you could look at the screen, Dr. Mellinger, PX-163. What is shown?

A. **Yes. This is two of the prior art examples that I looked at. On the left-hand side is the PTX-403, which once again is the catalog that we just looked at from Gold Star or produced by LG in 1988. It clearly shows the outlet in red, the plaques in that plastic liner.**

Q. **What is the PTX number for that catalog?**

A. **It is PTX-403.**

Q. **Please continue, sir.**

A. **On the right-hand side is a patent by Matsushita. That is PTX-404. That patent was issued in 1983. Once again, I have outlined the plaques in that patent in red.**

Q. **Dr. Mellinger, have you compared the prior art shown on this slide, PTX-403 and PTX-404, with the claims of the '601 patent?**

A. **Yes.**

Q. **Could you please walk the jury through that comparison?**

A. **Sure. I prepared a chart for that.**

Mr. Brooks, I think it's -- thank you very much. Essentially what I have here is the two charts I just talked about on the '601 patent.

On the left-hand side here is Claim 1 of the '601 patent broken up into elements.

Q. **Can you quickly explain how the language in the claims is found in the prior art?**

A. **Sure. This essentially talks about the plastic inner liner, metal our case, foam intermediate structure, like the walls of the refrigerator, and it has a plaque in it. And I have looked at both the patent and the brochure and both of these exhibits, that same structure. Therefore, they exist.**

Q. **Can you go to the next element?**

A. **Yes. The next one just talks about this plaque being offset into the foam. Clearly, if you look at both of these, you can see that, in fact, is also in that. So I will check both of those, also.**

Next it talks about the edge portions that the plaque exists. Once you have a plaque, the edge portions, those can be seen in both the patent and the Gold Star catalog. Therefore, those can be checked.

Next it's talking about the expansion joints. So once again, it's this plaque, showing in fact it can act as an expansion joint. If you look at both the patent and the catalog, you can see the plaques in there with expansion joints. We can check that.

Next it talks about the beam elements. As I said before, the same edges act as a beam element to stiffen it. You can see the beam elements in both the patent and the brochure. And we are going to check that.

For the time being I am going to skip this next portion and go to the last one.

The last one talks about a foam close, really embracing the edge portions. What that means is the foam is up tight to the plastic liner. If you look at the Matsushita patent, it clearly shows the foam attached to the plastic liner. If you look at the Gold Star reference, that shows what appears to be a plastic liner in that catalog. At that point in time, people who were using plastic liners were using polyurethane foam. In the normal way, unless you do something unusual, is to have that foam up tight and embracing the plastic liner.

So therefore, I am going to check both of those boxes.

Q. **Dr. Mellinger, do you know if LG or Gold Star did anything unusual?**

A. **They did not do anything unusual.**

As a matter of fact, I talked to one of the LG engineers, and he actually showed me drawings of the product as was made back then. And it clearly showed that nothing unusual was done and it was foamed up against the liner.

Q. **There is one last element there.**

A. **Right. Then we talk about preventing bowing. If you say preventing means eliminating bowing, these prior art examples do not eliminate bowing. They only reduce.**

If you take Dr. Caligiuri's example, the Whirlpool expert, who says, preventing really only means reducing, then both of these prior art examples show the example of being able to reduce. So under Dr. Caligiuri's definition, I am going to check both of those boxes.

Q. **So applying Dr. Caligiuri's definition of preventing bowing, what is your opinion as to the validity of claim 1?**

A. **My opinion is that claim 1 is invalid.**

Q. **If we can go to the next slide, I believe it's Claim 4, PDX-165.**

A. **Right.**

Q. **What is shown here?**

A. **Claim 4 is one of the accused claims, but it also refers back to Claim 2. Claim 2 essentially says we have a generally rectangular plaque. As you can see, the Matsushita patent clearly shows rectangular. Therefore, I**

can check that.

THE COURT: Doctor, you just said accused claims. Did you mean asserted claims?

THE WITNESS: I am sorry, the asserted claims.

BY MR. SHARMA:

Q. **Can you identify what prior art you are referring to here?**

A. **I am referring to PTX-404, which is the Matsushita patent.**

Q. **I may have interrupted you. How do the claims compare to that reference?**

A. **The claims talk about generally rectangular. As you can see, it also talks here in this section about a Paraflax that has a channel in between, a Paraflax with a channel in between. Therefore, both of those features are found in the patent.**

Q. **Mr. Brooks, can you go to the patent, claim 15?**

Dr. Mellinger, can you tell us how the prior art compares to Claim 15 of the '601 patent? This is the last asserted claim in the '601 patent.

A. **Yes. This is claim 15. As you heard the other day from Dr. Caligiuri, from Whirlpool's expert, this is essentially the same as claim 1 except it talks about side-by-side refrigerators and a generally rectangular plaque. That is really what this whole claim is about.**

So we saw that there is prior art examples of top-mount refrigerators that have plaques in them. So it would be kind of understood by one working in the industry of ordinary skill in the art that those benefits that you get from a top-mount could easily be put into a side-by-side refrigerator with the same benefits that I mentioned earlier.

So it would be obvious to move that technology into the side-by-side refrigerator. And the rest of that claim is exactly claim 1, with, of course, the caveat of Dr. Caligiuri, where preventing only means reducing.

Q. **Why would it be obvious?**

A. **Because those units existed, the top-mount unit, with all the benefits. And actually, in addition, there were some side-by-sides in the marketplace from Montgomery Ward that show plaque.**

MR. MORICO: Objection, Your Honor. Beyond the personal knowledge of the witness, in terms of prior art.

THE COURT: He is testifying as an expert. Aren't experts permitted to offer hearsay?

MR. MORICO: He is talking about what was in the prior art.

THE COURT: Let me see counsel for a moment.

(The following took place at sidebar.)

THE COURT: I am not sure I understand your

objection.

MR. MORICO: Yes, Your Honor. He was talking about Montgomery Ward units in the field of having all of the elements of the claim. There has been no foundation laid for those units being prior art.

THE COURT: I see.

MR. SHARMA: I was just asking what was his opinion as to why it was obvious.

MR. MORICO: He is relying on what would be prior art but for the lack of foundation.

THE COURT: I think you can move on. I think he well established that he has an opinion, and there is certainly a foundation for that opinion, without further risking possible error.

(End of sidebar conference.)

BY MR. SHARMA:

Q. **Dr. Mellinger, what is your opinion as to the validity of claim 15?**

A. **I believe claim 15 is invalid.**

Q. **Is it invalid as obvious?**

A. **It's invalid as obvious.**

Q. **Dr. Mellinger, when you did your infringement and validity analysis, what mindset did you use?**

A. **I used one of ordinary skill in the art at that time.**

Q. **What is a person of ordinary skill in the art in the**

context of the '601 patent?

A. **I believe it's someone who has a Bachelor's degree in engineering and a couple years of experience, specifically in the refrigeration industry, or someone with less than a Bachelor's degree and say four to five years of experience in our refrigeration industry.**

Q. **Dr. Mellinger, applying that mindset, how do the plaques of the LG refrigerators that are accused of infringement compare to the prior art plaques that you have discussed?**

A. **Really, I see no difference. That's why I am a little surprised that Whirlpool is suing over that.**

MR. SHARMA: Your Honor, no additional questions.

THE COURT: You may cross-examine.

MR. MORICO: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. MORICO:

Q. **Good morning, Dr. Mellinger. We have never met. My name is Paul Morico. Nice to meet you this morning.**

I would like to turn your attention to your discussion, back to the LG plaques for a moment. Do you recall testifying about the LG plaques?

A. **Yes.**

Q. **You are familiar with the testing that was done by Dr.**

Mellinger and Mr. Dapkunas of the testing of the LG plaques that were accused of infringement in this case?

A. **Yes, I am.**

Q. **And you are familiar with the tensile tests that they ran in connection with those plaques?**

A. **Yes, I heard them describe that.**

Q. **You are familiar with and would agree that those tensile tests SHOWED that the plaques in the LG refrigerators acted as expansion joints?**

A. **Yes, the testing showed that all liner samples that both people tested that had some sort of plaques all showed expansion joints.**

Q. **Including the ones accused of infringement. Correct?**

A. **Yes, including the ones accused.**

Q. **You don't dispute, as I hear your testimony today, that LG plaques accused of infringement act to reduce wall bowing. Correct?**

A. **The plaques in LG's unit, as well as prior art units, all --**

Q. **My question was about the LG units, sir.**

You don't dispute that the plaques in the LG units reduce wall bowing, the ones that are accused of infringement. Correct?

A. **The plaques in the LG units, the liner material, shows, to your question that they expand, they provide**

expansion. But as far as data in refrigerators of reduced bowing, I have not seen that data.

Q. **You would agree that the liners -- it reduces the bowing in the liners, correct, in the LG tested units?**

A. **No. I would agree that the liners expand and would have a tendency towards reducing bowing. But I have not seen data in refrigerators.**

Q. **Thank you.**

Now, it's your opinion that the term prevent means prevent all bowing. Correct?

A. **Yes. Prevent means to eliminate.**

Q. **If we can pull up claim 1, Mr. Roberts, please?**

If you can look at the first few words of claim 1, where it says, Thermally induced bowing reduction means. Do you see that?

A. **Yes, I see that.**

Q. **And is it your understanding that the claim is directed to a bowing reduction means? That's what it says there. Correct?**

A. **Well, the claim says bowing reduction there, and goes on further to clarify at the bottom, preventing bowing.**

Q. **Let's turn to the preventing bowing language.**

It doesn't say eliminate or prevent all bowing, does it?

A. **It says preventing bowing.**

Q. **It says preventing bowing, but it doesn't say preventing all bowing. Correct?**

A. **Well, if it prevents some, I guess it prevents all.**

Q. **You have previously testified that you have never seen a composite wall structure which has completely prevented bowing. Correct? Do you recall that testimony during your deposition?**

A. **Yes, I have never seen a refrigerator that has -- with plaques in it that does not bow.**

Q. **So accepting that as true, according to you, the Patent Office issued a patent directed to something which is an impossibility. Correct?**

A. **No. Not an impossibility. It just says -- I have never seen it. It just says, when they are claiming preventing in this patent, it is something new that they are claiming is preventing. I have not seen it. But this is what they are claiming.**

Q. **Let's move on.**

Mr. Roberts, if you can pull up the demonstrative in connection with the Japanese patent.

Actually, first, if you could pull up the first page of PTX-404, please. If you can turn to the first page of the translation, please.

Dr. Mellinger, you had testified earlier that this was a patent issued to a Japanese company. Correct?

A. **Yes.**

Q. **Now, if you look up there in the top, it says Publication for utility model application. Do you see that?**

A. **Yes, I see that.**

Q. **So this is actually a Japanese patent application, not an issued or granted patent, is it?**

A. **It says utility model application. It has a number to it.**

I am not certain if that is an application. I guess you are saying it's an application.

Q. **It's an application. And you had testified that it was a granted patent. Do you recall that testimony?**

A. **I do.**

Q. **All right. In fact, you have no idea whether the Japanese Patent Office examined this application, do you?**

A. **I have every reason to believe they would have if it was submitted to them.**

Q. **It's possible that they didn't, it was just published as an application. Correct?**

A. **If that's an application, and they chose not to look at it -- I do not know.**

Q. **Let's take a look at the figure, Mr. Roberts. If you can go to the demonstrative.**

The problem that this patent was actually trying to solve, Dr. Mellinger, is solving of the problem of

minimizing the formulation of bubbles which form between the liner and the foam. Correct?

A. **That's what it says. Of course, minimization of bubbles in foam is very important, as I talked about improving the appearance. That's why the side wall, flat side wall shows all those imperfections and plaques hide them.**

Q. **Thank you. In fact, what the patent talks about is putting in the cuts or those uneven portions to help disperse the bubbles and break them up from large sizes to small sizes. Correct?**

A. **The patent talks about hiding -- making the plastic liner hide the imperfections of the bubbles that are formed during the normal foaming process, when the foam is rising like shaving cream, filling up that cavity.**

Q. **Let's turn now to the Gold Star catalog that you have just testified about. Nothing in that catalog describes how the liner is made. Correct?**

A. **That catalog -- no. That catalog talks about the products that they make and shows very good pictures of those products, correct.**

Q. **All right. And you never inspected any actual units in connection with that refrigerator. Correct?**

A. **No, I did not look at any Gold Star units.**

Q. **And you never ran any tensile tests on those units.**

Correct?

A. **Tensile tests, I am not aware of any tensile tests run.**

Q. **And you didn't perform any flexure tests on those units, did you?**

A. **No, I did not perform any flex on those.**

Q. **And you never cut one of the walls of those units to see how the wall was formed. Correct?**

A. **The wall -- I saw drawings from LG or Gold Star on exactly how the walls were -- how the foam was, how it was assembled. But to your question did I cut that apart, no.**

Q. **And you understand that some refrigerators are made with solid films, correct, in between the liner and the foam? You are aware of such units. Correct?**

A. **I am.**

Q. **Do you recall testifying about such units?**

A. **I do.**

Q. **And you recall your testimony saying that such units would not infringe any of the claims of the '601 patent. Do you recall that testimony during your deposition?**

A. **I was asked about the -- there is a closely embracing, and I said I say that -- the question was, how much closely embracing that is, if it is bonded or not. And --**

Q. **And you said it was noninfringing. Correct?**

A. **I believe that's what I said.**

Q. **Mr. Roberts, if you could put up Demonstrative No. 3, please.**

You are telling this jury, based on looking at this photo, that all of the elements of claim 1 are met. Is that your testimony?

A. **My testimony is that that appears to me to be a plastic liner.**

Q. **So it appears to be. You don't know for certain that it is?**

A. **I can't be 100-percent certain from that catalog, as I said previously. However, it appears to be plastic for a number of reasons. And if it's --**

Q. **Go ahead.**

A. **-- if it's a plastic liner, at that point in time, people who were using plastic liners made them with polyurethane foam.**

Q. **So you can't say with a hundred-percent certainty or even under the clear and convincing evidence standard that those are plastic liners, can you, Dr. Mellinger?**

A. **Well, every indication in that drawing, in that picture, shows that that is a plastic liner from the way that it's formed in the side. And it appears to be. Plus, of course, I made several trips --**

Q. **But you never inspected that unit. Correct?**

A. **I did not inspect that particular unit. But I saw**

the --

Q. **Thank you --**

A. **-- the engineering drawings.**

Q. **I think you have answered my question.**

Finally, Dr. Mellinger, do you recall in your deposition stating that you have never seen any data to show that a plaqued versus an unplaqued liner reduces wall bowing?

A. **That is correct. Data on refrigerators, total refrigerators, to the extent --**

Q. **That would include the prior art. Correct?**

THE COURT: Mr. Morico, let him finish.

MR. MORICO: I am sorry, Your Honor.

THE WITNESS: Not seen specific data on an unplaqued refrigerator versus a plaqued refrigerator to talk about the degree of reduction. All I know is that the structure of the plaque, which makes it more elongation in one direction, stiffer in the other direction, would have a tendency to reduce bowing.

By what extent depends on a lot of other factors in the refrigerator.

BY MR. MORICO:

Q. **Thank you very much, Doctor.**

MR. MORICO: I passed pass the witness.

THE COURT: Mr. Sharma.

REDIRECT EXAMINATION

BY MR. SHARMA:

Q. **Dr. Mellinger, was the foam in the Gold Star closely embracing the plaques?**

A. **Yes, by the engineering drawings that were shown to me by the Gold Star people, it showed closely embracing, nothing in between.**

Q. **Was that an LG engineer that showed you those drawings?**

A. **That was an LG engineer.**

MR. SHARMA: Thank you, Your Honor. No additional questions.

THE COURT: Thank you, Doctor. You are excused.

(Witness excused.)

MR. SHARMA: Your Honor, may I call our next witness?

THE COURT: Yes.

MR. SHARMA: As LG's next witness we would like to recall to the stand Dr. Mohan Rao.

... MOHAN RAO, having been previously sworn as a witness, was examined and testified further as. follows ...

DIRECT EXAMINATION

BY MR. SHARMA:

Q. **Good morning, Dr. Rao.**

A. **Good morning.**

Q. **Were you present when Mr. Nawrocki, Whirlpool's expert, testified on the damages for the '130 patent?**

A. **Yes, I was.**

Q. **Do you recall what his damages estimation was for the '130 patent?**

[redacted]

Q. **And do you agree with that?**

A. **No, I do not.**

Q. **Why is that?**

A. **There are a number of reasons. The first thing is --**

MS. WOODALL: Objection, Your Honor. Can we have a sidebar?

THE COURT: Yes.

(The following took place at sidebar.)

THE COURT: Are you concerned with the form of the question?

MS. WOODALL: I am concerned with the open-ended nature, the form of the question.

Your Honor, Dr. Rao, given the exclusion this morning, has no affirmative opinion on the quantity of damages. His report discloses only a critique of very specific measures.

THE COURT: I got your position.

Do you recall that argument and my agreement

with it?

MR. SHARMA: This morning.

THE COURT: This morning.

MR. SHARMA: Yes. I talked to Dr. Rao, and he understands what Your Honor ruled as far as what's off the table.

THE COURT: The question, the form of the question is rather open-ended, particularly given this witness' proclivities, and what I mean by that, I don't mean to be unkind, I just mean that he tends to be a little verbose, a little aggressive as a witness.

I don't want to have things coming out of his mouth that I have already ruled are unacceptable.

MR. SHARMA: I talked to him about that.

THE COURT: My point is --

MR. SHARMA: I will try to listen.

THE COURT: You really can't -- this is becoming an issue. It's not so much an issue with the gentlemen and the ladies who don't have who have gray in their hair, who seem to recall a time when judges spoke and lawyers listened, particularly in federal court, counsel.

You are both rather young and early in your carriers. As a word of advice, I want to offer to both, that generally it's probably a good thing to do, to pay attention to the person you are talking to, especially if

it's a judge, somebody in a black robe. When that mouth opens, yours should close.

Now, some are more or less strict in this regard. I happen to be rather strict. I don't know where I fit on the spectrum. But I know that I am rather strict. I demand formality and respect. It's not the person. It's the office.

Am I clear about that? Mr. Sharma, if you interrupt me again, I am going to fine you. Okay? Is that clear?

MR. SHARMA: Yes, Your Honor. I apologize.

THE COURT: Be careful in your examination of this gentleman.

(End of sidebar conference.)

BY MR. SHARMA:

Q. Dr. Rao, do you recall Dr. Nawrocki's testimony about IDI being game changing or transformational technology?

A. Yes, I do.

Q. Do you agree with that?

A. No, I do not.

Q. Can you please explain?

A. Well, I have heard Mr. Nawrocki describe IDI as a transformational technology. We have also heard a number of Whirlpool witnesses describe it as a major step for them that increases market share.

There are a couple of things that I found very interesting about those statements, because we have now from 2000 onwards to the present time Whirlpool's documents that were prepared in the normal course of business, and we have seen a number of those that are inconsistent with those statements.

[redacted]

MS. WOODALL: Objection, Your Honor. This is outside the scope of the report.

THE COURT: Mr. Sharma, was this in the report?

MR. SHARMA: Your Honor, I don't recall immediately. But I can move on to another question.

THE COURT: I will sustain the objection.

BY MR. SHARMA:

Q. **Dr. Rao, any other reasons why you don't agree with Mr. Nawrocki's testimony that IDIs are transformational or game changing?**

A. **The second thing I was referring to was the documents. What we find pretty consistently in the documents is that consumers prefer external features more than internal features. They prefer ice and water dispensers to in-door-ice. They prefer specifically the tray and the spigot to IDI. In fact, we saw documents that said that consumers are willing to pay for those water ice dispenser features over IDI.**

Moreover, we saw documents and testimony that IDI was not a sufficient differentiating feature for Whirlpool, that they were losing sales to other competitive refrigerators which did not even have IDI, but nonetheless had external features that were appealing, or electronic controls, styling and things of that sort.

THE COURT: Doctor, I am sorry to interrupt you for a second.

MS. WOODALL: Objection. Mischaracterizes the record evidence.

THE COURT: I will let you examine him further on that.

You may continue.

THE WITNESS: Thank you.

And that they continued to [redacted]

So what we find is that when you look at the record, which, again, are documents that were prepared by Whirlpool during its normal course of business, that is very different and inconsistent with what Mr. Nawrocki testified and concluded and then that of other Whirlpool witnesses.

BY MR. SHARMA:

Q. **What is the value, Dr. Rao, for a patented technology based on?**

A. **As I discussed last week when I was up here, the fundamental driver for value of a patented technology is the incremental benefit. It is not based on how long it takes, how expensive it was, those kinds of things. It basically depends on what is incremental benefit. Through companies, that benefit is what is incremental profits. Ultimately that is what we need to be looking at: What is incremental profit? That is something economically rational companies would pay based on that incremental profit.**

Q. **How did Mr. Nawrocki calculate LG's incremental profit?**

[redacted]

[redacted]

It is sort of like, if you are trying to figure out the value of your house, it is like looking at the median price of houses in the U.S. and saying, well, that's a good benchmark to use. Obviously, we wouldn't do that. We would look at a cohort group in your neighborhood of similar values and adjust that to figure out the value of your house. So the medians are not terribly usable.

[redacted]

Then, of course, we look at the post. And he compares two specific refrigerators to calculate the

incremental benefit between IDI and no IDI.

Q. **Dr. Rao, if we can pull up on the screen Mr. Nawrocki's slide 23, this is Tab 11 in your binder.**

What is this? What is this showing?

A. **This pleasure is Mr. Nawrocki's comparison. If you zoom to the picture of the two refrigerators, what you see is, right away, just in terms of external features, they are very different. They have different dispensers. So you are comparing this model 31, let's just use that as a shorthand, which has IDI, which LG calls Space Plus. Then he is comparing that to model 10, which is no Space Plus. So this is his comparison.**

Q. **Dr. Rao, do you have an opinion as to which models you believe are a better example of comparative models?**

A. **Yes. I looked through the entire Whirlpool catalog trying to see which models are actually better comparisons. So the comparison that we want is for 31. That is the one with IDI. We want to find out, what is the closest LG refrigerator to this particular model?**

It actually turns out -- and I have a tab for this that I prepared --

Q. **Doctor, I believe it's in tab 2. PDX-130.**

A. **That is correct.**

Q. **What does this show ?**

A. **Basically, I am trying to compare first Mr. Nawrocki's**

models. So there are two models on the left with no in-door-ice and there is one with in-door-ice. What Mr. Nawrocki compared is model 10 with model 31. And so if you

[redacted]

I added a new model, which is model 26. Why did I use model 26? It turns out that model 31 actually was a replacement for model 26. So it has features that are much closer to model 31. You know, there is no model that has only one difference being IDI, so you can't conclude just for IDI. We were trying to get as close as possible to IDI.

It turns out, between 31 and 10 there are some significant differences, you humidity control, crispers, and the filtration system is different. Whereas those things are much closer or the same between these two modelsS, between 26 and 31.

[redacted]

[redacted]

Q. **Dr. Rao, let's turn now to the '601 patent.**

Were you present for Mr. Nawrocki's analysis on the '601 patent?

A. **Yes, I was.**

Q. **What was Mr. Nawrocki's royalty calculation per unit for this patent?**

[redacted]

Q. **Do you agree?**

A. **No, I do not.**

Q. **Why not?**

MS. WOODALL: Objection, Your Honor. We have the foundational issue we need to address with the Court.

THE COURT: At sidebar?

MS. WOODALL: Yes, Your Honor.

(The following took place at sidebar.)

MS. WOODALL: Your Honor, I begin with the open-ended question issue here. But what I am concerned about is, Dr. Rao has only one opinion with respect to the '601. It's for that Gold Star unit that we have talked about earlier.

The problem here is that the Federal Circuit has set forth a predicate foundation for using an alleged noninfringing alternative in any analysis for damages purposes.

First, if there is not an established -- they have to establish in the record that it was actually available during the damages period. And if they cannot do that, then they have to come forward with evidence that it was commercially -- it would have been available, know-how, technical features, all of that, and it would have been commercially acceptable.

There has been some testimony from Dr. Mellinger about the way the plaques may have been formed. We don't even have to go there.

Your Honor during the direct of Dr. Lee yesterday sustained objections with respect to commercial acceptability, whether or not LG would have been able to use

these if they had needed to. You sustained objections with regard to the way the plaques were made.

And Mr. Coyne during a sidebar -- I checked the record -- Mr. Coyne indicated to Your Honor that he was trying to lay the predicate for a noninfringing alternative. I brought the transcript up with me, if you would like to see it. He specifically indicated that what he was trying to do is lay the foundation for a noninfringing alternative for the damages calculation. In each and every one of those questions the objection was sustained.

There is no evidence in this record that would allow him to proffer an opinion on a design-around at this point.

Dr. Rao's analysis is circumscribed to that design-around and for the Gold Star catalog as a printed publication. Not any refrigerator. Not whether or not they brought one in for UL. The footnote in his report is only for that Gold Star catalog.

THE COURT: Okay. Your response.

MR. SHARMA: Your Honor --

THE COURT: I think she has accurately recounted yesterday. Mr. Coyne didn't have the benefit of that entire recitation. But go ahead.

MR. SHARMA: Your Honor, my understanding was, Mr. Ching Ho Lee testified this was a design they were using

in the 1980s. So we would consider it an alternative design. Dr. Mellinger also gave opinions on how that design, if it was used, would render the claims invalid.

So if that design is used in that Gold Star brochure, for at this time it to be infringing, it would also mean that the claims are invalid. And you can't infringe invalid claims. We look at that as an alternative design that LG could turn to in a hypothetical negotiation between LG and Whirlpool on the '601 patent.

MS. WOODALL: Your Honor, we don't even have to go to the invalidity point. There is no predicate in this record for commercial acceptability. And there is no --

THE COURT: I was going to cut you off, because I think you are making the same point you just made. Is this a different point?

MS. WOODALL: No, not really, Your Honor.

THE COURT: You need, someone needs to respond to the point.

Mr. Coyne wasn't up here when this started, so you can confer.

(Counsel confer.)

MR. COYNE: Your Honor --

THE COURT: Yes, because you were involved in the other witness.

MR. COYNE: I was trying to adduce that

testimony through Dr. Lee yesterday that the unit in fact was sold, he testified that it was sold in other parts of the world, Middle East. So it was commercially acceptable, as the company said. I did not continue that line of interrogation when the objections to the questions were sustained. But I think there is a sufficient record to say that it was a commercially acceptable alternative and that it had been sold throughout all these countries.

MS. WOODALL: Your Honor, now we go back to the prior art issue. Sales outside of the United States do not constitute prior art, validated prior art.

The printed publication and invalidity challenge would be limited to the four corners of that document. They can't backfill it -- that was Mr. Spears' objection yesterday. They can't backfill and create validating prior art in printed publications through testimony. The document speaks for itself. It says nothing about how they were made. It says nothing about whether or not they achieve the same result as the '601 patent.

MR. COYNE: Your Honor, if I may, probably one of the more conclusive points came out of one of their own witness' mouth, he did not believe until August of 2008 that their liners prevented bowing. They never would have used this. Dr. Lee testified that until it was tested, he didn't believe it prevented bowing.

THE COURT: I recall that.

I am going to sustain the objection.

(End of sidebar conference.)

BY MR. SHARMA:

Q. **Dr. Rao, returning to the '601 patent and Mr. Nawrocki's royalty calculation for this patent.**

Do you recall what methodology he used?

A. **Yes. In fact, Mr. Nawrocki uses a different methodology to calculate each of his patent damages. Recall that the principle, the foundation should be incremental value.**

In this case, he bases it on something other than incremental value.

Q. **Can you please explain?**

A. **Well, what Mr. Nawrocki testified was that the benefit of having these plaques is reduced customer complaints and therefore presumably reduced warranty costs. So the incremental benefit should come from just the warranty cost. Or, alternatively, it could be that somehow the plaque liner is cheaper to manufacture than the unplaqued liner, so you could actually have a cost advantage which, once again, will translate into increased profits.**

He doesn't provide any of that information. In fact, he provided no evidence on anything before and after to show there was actually an incremental benefit to even

Whirlpool, let alone LG, which is really our focus here.

[redacted]

I have been teaching valuation for a number of years, almost two decades, in one form or another. This is simply a nonsensical approach. I have never seen a real-world valuation based on that. Nor have I seen any expert use just purely the cost, not the cost advantage or incremental benefit, simply the cost to calculate that kind of an advantage.

Q. **Dr. Rao, did Mr. Nawrocki in any way measure an**

incremental benefit to LG?

A. **No. In fact, that is the other key point to keep in mind. Here, LG is the one which would be licensing this technology. So it would be based on its incremental benefit.**

We saw evidence suggesting that they use steel plates to reinforce their sites. And potentially, even if the plaques contribute to something, its incremental benefit is going to be very different, that is to LG, than it would be to Whirlpool.

So what we need is some measure of the incremental benefit to LG. Once again, Mr. Nawrocki provides nothing of that sort.

Q. **Dr. Rao, if you were to use Mr. Nawrocki's methodology, but instead use LG's cost of the liner, what is the cost of LG's liner?**

[redacted]

[redacted]

Q. **And how would that translate to a royalty rate?**

MS. WOODALL: Objection, Your Honor. This is beyond the scope of the expert report. He provided the analysis that he has just given but he did not do the multiplication related to damages or for damages purposes in this case.

MR. SHARMA: Your Honor, I have the report. I am going to take a moment to look at the page.

THE COURT: Take a moment.

MR. SHARMA: I am going to withdraw that question, Your Honor.

BY MR. SHARMA:

Q. **Dr. Rao, going back to Mr. Nawrocki's methodology, using the cost of the LG liner that you provided, what would the royalty rate for the '601 patent be using that methodology and that cost of the liner?**

[redacted]

[redacted]

MS. WOODALL: Objection, Your Honor. This is not in his report, either, with respect to side-by-sides. He has not done that analysis. There is no weighted average across side-by-side and French doors.

MR. SHARMA: Your Honor, I can withdraw the question.

I have no additional questions. Pass the witness.

THE COURT: Ladies and gentlemen, you will disregard the Doctor's last response.

You may cross-examine.

CROSS-EXAMINATION

BY MS. WOODALL:

Q. **Good morning, Dr. Rao.**

A. **Good morning, Ms. Woodall.**

Q. **So there is no ambiguity, Dr. Rao, you do not have a Ph.D. in economics, do you?**

A. **I was actually in a dual Ph.D. program of economics**

and international relations. That is what I mentioned.

Q. **This is a yes or no question. Am I correct that you do not have a Ph.D. in economics from the University of Colorado?**

A. **As I said, I was in a dual Ph.D. program. The way programs work is you declare in one of the fields. And I declared in international trade or international political economy.**

Q. **Dr. Rao, if I were to tell you that I had an original official certified letter from the registrar of the University of Colorado that states that you have no Ph.D. in economics, would your answer to that question change?**

A. **No. That's exactly what I testified, which is I was in a dual Ph.D. program.**

The way Ph.D. programs work is they don't give you two Ph.D.'s. You declare in one of them. I declared in international relations. My distinction was in international trade. That is exactly consistent with what I just mentioned.

But they do give you two Masters as part of the program. I have a Master's in economics and I have a Master's in international relations.

Q. **Dr. Rau, isn't it correct that your Ph.D. is in political science and only in political science?**

A. **That is what international relations is part of.**

Q. **And you have no Ph.D. in economics from any university. Isn't that correct?**

A. **That's correct.**

As I said, I was in a dual Ph.D. program between economics and international relations. As I said, they give you two Masters's. You declare in one major for a Ph.D., because universities do not grant two Ph.D.'s even if you are in a dual program, finished all the requirements for both programs. And I declared it in international relations.

Q. **Dr. Rao, do you believe that rational companies would stage a break-in in the middle of the night at a trade show for marginal technology?**

A. **I am sorry? I am not sure what you mean.**

Q. **Earlier you said that you did not believe that the '130 represented advanced technology, that it was marginal technology. Do you recall that?**

A. **I didn't say exactly that. What I said is that if you look at Whirlpool's documents, they are very different, very inconsistent.**

Q. **My question to you is, would a rational company stage a break-in in the middle of the night at a trade show if they thought it were marginal technology?**

A. **Now you are getting beyond anything, any facts that I know. So I cannot really meaningfully answer that.**

Q. **Weren't you here for the testimony of Dr. Bessler?**

A. **I was.**

Q. **So you heard Mr. Garavalia's recounting the break-in by LG in the middle of the night at a trade show where IDI was first introduced, did you not?**

THE COURT: Counsel, let me see you.

(The following took place at sidebar.)

THE COURT: There is nothing inappropriate or wrong about the line of inquiry. But I am concerned about two things. Mr. Sharma, I wish you would engage, quite frankly. But I am a little concerned. I don't want this jury to be inflamed in an inappropriate way.

I think it mischaracterizes what happened to call it a break-in.

MS. WOODALL: I think it was referred to that by Mr. Garavalia.

THE COURT: Did Mr. Garavalia use that term?

MS. WOODALL: I think he did.

THE COURT: I didn't recall that. If he did, he is probably mischaracterizing what I understand happened that day.

MS. WOODALL: I am happy to move on, Your Honor.

(End of sidebar conference.)

MS. WOODALL: Can we have PDX-130.

BY MS. WOODALL:

Q. **You testified a little while ago regarding your analysis of these three LG models with and without IDI. Do you recall that?**

A. **That is correct.**

Q. **Do you know when each of the models listed here, the 10, the 26 and the 31, were introduced?**

A. **I do not recall the introduction date. I know the date when I calculated these profit differences.**

Q. **So you have not performed, as Mr. Nawrocki did, a year-by-year analysis to compare the profitability of those LG models with and without IDI. Isn't that correct?**

A. **I used the same methodology to select the models that he did. And what I did was we had two years of data in 2007 and 2008. So I used those two years of data to calculate the profitability.**

Q. **So the answer to my question, though, is yes, that you did not do a year-by-year calculation comparing them. Instead, you used data for two years and kind of did an average across those two years. Is that correct?**

A. **That's correct. We had two years worth of refrigerators. There are very few price differences among these refrigerators from year to year, Relatively few cost differences from year to year. What we are looking for, obviously, is what is the average profitability. And we have two years worth of data. So I took the two years worth**

of data.
Q. But you understand, as companies introduce new models, there is a tendency of an older model to decrease, isn't there?
A. That can potentially be the case. In this case, as you can see, the prices are relatively close to each other.
Q. Since you have not done that analysis year by year, you would have no objection and you have no opinion, nothing to suggest that LG, in fact, may have been just selling some of these at a loss after the lawsuit was filed, do you?
A. I am not sure I understand the question at all.
Why would they sell at a loss again?
THE COURT: If you don't understand, Doctor, you don't understand. She can rephrase.
BY MS. WOODALL:
Q. If we were to look at these on a year-by-year basis and look at what happened to the price of these models after the lawsuit was filed, you have no evidence to tell you that in fact LG didn't just start selling them at a lower price after that lawsuit was filed?
A. I did not check that. I have no reason to believe that they would deliberately start selling something at a lower price after a lawsuit was filed.
Q. And you have no evidence to the contrary, do you?
A. That's correct. I never checked that.

Q. **And with respect to your criticism of Mr. Nawrocki for the '601 patent, you have criticized his use of the cost of liners. Is that correct?**

A. **That's correct.**

Q. **You would agree you have no evidence that LG's refrigerators with the plaqued liners did not reduce bowing, do you?**

A. **I am not a technical expert. I heard the same things that everybody else heard in the courtroom. Of course, I reviewed deposition transcripts. But I am relying on basically the technical experts for that.**

MS. WOODALL: No further questions.

THE COURT: All right. Mr. Sharma, do you have redirect?

MR. SHARMA: No additional questions, Your Honor.

THE COURT: Thank you.

THE WITNESS: Thank you, Your Honor.

(Witness excused.)

THE COURT: Counsel, let's take this opportunity to take our morning break.

(Jury leaves courtroom at 10:35 a.m.)

(Recess taken.)

THE COURT: All right. Ms. Walker.

(Jury enters courtroom at 10:52 a.m.)

THE COURT: All right. Please continue.

MR. COYNE: Your Honor, that concludes this stage of the case for us.

THE COURT: Okay.

Mr. Partridge.

MR. PARTRIDGE: Your Honor, with the Court's permission, we have motions, which we will submit in writing over the lunch hour. With that, may we proceed with calling our first witness?

THE COURT: Please do.

MR. PARTRIDGE: Mr. Spears will do so.

MR. SPEARS: Whirlpool's first witness is Dr. Robert Dr. Caligiuri.

... Robert Caligiuri, having been previously sworn as a witness, was examined and testified further as follows ...

DIRECT EXAMINATION

BY MR. SPEARS:

Q. **Dr. Caligiuri, I am placing up on the Elmo sort of a shell of a chart I would like to fill out.**

The purpose of the chart is to sort of see how the various players in this trial line up on the question of whether or not the '130 patent is invalid.

A. **Okay.**

Q. **The first person I would like to talk about is Dr.**

Bessler.

A. **Okay.**

Q. **Were you here for his testimony?**

A. **I was.**

Q. **How do you understand Dr. Bessler to weigh in on this question?**

A. **Well, I think he believes the '130 patent is invalid.**

Q. **Where should I put Dr. Bessler on this chart?**

A. **In the yes column.**

Q. **All right.**

Have you formed any opinions about the validity of the '130 patent?

A. **Well, based on my review of the patent, and the prosecution history, and the prior art that has been presented to me through Dr. Bessler, I don't agree with that.**

Q. **So where do you belong on this chart?**

A. **I belong in the no column.**

Q. **I know you have a problem with your name being misspelled frequently. Have I got that correct, sir?**

A. **You did, indeed.**

Q. **Maybe the first time.**

Now I would like to talk about LG. Have you seen documents that were prepared by LG engineers during the course of their development of the products that are accused

of infringement in this case?

A. **I certainly have.**

Q. **What consistent themes have you noticed in those documents about Whirlpool's in-door-ice technology?**

A. **They make pretty regular reference to it being advanced technology, most advanced technology, unique advanced technology.**

Q. **So where does LG belong on this table?**

A. **Well, given those statements and the fact that they had the '165 reference from basically the beginning of their development project, and worked pretty hard at it, I would say they would say the patent is not invalid.**

Q. **So they belong in the no column?**

A. **That's correct.**

Q. **Now, let's talk about Whirlpool. I would like to have Defendants' Exhibit 311 put up. Specifically, Page 156 of that exhibit.**

What if anything does this page of this document tell you about the nature of the design challenges that were presented to Whirlpool at the time that they were developing the invention of the '130 patent?

A. **Well, we see two bullets here on this particular chart that says significant invention occurring, and very large technical content, which to me, when you put those together, that Whirlpool was believing they were developing something**

pretty new and unique.

I think that's pretty consistent with what I heard from the Whirlpool witnesses that have been here, including the inventor.

Q. **So where should I place Whirlpool on my crude little chart here?**

A. **I would put Whirlpool in the no column.**

Q. **The next actor I would like to talk about actually has not been in this courtroom. That is the United States Patent and Trademark Office. To begin our discussion, I would like to have the front page of the '130 patent placed on the screen. Specifically, the section listing the references cited.**

What I would like you to do, Dr. Caligiuri, is explain to the jury what the significance of that information is?

A. **Well, we see right there in the front page of the patent a list of approximately 20 or so U.S. patent documents that are cited.**

These represent prior art documents that the examiner used and had in front of him when he was evaluating the proposed claims of the '130 patent as to its validity.

Q. **Among those references, do you see a Gould patent listed?**

A. **Yes. I believe that's the '601 patent.**

Q. **Do you also see a Buchser patent listed?**

A. **Yes, I do. I see several of them, yes.**

Q. **And how were those patents treated during the application process that led to the '130 patent?**

A. **Well, as I read the prosecution history, the patent examiner looked at Gould and Buchser in combination as he evaluated the proposed claims of the '130 application, evaluating how relevant they are to the validity of the patent.**

Q. **What do you mean by looked to them in combination?**

A. **Well, what you do is, you examine a patent, and you try to see -- or a piece of prior art, and you are trying to see if that prior art contains all the elements and limitations of the proposed claim language. The other thing you can do is look at pieces of other prior art in combination. You put them together to see if the combination of the two would make it obvious that the proposed claims would be obvious to someone of ordinary skill, and then would render that patent claim invalid.**

Q. **Is there anything in the Hitachi reference that is missing from the combination of Gould and Buchser that the examiner considered before allowing this patent to issue?**

A. **Now, if you look at Gould and Buchser together, it talks about a motor on a door. It talks about a storage bin on a door. It talks about an auger driven by a motor for**

pushing ice out. It talks about a dispensing system to drop the ice down outside of the door of the refrigerator. If you put all the elements together, that is what Buchser and Gould do.

That is exactly what the elements are that are contained within the '165 application.

Q. **If, instead of the combination of the Gould and Buchser references, the examiner had the Hitachi '165 reference in front of him, what would he have done with it?**

A. **He would have done the same thing, because he looked at those elements in combination, and it wasn't just the fact that the elements were present in Gould and Buchser. It's the fact he allowed the patent claims because of issues related to implementation of this, particularly in the door. So it wasn't the fact that the elements were present. It is a matter of being able -- a person of ordinary skill to actually implement it.**

In fact, the Hitachi offers no benefit to that. So he would have come to the same conclusion and would have viewed that the Hitachi reference has no more relevance to the evaluation of the validity of the '130 applications than Gould and Buchser in combination.

Q. **So returning to my crude handwritten chart, where should I place the Patent Office?**

A. **In the no column.**

Q. **Dr. Caligiuri, I would like to talk more about this Hitachi reference. First question. Does it disclose an automatic ice maker anywhere in the reference?**

A. **No, I didn't see it.**

Q. **Did you see one illustrated in the figures?**

A. **No. In fact, usually, certainly the patents and technologies I have reviewed in the past, when they are talking about a system involving an automatic ice maker, they show it either in some detail or perhaps as a little box indicating the presence of an automatic ice maker. I didn't see that anywhere in the '165 application.**

Q. **Could we go to page 6 of the transaction of PTX-130, the Hitachi '165 application, have that put on the screen.**

I am interested in sort of the last line before the brief explanation of the drawings, where the reference talks about the operation of emptying ice cubes from the ice-making tray being more pleasant.

Do you see that, Dr. Caligiuri?

A. **I do, indeed.**

Q. **What does that tell you about whether this Hitachi patent is talking about an automatic ice maker or the sort of manual ice tray that we might fill with water, place in a freezer and then empty out once the water is frozen?**

A. **Well, it's kind of hard to imagine how an automatic ice maker would feel pleasure. I believe that is making**

reference to human interaction. And human interaction becomes involved when you are talking about breaking a manual ice stray over a storage bin.

This tells me, the Hitachi application tells me in part that the Hitachi application is talking about manual ice trays and not about an automatic ice maker.

Q. **I would like to talk about the ice storage bin that is illustrated and described in the Hitachi reference. Is that storage bin suitable for use with an automatic ice maker?**

A. **Well, when I look at it, it's missing a key element that you need when you have an automatic ice-making system, because an automatic ice making system is making ice all the time in larger volumes. That is one of the reasons you go to it.**

So to keep the ice from filling up the storage bin and then keeping it filling and from falling all over the place, you need some mechanism to tell the automatic ice maker, hey, wait a minute, the storage bin is full. Stop making ice until the ice is removed.

I don't see any indication in this sketch, this 30-year-old sketch here, of any sort of mechanism or methodology to tell the automatic ice maker to shut off.

If it doesn't include it, to me, that would be an important indication.

Q. **Have you seen any LG documents that weigh in on this**

question of whether the Hitachi reference discloses an automatic ice maker?

A. **I have.**

Q. **Could we have Defendants' Exhibit 173 up. Specifically, page 306?**

I am interested in the language in the lower left-hand corner.

Is this the document that you had in mind, sir?

A. **It is.**

Q. **And what does it indicate?**

A. **Well, if you look at the second bullet there in the left-hand column, it says, Development of the technology for manufacturing the ice maker installed on a door of Hitachi.**

What that tells me is LG recognized that Hitachi does not include an automatic ice maker, and therefore, they need to develop the technology of an automatic ice maker to use in conjunction with the Hitachi application.

Again, it is indicating to me that the Hitachi application, at least in LG's mind, did not include an automatic ice maker.

Q. **I would like to talk with you about a different issue, Dr. Caligiuri. Specifically, whether it would have been obvious by 1988 to stick an automatic ice maker in that Hitachi reference, turn it on and have it make ice. Would that have been an obvious thing to do?**

A. **First, you said 1988.**

Q. **I am sorry, 1998, sir.**

A. **Could you repeat it, please.**

Q. **Would it have been obvious in 1998 to stick an automatic ice maker and use that in that Hitachi refrigerator?**

A. **I don't think so.**

Q. **Now, what exactly is Dr. Bessler telling the jury that it would have been obvious to do with that Hitachi refrigerator in 1998?**

A. **Well, as I understood Dr. Bessler's testimony, he is talking about taking an automatic ice maker, which, indeed, existed in 1998, putting it in conjunction with the storage bin, auger, motor, everything described in the Hitachi '165 application, and a distribution or dispensing system to put the ice out through the door in a top-mount refrigerator.**

Remember, the Hitachi '165 is very explicit about using a top-mount refrigerator.

Q. **Even today, is the design that Dr. Bessler told the jury would have been obvious to do in 1998, even today, can you find anyone offering that design in retail showrooms?**

A. **No.**

Q. **How do you know that, Dr. Caligiuri?**

A. **Well, I went pseudo-shopping. I went to the appliance websites for Best Buy, Loews, Sears, and Home Depot, and**

looked at all of their top-mount refrigerator units. And that was hundreds and hundreds and hundreds of units. Not one of them showed a through-the-door ice-dispensing system.

Q. Is there any sort of technical obstacle to putting an automatic ice maker from the prior art disclosed in the Hitachi reference?

A. There is a technical issue in my mind surrounding the issue of available space to implement all of these three pieces into a top-mount.

Q. Using the refrigerators in this courtroom, could you provide more detail about that opinion?

A. I could.

MR. SPEARS: With your permission, Your Honor, may the witness approach the refrigerators?

(Witness steps down from stand.)

A. I think it would be useful to start with a side-by-side model, as we have here with the LG, it's DPX-23. If I open the freezer side door here, where LG implemented its in-door-ice system, the first thing to notice is that there is a lot of vertically oriented space on the door, that's narrower, but basically the height of the refrigerator unit -- and vertical orientation is important in implementing what Dr. Bessler was talking about, which is an automatic ice maker and a storage bin and dispensing system, because they all have to be linked up

vertically for the ice to move consistently through the system. So the vertical orientation is important.

As you can see, essentially, this dispensing system takes something out from the vertical space of this door.

In any event, to implement here, in the side-by-side, if we go over to the top-mount here, we have, conveniently, if we open this up, and now what we are talking about is putting an automatic ice maker in conjunction with the Hitachi application, which is a motor/auger driven system with a storage bin and a through-the-door dispensing system, fitting it into a space something like this. So you are trying to take something that we see in the LG side by side, somehow putting it here into a more horizontally oriented space than in top-mount.

THE COURT: You can resume your seat, Dr. Caligiuri.

(Witness resumes stand.)

BY MR. SPEARS:

Q. The testimony you have just given was with respect to a top-mount refrigerator which has been labeled PTX-425. What I would like to talk about is the top-mount refrigerator that is illustrated in the Hitachi '165 reference. If we could have the figures from that reference put up?

Does that refrigerator appear to be any more roomy than the sort of top-mount refrigerators you saw at Best Buy or that you just talked the jury through in this courtroom?

A. **It looks on the order of all the top-mounts I have of seen.**

Q. **Now, Dr. Caligiuri, wouldn't it have been obvious by 1998 to simply miniaturize the ice bin, miniaturize the ice maker, and to stick all these miniature ice components in the space afforded by the top-mount refrigerator?**

A. **You could do it, I mean, you could shrink everything down and make it fit, I suppose. But the problem is, you are now hindering one of the main reasons for having such a system. And having such a system is to make significant quantities of ice readily available.**

If you shrink this whole thing down to where you are making a few cubes of ice, putting them in a little bin, it sort of teaches away from doing it.

Q. **Would any refrigeration engineer in his right mind have wanted to carry out that minimization process?**

A. **Well, to do such a minimization process would require some extensive work and extensive expenditures to do that. It's not a simple thing to do.**

And I don't think any engineer would want to spend those resources if he doesn't believe that the

marketplace will demand that particular miniaturization of this system.

You have to remember that the top-mount units are not the high-end units in the refrigeration world. They are the lower to mid-markets. So they are very price-point sensitive. And an engineer who is developing a system, miniaturizing these components, would have to be very sensitive to the fact that consumers may not want to pay the extra money for such a system.

Q. **Would all of these factors, would they encourage or discourage a refrigeration engineer from conducting this miniaturization process?**

A. **Well, to combine things, to put them together, requires a motivation. And part of the motivation in any design engineer effort is to be sensitive to what the consumer needs. So if the consumer is not wanting it, there is no motivation on the part of the design engineer to implement something that the customers don't want.**

Q. **Now, Dr. Caligiuri, does the Hitachi reference disclose the sort of plumbing and wiring you that you need to install an automatic ice maker in that refrigerator?**

A. **No, it does not. It's simply a sketch. I think it's important, in relationship back to what the Patent Office did, because, again, they accepted the '130 claims even in light of combining Buchser with Gould because of the**

technology, the technical difficulties of doing it, the wiring, the mounting the motor with an auger on the door.

So it was because of the technical difficulties associated with doing it, the patent examiner viewed the combination of Gould and Buchser not to invalidate the claims.

Hitachi offers no additional information with regards to those technical difficulties.

Q. Dr. Caligiuri, is there any sort of difference between ice that comes from a manual ice tray and ice that's harvested from an automatic ice maker?

A. Well, many of the automatic ice makers you find today, the way they work is, of course, you make the ice, but then you got to get the ice out of the ice maker, harvest it.

What happens is that the tray, the molding tray is heated a little bit, it melts the really thin film of the ice into water, makes it kind of slippery. Then it's pushed out and drops down into the storage bin.

Q. Have you prepared a demonstrative to what would happen if wet ice were placed in the ice bin described in the Hitachi '165 reference?

MR. COYNE: Your Honor, may we approach? Objection.

(The following took place at sidebar.)

MR. COYNE: We addressed this in the motion in

limine, with respect to this ice bin. The specification has nothing in it about wet ice nor does it have anything in it for the sloping to be inadequate for the ice to be clear. What they are going to show next is a clump of ice bridging the ice bin. This is what we talked about in the motion in limine. It was excluded.

MR. SPEARS: The motion in limine dealt with making specific dimensional arguments with respect to structures illustrated in figures.

The wet ice comes from the notion of combining an automatic ice maker which would discharge wet ice into the ice bin in Hitachi.

The figures we are about to show have a clear label, drawn not to scale, and the witness is not going to talk about any specific dimensions. He is going to talk about the general shape of the bin and how this is incompatible with the use of wet ice harvested from the bottom of the ice maker.

THE COURT: Overruled.

(End of sidebar conference.)

MR. SPEARS: I can't remember where I was. I apologize if I am repeating myself.

BY MR. SPEARS:

Q. **Dr. Caligiuri, have you prepared a demonstrative to illustrate what would happen if wet ice were placed in the**

bin disclosed in the Hitachi reference?

A. **What could happen, yes.**

Q. **Could I have that.**

Could you please explain, sir?

A. **There is a pointer up here. Am I free to use that?**

THE COURT: Yes.

THE WITNESS: Over here, I believe that's the front page of the '165 application, and this sketch here is the sketch from the Hitachi application, showing the storage bin, and the ice-crushing region, and the auger.

What I have done here is superimposed upon this sketch some ice cubes that would have come from, say, an automatic ice maker. These cubes are built up in the bin here, and they were kind of wet and slippery when they were made.

The next one shows, what this next one here shows is what happens when you actually call for some ice, out the door, you push the lever. And, of course, the auger turns, pushes some of the ice out here, crushes it, maybe, and it drops down.

But what has happened is you only get some of it out. Because of the slope you have here in this particular part of the storage bin, the ramp area, for receiving the ice from the automatic ice maker, it was sitting there for a while, and it stuck together because it's wet, and then it

kind of sticks together. I think you have all experienced kind of sticky ice.

What it does is plug up the ramp here. So you don't get as much ice out of it as you would like. And furthermore, now you have plugged it up. So you have clumped up the ice maker out of the bin, so if the automatic ice maker was to make more ice, it would just pile on top of that.

I think the import part here, at least as I reviewed the '165 application, I saw no remedy or description of how to deal with that problem in this application, again, indicating to me that the Hitachi '165 application is not meant for an automatic ice maker application.

Q. **That bin that we were just talking about, is that removable?**

A. **No. There is another sketch, which I don't remember, that shows the actual Hitachi system in cross-section. I believe it might be -- there we go. Thank you. That's it.**

This is actually looking end on into Hitachi. This is another sketch from the Hitachi '165 application. You can see the ice crushing blades here. You can see the door of the top-mount refrigerator, the freezer, here is the actual bin here.

The important part is not this structure right

here, it comes around as a part of the structure of the storage bin. Notice how it comes down and goes into the wall of the freezer compartment.

So in order to take this unit off, you have to pull it out of that. Plus, you have got some attachment points here and potentially in here to remove that ice storage bin.

Then another factor is, this is pretty cumbersome, because you are taking the whole thing off, including the motor and auger and whole bit to do something with.

In my mind, this is not removable.

Q. Dr. Caligiuri, have you considered objective evidence or secondary considerations of nonobviousness in the course of your valuation of the validity of the '130 patent?

A. I have.

Q. Could you explain to the jury briefly what that is?

A. My understanding of secondary indicators or objective evidence is it's meant to be real-world things, real-world evidence to demonstrate whether or not a particular combination is obvious, instead of using experts to look at things in hindsight.

So it's real-world ideas and information that is out there.

There are a number of such indices that have

been identified.

Q. **What did the real-world evidence show in this case?**

A. **Well, first of all, as I have discussed before, LG has had evidence of copying of the '130 patent. There is clear indications of great praise for this, both from LG praising this innovative invention here. And there is indications, as I heard from Dr. Bessler, that GE tried to do the same thing, got to the prototype stage, but never was able to turn it into a real commercial item, which means they failed to do it.**

And I understand that Dr. Seth Kaplan will be here today to talk about what a huge success this particular in-door-ice system has been in the marketplace.

All of those factors put together tell me that it would not have been obvious in 1998 to have simply implemented the Hitachi system with an automatic ice maker to create the IDI system.

Q. **One last question about the '130 patent, Dr. Caligiuri.**

Is there a written description in that patent of an ice maker disposed within a freezer compartment?

A. **There is.**

Q. **What's the clearest example?**

A. **It's the figures that are in the '130 patent, and I believe Figure 2 illustrates that.**

Q. **Okay. I would like to move from the '130 patent to the '601 patent. My first question, Dr. Caligiuri, is if I gave you a document, like, say, the Gold Star refrigerator manual, and asked you to determine whether in that document itself you found a full disclosure of the invention claimed in the '601 patent, what information would you look for?**

A. **Well, as I think I discussed earlier this week, is that there are a number of things you need to do.**

The first thing you need to do is to determine if what's in the picture is a composite wall structure, consisting of an outer metal liner, plastic foam on the inside, plastic -- excuse me, blown-in foam on the middle, and a plastic liner on the inside, all bonded together in a composite structure. You just can't do that if you just look at a picture.

The second thing you need to do is look to see if the shape of the plastic liner is consistent with what we have been calling plaques here: Does it have the right shape and does it indent in towards the direction of the fountain? Then the third thing you need to do here, from the structural wall itself, is to be able to say that the foam is closely embracing the edge portions of these indentations or plaques. Very difficult to do if you are just looking at a picture.

But that's not all, because the other elements

of that claim then require, once those conditions are met, that these, the edges of these indentations must act as expansion joints and bead elements to reduce overall -- to reduce wall bowing.

That you can't get from just looking at a picture.

Q. **Is any of that information in the Gold Star product catalog?**

A. **No.**

Q. **I would like to talk next about the Japanese 40 reference, that is Plaintiff's Trial Exhibit 404. Have you prepared a demonstrative to assist in describing what that reference is all about?**

A. **I have.**

Q. **Could we have that up, please?**

Is this the demonstrative you had in mind?

A. **Yes, it is.**

Q. **Could you explain to the jury what the nature of the problem was that was presented to the inventor of this reference?**

A. **Well, as I read the '484 application, the Japanese application here, the basic issue it's trying to deal with is dimpling of the inner plastic liner as a result of the creation of large gas pockets as the foam is solidifying.**

So as the foam is, I think Dr. Mellinger used

the term, acting like shaving cream, it's coming up, it's got a lot of gas in it, and it can create large gas pockets after the foam is solidified. The problem with that is, under certain circumstances, that gas pocket, if it's next to the plastic liner, can actually allow that plastic liner to suck in and dimple a little bit. And that was a problem certainly in this time frame when the industry converted to foamed-in structures.

That's illustrated here down in this picture. You create a large bubble of gas. When the gas cools, it sucks in on the gas liner, dimpling it.

Q. **What was the inventors' solution to that problem?**

A. **That is shown here on the right side. This upper sketch is what was taken from the 484 application. You can see here, of course, this No. 9 -- I believe No. 9 is the steel outer liner. No. 3 is the foam, it's blown in. 8 here, the corrugations here is the plastic liner.**

What they are doing is corrugating the plastic liner like this. What the effect is is that instead of making one big gas bubble here, it breaks it up into a series of smaller ones as being trapped by the edges of this corrugation. And as a result you get a lot of smaller bubbles, which will lead to reducing the impact of the dimpling.

Q. **Does this Japanese reference have any relevance at all**

to the '601 patent?

A. Well, it's kind of dealing with the opposite problem, the sucking in of the plastic liner as opposed to bowing of the whole overall wall, composite structure. It is really dealing with a different problem entirely.

In fact, if you look right here, you can see, it's talking about collecting gas around the edges of these corrugations, which, in fact, teaches you away from the idea of closely embracing the foam at the edges of the plaques. So it's teaching away from one of the key parts of the '601 patent.

Q. Does that reference have anything in it about beam elements or expansion joints or any of the other information that you mentioned earlier when we began our discussion of the '601 patent?

A. No, because it's not talking about the structural rigidity of the composite wall at all.

MR. SPEARS: Pass the witness.

THE COURT: Mr. Coyne, you may cross-examine.

CROSS-EXAMINATION

BY MR. COYNE:

Q. Dr. Caligiuri, do you have PTX-9 in front of you in the binder?

A. I will look.

Do you know what tab it is?

Q. **I will give you the cross-binder.**

While they are getting that, can we go back to Mr. Spears' handwritten chart for a moment.

Sir, after sitting here for the last seven days, do you really think it's fair to characterize that LG thinks that the '130 patent is valid?

A. **Well, when I look at the evidence I reviewed, based on the documentation, I think in the time frame they were developing their own in-door-ice system, they thought it was valid.**

Q. **Do you really think LG thinks that today?**

A. **Well, I don't know if they think that today. But I believe they believed that back in the development period.**

Q. **Sir, I am showing you what we marked earlier as PDX-171. Would you go to the tab for the '130 patent. It's tab 3.**

A. **There is no tab 3 in here. There is 1, 2, 7, 4, 5, 9.**

THE COURT: Do you see the tab numbers?

THE WITNESS: Yes, I apologize. Thank you.

BY MR. COYNE:

Q. **Do you have tab 3?**

A. **Thank you. I got it.**

Q. **Where specifically in the '130 patent is there a written description of an ice maker being mounted onto a door that can move with the door without spilling?**

MR. SPEARS: Objection. Confusing. Irrelevant.

THE COURT: Why is it irrelevant? Did you say irrelevant?

MR. SPEARS: I said irrelevant.

THE COURT: I said why is it irrelevant?

MR. SPEARS: Because the written description focuses on whether there is a written description of the claimed subject matter. And the claimed subject matter is not what Mr. Coyne is putting in front of the witness.

THE COURT: Okay. Sustained.

BY MR. COYNE:

Q. **With respect to the PDX-130, sir, could you please turn to that?**

A. **Tab, please?**

Q. **It was one of the documents Mr. Spears used with you on direct.**

It's tab 5.

Can we go back to the portion that Mr. Spears had highlighted about the pleasant experience.

Sir, doesn't it look to you more like it's just a syntax or a word choice there in the translation?

A. **I am only reading what I read here: An operation of emptying ice cubes from an ice-making tray into the ice storage is more pleasant.**

It is my understanding everybody has agreed to

those translations.

Q. It is more pleasant having an automatic ice maker do it for you so you don't have to go into the freezer and twist an ice tray every few hours?

A. Certainly, an automatic ice maker makes it more easy to make ice, that's for sure.

Q. So it's more pleasant?

A. Easier.

Q. Can we go to DX-173, sir. This is another one that Mr. Spears showed you on direct. That is tab 2.

Can we go to the portion that Mr. Spears directed you to on page 2 of the document.

A. Tab 2 is PTX-10.

Q. You may be in the wrong binder, sir. I am back in Mr. Spears' binder.

A. Mr. Spears' binder. Okay.

Q. Do you see the reference there to the Hitachi that you were talking about on direct, sir?

A. I do.

Q. What year was the Hitachi patent that Dr. Lee testified about, what year was it issued, or filed?

A. The one they make reference to is 1976. But I haven't seen any other discussion in any of the documents produced by LG in this case that makes reference to another Hitachi reference from 1996. So my interpretation here is that was

a typo, meaning 1976.

Q. **But it says 1996?**

A. **Yes, it does. But there is no other evidence of another Hitachi application here talking about applying something to a door dating from 1996.**

Q. **Hitachi is a fairly large company, isn't it, sir?**

A. **Yes, it is.**

Q. **They get a lot of patents. Right?**

A. **Yes, they do.**

Q. **And they are very active in this ice-making area. Correct?**

A. **They are active.**

Q. **You had been asked some questions about the wet ice coming out of the ice maker in your discussion of the Hitachi 1976 reference. Do you recall that?**

A. **I do.**

Q. **Sir, do you have an automatic ice maker in your unit at home?**

A. **I do.**

Q. **Has it ever clumped up like that on you?**

A. **Oh, yes.**

Q. **How often?**

A. **I don't know. Periodically.**

Q. **Is it your testimony that the ice is intended to be dispensed wet so that it clumps up like that?**

A. **I think what happens is, certainly in the application in my home, which is a traditional system where the ice storage bin is placed on the shelf along with racks, or the ice maker above it, is that the ice falls directly into the bin, so it doesn't have the opportunity to be trapped and clumped in the area where the ice is being dropped into the bin, into the delivery system.**

What happens in the application, in my refrigerator, is that if you don't access it for a while, it all sticks together in the bin, as opposed to sticking up in a delivery area as described in the '165 application.

Q. **Can we agree that that is not how Hitachi intended to operate? Correct?**

A. **Well, I think that's the point. That's why it tells me that Hitachi does not have in mind an automatic ice maker.**

Q. **Sir, I would like to go to the questions you were asked about the combination of Gould and Buchser for the '130 patent.**

Those were two references that the examiner cited against Whirlpool in the first office action. Correct?

A. **Yes, I believe they looked at the combination of Gould and Buchser, and disallowed several of the claims, yes.**

Q. **The examiner felt that the combination of Gould and**

Buchser satisfied every element of the claims that he rejected. Correct?

A. **Well, yes. But then they came back again and accepted that same combination as not invalidating the '130 claims because of all the technical difficulties associated with it.**

Q. **Specifically, the examiner felt, after Whirlpool met with them, that it wasn't appropriate to combine Gould and Buchser any longer. Correct?**

A. **Well, I don't know what it means by "prepare to combine." But certainly, that combination was evaluated, referencing the technical difficulties.**

Q. **And your testimony is that the '165 basically shows the same things as the combination of Gould and Buchser. Correct?**

A. **In terms of the elements, yes.**

Q. **All of them. Right?**

A. **Yes.**

Q. **So if the combination of Gould and Buchser invalidated those claims, then Hitachi alone would invalidate them, too. Right?**

A. **Yes. But remember, it isn't just a combination of these pieces of an auger, a motor, a dispensing system, storage bin. It's how you can do that and whether or not you can accomplish that.**

In my reading of the prosecution history, the examiner concluded that it is not obvious to do that, because of the difficulties associated with it. It's not the individual elements themselves in combination.

Q. **Sir, I would like to turn to the '601 patent briefly.**

Mr. Brooks, can we bring up the Court's claim construction, and Claim 1. I believe it's Exhibit PTX-15, is the patent. Can we highlight the portion of the claim construction for the beam elements.

It's the third item down under the '601 patent.

Sir, do you see the construction for beam elements?

A. **I do.**

Q. **The term beam elements is construed to mean the edge portions function to stiffen the inner liner to resist bowing deformation.**

Did I read that correctly?

A. **You did.**

Q. **Sir, if the beam elements portion of the claim, Claim 1 on the right, is interpreted to mean edge portions function to stiffen the inner liner to resist bowing deformation, then what does the word preventing do?**

MR. SPEARS: Objection. Scope of direct.

THE COURT: Sustained.

BY MR. COYNE:

Q. **Sir, do you remember at your deposition I had shown you some pictures of some refrigerators and asked you whether or not the plaques that were shown in those refrigerators satisfied the limitations of Claim 1?**

A. **I do.**

Q. **And you answered my that you would not be able to answer that question because the plaques that I had shown you, you didn't have dimensions and you didn't have proportions in the refrigerator. Correct?**

A. **Right. Didn't have test data on how they would perform.**

Q. **Let's go back PTX-15 for a moment. Can we go to column 1?**

Sir, if we go down to around line 30 to 36, roughly.

Column 2, excuse me, Mr. Brooks.

Do you see the line that begins at line 34, also, the plaques?

"Plaques increase the structural rigidity of the liner and therefore resist thermal bowing."

Did I read that correctly?

A. **Yes.**

Q. **What this patent is disclosing to one of ordinary skill in the art is that these edge portions and beam elements making the sheet more stretchy and less bendable**

are going to reduce bowing. Correct?

MR. SPEARS: Objection. Scope of direct.

THE COURT: Sustained.

BY MR. COYNE:

Q. Sir, if I showed you two additional liners that do, in fact, have dimensions, would you be able to tell me whether or not they satisfy the limitations of the claim?

A. No, because in addition to needing the measurements and dimensions to get an idea of the overall size of these plaques relative to the wall, you also have to know, what's the wall made of, and is it a composite structure that is bonded together? And these formulations that you show, whether they act as beam elements and expansion joints and can they act in some way to reduce overall bowing?

You have to put the whole package together in terms of assessing whether or not the limitations of the '601 claim are met in those pictures.

Q. Sir, I would like to show you a design of plaques and ask you a hypothetical then.

I am going to show you PDX-100.

MR. SPEARS: This appears to be going beyond the scope of direct again.

THE COURT: It does.

MR. COYNE: Your Honor, he has indicated what his interpretation was on his direct testimony. I want to

find out whether or not he can identify the plaques.

THE COURT: It may be the case, Mr. Coyne. But the objection is it goes beyond the scope of the direct testimony.

MR. COYNE: I will withdraw it, Your Honor.

THE COURT: Sustained.

BY MR. COYNE:

Q. Last set of questions for you. You went over to the refrigerator that has been marked PTX-425 on your direct testimony, didn't you?

A. Yes, I did.

Q. In fact, that's a GE HotPoint Model CFX style of refrigerator. Correct?

A. You know, I don't know that. I was only looking at it in terms of being a top-mount unit.

So I don't know.

Q. Sir, that is one of the units that you identified in your expert report that was the basis for your opinions. Correct?

A. Is it? It may be. I just don't know. I see the number 34 on it. That number 34 refers to its number as it was in that warehouse I saw in Columbia, Maryland. And, yes, I would have looked at it.

Q. So we are clear that you did, in fact, look at the unit?

A. **Well, okay. Yes.**

Q. **Thank you.**

Sir, you are aware, are you not, that that unit was made in October of 1989? Correct?

MR. SPEARS: Objection. Beyond the scope.

THE COURT: Again, sustained.

MR. COYNE: Thank you, Your Honor. Nothing further.

THE COURT: Anything, counsel?

REDIRECT EXAMINATION

BY MR. SPEARS:

Q. **Just one question and a housekeeping point. First the question, Dr. Caligiuri.**

Mr. Coyne asked you a question that began with the phrase along the lines of, if Gould and Buchser invalidated the claims. Do you recall that question?

A. **I do.**

Q. **How, exactly, did the examiner weigh in on that very question?**

A. **Well, he looked at Gould in combination with Buchser, and then concluded that that combination does not invalidate the claims of the '130 patent.**

Q. **We went over the "if" part of Mr. Coyne's question. The "then" part, if I recall this correctly, was then the Hitachi '165 reference would invalidate the claim. Do you**

remember that?

A. **I do.**

Q. **Could you comment on the "then" portion of Mr. Coyne's question?**

A. **Well, it presumes that if Gould and Buchser in combination invalidate the patent, then the patent is invalidated.**

Q. **Again, how did the PTO weigh in on that question?**

A. **It allowed the patent claims to go forward, which means they ruled that the patent is valid.**

MR. SPEARS: I would like to mark my chicken scratch as Defendants' Demonstrative Exhibit 598.

THE COURT: That is fine.

MR. SPEARS: And I pass the witness.

THE COURT: I am sorry. We are finished.

Okay. You are excused, Doctor.

THE WITNESS: Thank you, Your Honor.

(Witness excused.)

MR. PARTRIDGE: Your Honor, for our next witness, Ms. Woodall will present the witness.

This will be our last witness, Your Honor, for this stage of the case.

THE COURT: Okay.

MS. WOODALL: Your Honor, for its next witness, Whirlpool calls Dr. Seth Kaplan.

... Seth Kaplan, having been duly sworn as a witness, was examined and testified as follows ...

DIRECT EXAMINATION

BY MS. WOODALL:

Q. Good morning, Dr. Kaplan.

A. Good morning.

Q. Could you please introduce yourself to the jury and tell them what you do?

A. My name is Seth Kaplan. I am an economic consultant.

Q. And what area do you specialize in?

A. I specialize in patents, international trade disputes, antitrust, and commercial damages.

Q. And by whom are you employed?

A. The Bretal Group, which is an international economic and business consulting firm.

Q. And could you please give us a sense of your educational background?

A. I have a Ph.D. in economics from Michigan State University.

Q. Could you please give us a sense of your professional career?

A. While I was completing my Ph.D., I taught at Aquinas College and University of Michigan at Dearborn, then I joined the government as an economist in the research division of the U.S. International Trade Commission, where I

was also detailed to the economists to the chairman of the commission.

After leaving the International Trade Commission, I entered economic consulting.

Q. After your position at Aquinas, did you have any other academic positions in economics?

A. Yes, I was a professorial lecturer at the George Washington University, teaching international trade and international finance at the undergraduate and graduate level for nine years, while I was working for the government and also while I was a private consultant.

Q. Can you tell us what types of analyses you have done in connection with economic analyses for patents?

A. Yes. I analyzed commercial success before. I have looked at the labor, capital, and research and development that goes into creating a domestic industry that uses patented technology.

I have done analyses on the effects of remedies with respect to patents, and also with respect to bonding in the international trade aspects with respect to patents.

Q. And what types of patented technology have you analyzed?

A. Well, I have worked on a whole series of different types of semiconductor chips, computer chips, and the industries that use them, such as the consumer electronics

industry, things like thumb drives, MP3 players, cameras with computer chips, computers.

I have also worked on LCD television technology.

I have worked on automobiles, and also on home appliances.

MS. WOODALL: Your Honor, Whirlpool would offer Dr. Kaplan as an expert in economics and economic analyses related to patents.

MR. COYNE: No objection, Your Honor.

THE COURT: The Doctor is accepted in those areas.

BY MS. WOODALL:

Q. Dr. Kaplan, what have you been asked to do in this case?

A. I have been asked to consider the commercial success of the invention described by the '130 patent.

Q. And to what are you referring when you say the invention?

A. It's the IDI that's been talked about here for the last week, or Space Plus.

Q. Is Space Plus the name LG uses for its IDI system?

A. Yes, it is.

Q. Have you formed an opinion with respect to the commercial success?

A. I have.

Q. **And what is your opinion?**

A. **I found that it, in fact, is successful.**

Q. **Have you prepared a set of demonstrative slides to aid you in the explanation of your opinions here today?**

A. **Yes, I have.**

Q. **And in forming your opinion on commercial success, what did you first look at?**

A. **If you could put up the first slide. I looked at four factors. The first factor was unit sales, revenues and probability.**

Those three points go to whether the refrigerator incorporating the IDI or the Space Plus was commercially successful.

Then I looked at three more factors, and what they go to is whether the commercial success of the refrigerators incorporating it was in part due to the existence of IDI in those refrigerators.

Q. **And how do those last three factors inform that analysis?**

A. **Well, it's my understanding that to find the invention of the '130 commercially successful, you need to show that the product is incorporating it successfully, the refrigerators, then you have to show a nexus or a link between the success of those refrigerators and the IDI itself. And that's what the last three go to.**

Q. **What did you consider in connection with the first factor, unit sales, revenues, and profitability?**

A. **Well, I looked at -- and if you could take a look at the next slide, I looked at, first at Whirlpool, I looked at the sales of refrigerators incorporating the IDI. As you can see, from 2002 to 2008 -- by the way, 2009 is in italics because that is only like four months of 2009. That is not a complete year.**

If you look at the total number of units sold, you are talking three million units, which to me points out that it was a product that was liked by consumers.

And the sales revenues are, you know, in the three-billion-dollar area.

So, to me, this is pretty successful, just based on the number of units and the amount of revenues.

Q. **Did you also look at LG's sales?**

A. **Yes, I did. The next slide looks at LG. LG** [redacted]

These are widely accepted products and sales have increased since they were introduced, which is an indication of success of the products for me.

Q. **And you have just looked at three years for LG's sales. Correct?**

A. **That's correct. Since they were introduced, I looked at the three full years of data.**

Q. **Have you identified any sales trends with respect to refrigerators incorporating in-door-ice?**

A. **Well, being an economist, I couldn't but help to make a graph.**

The time series here shows both Whirlpool and LG's units graphically.

[redacted]

Q. **Have you also looked at trends with respect to revenues for IDI?**

A. **Yes, I have.**

The next slide shows graphically the revenues I discussed. I basically have taken the tables with the

[redacted]

Q. **Dr. Kaplan, have you considered the profitability of Whirlpool and LG refrigerators incorporating IDI?**

A. **Yes, I have. The next table shows the profitability**

in dollars, and as a margin of sales, for each of the years I have talked about, since the units have been introduced.

So if you look at the fourth column, it says Product Margin. That is the product margin measure of profitability that is kept in the records for each of the models by Whirlpool.

So I summed up the product margin for the models incorporating the IDI, then I took the product margin and divided it by the revenues to get a percentage margin.

So what you see is the product margins since the introduction, the profits, as it were, are near a [redacted] and that the margin itself was significant, but falling from the time of the introduction.

I would like to add that the falling margin on the right-hand side is typical, when you see a new product introduced, and then over time this margin tends to fall.

But even in the year 2007 and 2008, during the housing crisis, the margins were significant and the dollars of profitability were in excess of a [redacted]

[redacted]

Q. **How do Whirlpool and LG's units sold, revenues and profitability relate to your analysis?**

A. **They relate to the issue of whether the product was -- the refrigerators incorporating the '130 were commercially successful. And based on the number of units sold, the revenues generated by those units, the product margin and the margins, I concluded that those refrigerators were commercially successful.**

Q. **If we could turn back to the list of things you considered, could you tell us what you looked at next?**

A. **Next I turned to the factors relating to the nexus between the '130 patent and the refrigerators incorporating them. And I looked at the relative profitability of models with and without in-door-ice.**

If you could please turn to the next slide.

So these are seven examples. On the left-hand side, you see the first model number and the second model number. The one on top is without IDI. And the one below it is with IDI. And I did that seven times. There are seven pairs there.

Now, the models are as close as I could get. They aren't identical, but they are as close as I could get to two models, one with IDI and one without IDI.

What I find is, unsurprisingly, the average price of the model incorporating IDI are higher. But I also found that, in general, the average profit margin was higher in models incorporating the IDI over the period I looked.

So the first two models was a two-year weighted average. The other five were a three-year weighted average.

What I did also in the far right column, I looked at it on a year-by-year basis, and I said in how many of years that I did the comparison was the IDI more profitable?

What I found was, for all of these models, in 16 of the 19 individual years I looked at, the model with the IDI had a higher average profit margin.

[redacted]

[redacted]

Q. **How does the information you considered with respect to Whirlpool and LG's profitability for refrigerators with IDI inform your analysis?**

A. **Well, this is one factor I considered in determining whether the IDI itself contributed to the sales of the refrigerators incorporating the IDI.**

Q. **And what was your conclusion?**

A. **I concluded that this was evidence favoring that, the conclusion that it did.**

Q. **Okay. Have you also considered the percentage of Whirlpool and LG models that incorporate IDI?**

A. **Please turn to the next slide.**

Here I look at, throughout the period that the models were available from Whirlpool, the total number of refrigerator models they made.

On the first line, you can see in 2000, they made [redacted] individual refrigerator models. The third column shows how many had IDI. And there were [redacted] there. Then I took a ratio, how many refrigerators that they made had IDI relative to their total number of refrigerators.

So it was [redacted] over [redacted] You get about [redacted]

percent.

I did that for every year that Whirlpool made models with IDI. What you see is it's increasing continuously.

So every year they had more and more models with IDI in their total product mix.

[redacted]

The next thing I did, instead of just looking at the models, I looked at their sales, their units, and that's -- first, the graph.

So as I talked about it going up, there is a graph showing it going up. Being a visual guy myself, I think it speaks for itself. Every year a higher percentage

[redacted]

Q. **And how did the ratio of models with IDI inform your**

analysis in this case?

A. **Well, it tells me that the companies believed that the incorporation of the models were useful to sell products, because that's what they did. They want to sell products. They are bringing them in.**

There is the other side of that, too. It says the consumers are buying these products or they wouldn't keep adding the feature to the new ones.

Both these companies do a lot of research, billions of dollars spent on these products. So they are looking at what the consumers want. And from seeing what the consumers buy, they are deciding to add this feature to their newer models.

Q. **And have you also considered changes with respect to the number of units sold?**

A. **I have. Let's take a look at Whirlpool. Instead of the number of models, I am looking at number of units that it's incorporated in.**

What you see is the total number of units with an IDI and over their total units sold of refrigerators.

What you see for Whirlpool, it increases continuously from 2000 to 2007. Then it falls off a little bit in 2008.

But it's still the second highest year.

[redacted]



[redacted]

[redacted]

Q. **Have you also looked at a trend information with respect to the number of units sold with IDI?**

[redacted]

their total sales, it increases through 2007, and then in 2008, it is at about the same level as 2006.

Q. **Dr. Kaplan, how does the information you have considered in this case impact your opinion?**

A. **Well, I first looked at the sales of refrigerators with IDI, their revenues and profitability. And I found they were significant. Then I looked at three different ways to see if there was a nexus between the feature, between the ice maker system, and the refrigerator incorporating it.**

And each of the measures indicated to me that there was this nexus, higher profitability in models that incorporated the IDI, increasing of percentage of models. That says both the consumer and the producers wanted them and incorporated them into their new features. And then an increasing percentage of actual units being sold.

[redacted]

[redacted]

So I found commercial success of the refrigerator and I found a nexus between the feature and the success in that refrigerator. And this led me to conclude that the innovation described by the '130 patent was commercially successful.

MS. WOODALL: No further questions.

MR. COYNE: No questions, Your Honor.

THE COURT: Okay. Thank you, Doctor. You are excused.

(Witness excused.)

MR. PARTRIDGE: With that, Your Honor, we rest this portion of our case.

THE COURT: All right.

We will take an early lunch today. Agreed?

MR. COYNE: Yes, Your Honor.

THE COURT: Ladies and gentlemen, we will take our hour at this point.

(Jury leaves were courtroom at 12:05 p.m.)

(Luncheon recess taken.)

THE COURT: All right. Please, take your seats.

All right. I have reviewed Whirlpool's JMOLs, Rule 50 motions, docketed at 392. I am going to deny each of them. There is more than enough evidence, in my view, to go to the jury on each of these questions. They are denied.

MR. COYNE: We would like to renew our 50(a)'s.

THE COURT: Denied.

Where are we, counsel?

MR. PARTRIDGE: I was waiting for Mr. Coyne to close, after I said we were resting. I think we are ready.

MR. COYNE: We are ready for closings and instructions, Your Honor.

THE COURT: You are ready for instructions and closing.

MR. COYNE: I am sorry. Instructions and closing.

THE COURT: We are all right on the instructions?

MR. PARTRIDGE: We agreed on the verdict form. And Mr. Spears is taking one last look at the instructions. I think we may be there, Your Honor.

THE COURT: Are those the copies?

MR. COYNE: Yes, Your Honor.

THE COURT: Delaware counsel should know this. I always require sources be removed from the jury instructions. You have case law.

How long is it going to take to get this done right?

MR. COTTRELL: Your Honor, let me go find Mr. Herrmann. I just noticed that and said that myself. I have got to go find Mr. Herrmann.

THE COURT: We will recess.

(Recess taken.)

THE COURT: Counsel, are we ready for the jury?

MR. PARTRIDGE: Yes, Your Honor.

THE COURT: All right.

(Jury enters courtroom at 1:27 p.m.)

THE COURT: All right, members of the jury.

It may not have been all that clear to you, but the parties have rested, both sides. Now it is time for me to instruct you about the law that you must follow in deciding this case.

So, as you know, each of you has been provided a copy of these instructions. You may read along, as I instructed you during delivery of the preliminary instructions, or direct your attention to me, as you prefer. Of course, you will have these instructions with you when you commence your deliberations after you listen to the closing speeches of counsel.

Let me start by explaining your duties and the general rules that apply in every civil case. Then I am going to explain some rules you will use and must use in evaluating the testimony and evidence here.

Then I will explain the positions of the parties and the law you will apply in this case.

And finally, I will explain the rules that you

must follow during your deliberations back in the jury room, and the possible verdicts that you may return.

Please listen carefully to everything I have to say.

Counsel, are you going to discuss the verdict form with the jury?

MR. PARTRIDGE: Yes, Your Honor. I was planning on doing so.

MR. COYNE: I was also planning on doing so.

THE COURT: If you don't mind, with your permission, I will forego that discussion with them. I think it's self-explanatory. To the extent I need to supplement any comments that you make, I will do that.

Contrary to what is, I believe, stated in the jury instructions, I won't go over the form. Is that acceptable?

MR. PARTRIDGE: Yes, Your Honor.

MR. COYNE: Yes, Your Honor.

THE COURT: Let me start here again, then, by reminding you that I am going to explain the general rules that apply in every civil case, then explain some of the rules that you will use in evaluating testimony and evidence. Then I am going to explain the positions of the parties and the law you are going to apply in this case, then the rules you will follow during your deliberations.

Again, listen carefully.

Members of the jury, it is important that you bear in mind the distinction between your duties and mine. You have two main duties as jurors. The first one is to decide what the facts are from the evidence that you saw and heard here during this trial in this courtroom. You are the sole judges of the facts. It is your judgment, and your judgment alone, to determine what the facts are, and nothing at all that I have said or done during this trial is or was meant to influence your decisions about the facts in any way whatsoever.

Your second duty is to take the law that I give you, apply it to the facts, and decide if the parties are liable.

Now, as far as my duty is concerned, I have the duty of advising you about the law you should apply to the facts as you find them. You are not to consider whether the principles I state to you are sound or whether you agree with them. You are bound by the oath that you took at the beginning of the trial to follow the instructions that I give you, all of them, or regardless of whether you disagree or agree with them. You must accept them, despite how you feel about their wisdom or lack thereof. This includes the instructions I gave you before and during the trial, and these instructions as well.

All the instructions are important, and should be considered together as a whole.

Perform these duties fairly. Do not let any bias, sympathy or prejudice that you may feel towards one side or the other influence your decision in any way.

You must make your decision, as you know, based only on the evidence that you saw and heard here in the courtroom. Do not let rumors, suspicions, or anything else that you might have heard or seen outside of the Court influence your decision in any way.

The evidence in this case includes only what the witnesses said while they were testifying under oath, deposition transcript testimony that was presented to you, the exhibits that I allowed into evidence, and the stipulations to which the lawyers agreed.

Nothing else is evidence. The lawyers' statements, as I have reminded you before, and arguments are not evidence. The lawyers' arguments are offered solely as an aid to help you in your determination of the facts. The lawyers' questions and objections are not evidence. My legal rulings on those objections are, of course, not evidence. My comments and questions are not evidence.

During the trial, as you know, I may not have let you hear the answers to some of the questions that the lawyers asked. I also may have ruled that you could not see

some of the exhibits that the lawyers wanted you to see. You must completely ignore these questions and exhibits. Do not speculate about what a witness might have said or what an exhibit might have shown. These things are not evidence, and you are bound by your oath not to let them influence your decision in any way.

Make your decision based only on the evidence, as I have defined it, and nothing more.

You should use your common sense in weighing evidence. Consider it in light of your every-day experience with people and events, and give it whatever weight you believe it deserves. If your experience tells you that certain evidence reasonably leads to a conclusion, ladies and gentlemen, you are free to reach that conclusion.

You have heard in the preliminary instructions the terms direct and circumstantial evidence.

Direct evidence is simply evidence, like the testimony, as I reminded you earlier, of an eyewitness, which, if you believe it, directly proves a fact. If a witness testified that she saw it was raining outside and you believed her, that would be direct evidence that it was raining.

Circumstantial evidence is simply a chain of circumstances that indirectly proves a fact. If someone walked into the courtroom this afternoon wearing a raincoat

covered with drops of water and carrying a wet umbrella, that would be circumstantial evidence from which you could conclude that it was raining.

It is your job to decide how much weight to give the direct and circumstantial evidence. The law makes no distinction between the weight that you should give to either one, nor does it say that one type of evidence is better than the other. You should consider all of the evidence, both direct and circumstantial, and give it whatever weight you believe it deserves.

Let's talk about credibility of witnesses.

You are the sole judges of each witness' credibility. You should consider each witness' means of knowledge; strength of memory; opportunity to observe; how reasonable or unreasonable the testimony is; whether it is consistent or inconsistent; whether it has been contradicted; the witness' biases, prejudices, or interests; the witness' manner or demeanor on the witness stand; and all circumstances that, according to the evidence, could affect the credibility of the testimony.

If you find the testimony to be contradictory, you must try to reconcile it, if reasonably possible, so as to make one harmonious story of it all. But if you can't do this, then it is your duty and privilege to believe the testimony that, in your judgment, is most believable and

disregard any testimony that, in your judgment, is not believable.

In determining the weight to give the testimony of a witness, you should ask yourself whether there was evidence tending to prove that the witness testified falsely about some important fact, or whether there was evidence that at some other time the witness said or did something, or failed to say or do something, that was different from the testimony that he or she gave at trial. You have the right to distrust such witness' testimony in other particulars and you may reject all or some of the testimony of that witness or give it such credibility as you may think it deserves.

You should remember that a simple mistake made by a witness does not necessarily mean that the witness was not telling the truth. People may tend to forget some things or remember other things inaccurately. If a witness has made a misstatement, you must consider whether it was simply an innocent lapse of memory or an intentional falsehood, and that may depend upon whether it concerns an important fact or an unimportant detail.

Now, these instructions apply to all witnesses.

A word about experts. You have heard a lot about so-called experts or opinion witnesses in this trial.

Expert testimony is testimony from a person who

has a special skill or knowledge in some science, profession, or business. This skill or knowledge is not common to the average person but has been acquired by the expert through special study and/or experience.

In weighing expert testimony, you may consider the expert's qualifications; the reasons for the expert's opinions; and the reliability of the information supporting those opinions; the consistency of the expert's opinion with other evidence, testimony, and common sense; as well as the factors that I have previously mentioned for weighing testimony of any other witness. Expert testimony, or opinion testimony, should receive whatever weight and credit you think appropriate, given all the other evidence in the case. You are free to accept or reject the testimony of experts, just as with any other witness.

Now, an additional point about witnesses. Sometimes jurors wonder if the amount, the number of witnesses who testified makes any difference.

Do not make any decisions, ladies and gentlemen, based only on the number of witnesses who have testified here. What is more important is how believable the witnesses are, and how much weight you think their testimony deserves. Concentrate on that, not the numbers.

Burden of proof. We talked a little about this. Let's talk about it in a little greater detail.

In this case, both LG and Whirlpool assert claims for patent infringement of their respective patents. As you know, each party has the burden of proving its claims of patent infringement and damages by a preponderance of the evidence. Now, that means that each party must produce evidence that, when considered in light of all the facts, leads you to believe that what the party claims is more likely true than not. To put it differently, if you were to put the parties' evidence on opposite sides of a scale, the evidence supporting the party claiming patent infringement and damages would have to make the scales tip somewhat to that party's side.

Whirlpool asserts that LG's patents are invalid, and LG asserts that Whirlpool's patents are invalid. As you know, a patent is presumed, however, to be valid. Accordingly, the party challenging the validity of the patent has the burden of proving by clear and convincing evidence that the patent is, indeed, invalid. Clear and convincing evidence is evidence that produces an abiding conviction that the truth of a factual contention is highly probable. Proof by clear and convincing evidence is thus a higher burden of proof than proof by a preponderance of the evidence.

Finally, Whirlpool asserts a claim for willful infringement, which it must prove by clear and convincing

evidence as well.

Those of you who have sat on criminal cases will have heard and recall you will have heard the term proof beyond a reasonable doubt. That requirement does not apply in this case, which is, as you know, a civil case; therefore, you should put it out of your mind.

During the trial, you have heard the phrase perhaps attorney-client privilege and you may have also seen documents that have been what we call redacted by the parties. The attorney-client privilege, ladies and gentlemen, protects clients' confidentiality when seeking legal advice from lawyers, from attorneys. You should know that it's perfectly proper for any witness to invoke the attorney-client privilege and you shouldn't draw any conclusion adverse to either party simply because a witness has invoked the privilege. Nor should you speculate on what the witness might have testified if the privilege had not been raised. You should also not draw any negative inference from the redaction of the documents that were presented to you throughout the trial. These redactions were also made to protect a claim of attorney-client privilege asserted by LG, and you should not draw any negative inference from these redactions or attempt to speculate about what information was contained in those redactions.

Confine your deliberations to the testimony that you have heard and to the documents in evidence, ladies and gentlemen.

The parties and their contentions.

As I did at the start of the case, let me for you summarize what each side contends. I will then provide you with detailed instructions on what each side must prove to prevail on each of these contentions to win.

LG contends that Whirlpool makes, uses, offers for sale, or sells products that infringe claims 20, 21, and 36 of the '121 patent.

Whirlpool denies that it is infringing those claims. Whirlpool also contends that these claims invalid.

In turn, Whirlpool contends that LG makes, uses, offers for sale, or sells products that infringe claims 1, 2, 6, 8 and 9 of the '130 patent and claims 1, 4 and 15 of the '601 patent. Whirlpool also contends that the LG's infringement of the '130 patent is willful.

LG denies the claims that I just mentioned and that it infringes the '130 patent willfully. LG also contends that those claims are invalid.

As to infringement.

You have heard the terms independent and dependent claims. Let's talk about that.

This case involves two types of patent claims,

independent and dependent claims.

An independent claim sets forth all of the requirements that must be met in order to be covered by that claim. Thus, it is not necessary to look at any other claim to determine what an independent claim covers. In this case, claim 36 of the '121 patent, claim 1 of the '130 patent, and claim 1 of the '601 patent are each independent claims.

The remainder of the claims in the patent are dependent claims. A dependent claim does not itself recite all of the requirements of the claim but refers to another claim for some of its requirements. In this way, the claim depends upon another claim. A dependent claim incorporates all the requirements of the claim or claims to which it refers. The dependent claim then adds its own additional requirements. To determine what a dependent claim covers, it is necessary to look at both the dependent claim and any other claim or claims to which it refers. A product that meets all of the requirements of both the dependent and the claim or claims to which it refers is covered by that dependent claim.

Claim construction. You have heard this discussed a little bit.

Before you decide any issues in this case, you will have to understand the patent claims. The patent

claims are numbered sentences at the end of the patent. The patent claims involved here are found at the end of the patents involved in this lawsuit. Only the claims of the patent can be infringed. Each of the claims must be considered individually. Neither the written description nor the drawings of a patent can be infringed. The specification and drawings merely describe embodiments of the invention.

I have already determined the meaning of certain language in the claims of the patents at issue. At the beginning of the trial, you were given a document, I believe, reflecting those meanings. For those words in the claim for which I have not provided you with a definition, you should apply their plain English meaning.

Allow me now to instruct you on how to decide whether or not an alleged infringer has infringed the patent. Infringement is assessed on a claim-by-claim basis. Therefore, there may be infringement as to one claim but not infringement as to another.

A patent owner has the right to stop others from using the invention covered by its patent during the life of the patent. If a person uses, sells, or offers to sell, within the United States, or imports into the United States, what is covered by the patent claims without the patent owner's permission, that person is said to infringe the

patent. There are two types of what we call direct infringement. The first is literal infringement, and the second is infringement under the doctrine of equivalents. I will explain these two types of infringement in a moment.

Deciding whether a claim has been directly infringed is a two-step process. First, I, the Judge, has to determine the meaning of the patent claims, as a matter of law. This is my job, and I have instructed you as to what the key terms of the asserted claims in this case mean as a matter of law. You must give the remaining terms their plain English meanings things. Second, you must compare each claim as I have interpreted it to the accused product to determine whether or not every element of the claim can be found in the accused product. This element-by-element comparison is your responsibility as the jury in this case.

Keep in mind that intent to infringe, actual knowledge of a patent, or knowledge that one is infringing a patent, are not part of a claim for patent infringement.

Now, literal infringement. To determine literal infringement, you must compare the product with each and every one of the requirements of a claim.

When the product meets all of the requirements of a claim, the product is said to literally infringe that claim. A claim limitation is literally present if it exists in the product as it is described in the claim language,

either as I have explained that language to you, or if I did not explain it, again, based upon its plain English meaning.

In order to prove literal infringement, the party asserting the patent must prove that each of the requirements of each of the asserted claims are met by a preponderance of the evidence, that is, that it is more likely than not that the accused infringer made, used, sold, offered for sale within, or imported into the U.S., without the patentee's authorization, during the time the patent is in force, a product that meets all of the requirements of a claim. This evidence may be again direct or circumstantial. If you find that any claim element is missing, then you must find that that claim is not literally infringed.

As to the doctrine of equivalents.

If a company makes, uses, sells, offers to sell within, or imports into the U.S. a product or process that does not meet all of the requirements of a claim and thus, therefore, does not literally infringe that claim, there can still be direct infringement if that product or process satisfies that claim under the doctrine of equivalents.

Under the doctrine of equivalents, a product or process infringes a claim if the accused product or process contains elements or performs steps corresponding to each and every requirement of the claim that is equivalent to, even though not literally met by, the accused product or

process. You may find that an element or step is equivalent to a requirement of a claim that is not met literally if a person having ordinary skill in the field of technology of the patent would have considered the differences between them to be insubstantial or would have found that the structure or action, first, performs substantially the same function, secondly, and works in substantially the same way, and finally, to achieve substantially the same result as the requirement of the claim. In order for the structure to be considered equivalent, it must have been known at the time of the alleged infringement to a person having ordinary skill in the field of technology of the patent. To prove infringement by equivalents, the patent holder must prove the equivalency of the structure or actions to a claim element by a preponderance of the evidence. If you find that there is no equivalent element to a missing element, you must find that the claim is not infringed under the doctrine of equivalents.

Now, as to willful infringement.

As you know, in this case, Whirlpool contends that LG infringes just the '130 patent willfully. If you find by a preponderance of the evidence that LG has infringed one or more of the claims of the '130 patent, you must go on and also decide whether or not Whirlpool has also established by clear and convincing evidence that LG

infringed the '130 patent willfully.

Willfulness requires you to determine two things, ladies and gentlemen:

First. That LG acted despite an objectively high likelihood that its actions infringed a valid patent; and,

Second. If Whirlpool proves by clear and convincing evidence that LG was objectively reckless, whether this objectively high risk was either known, or was so obvious that it should have been known, to LG.

To prove willful infringement, Whirlpool must establish by clear and convincing evidence that LG's infringement was willful. That is, Whirlpool must prove willfulness in such a way that you have been left with a clear conviction that the infringement was willful.

In deciding whether or not LG committed willful infringement, you must consider all of the facts, which include but are not limited to the following:

First. Whether or not LG intentionally copied a product of Whirlpool that is covered by the '130 patent;

Second. Whether or not LG possessed a reasonable basis to believe that it had a substantial defense to the infringement and validity of the patent and reasonably believed that the defenses would be successful if litigated;

Next. Whether or not LG made a good-faith effort to avoid infringing the patent, for example, LG took remedial action upon learning of the patent by ceasing infringing activity or attempting to design around the patent; and,

Finally. Whether or not LG tried to cover up its infringement.

You may also consider whether LG sought a legal opinion as one factor in assessing whether, under the totality of the circumstances, any infringement by LG was willful.

One of the benefits, ladies and gentlemen, of the patent system is the incentive to design around and avoid a competitor's products, even when they are patented, thus bringing a steady flow of innovations to our marketplace. Attempts to design around or to avoid a patent, even if unsuccessful, have always been relevant to the willfulness analysis. In reaching your decision on willfulness in this case, you may consider whether LG attempted to design around or avoid the '130 patent. Such efforts are not improper and tend to show that a party was not acting willfully. If you find that LG infringes one or more of the claims of the '130 patent, LG's efforts to avoid or design around the patent are relevant to whether or not LG was objectively reckless.

If LG, however, abandoned its attempted design-around and reverted back to the original design LG thought it would have infringed, you may take this as evidence of copying and willful infringement.

As you know, patent invalidity is a defense to patent infringement. Even though the PTO examiner, the Patent Office examiner, has allowed the claims of a patent, you have the ultimate responsibility for determining whether or not the claims of the patent are valid.

I will now instruct you on the invalidity issues you should consider. As you consider these issues, remember that the party asserting that the patent is invalid bears the burden of proving by clear and convincing evidence that the asserted claims in the patent are invalid.

The granting of a patent by the Patent Office carries with it the presumption that the patent's subject matter is new, useful, and constitutes an advance that was not, at the time the invention was made, obvious to one of ordinary skill in the art, or the field of technology. The law presumes, in the absence of clear and convincing evidence to the contrary, that the Patent Office acted correctly in issuing the patent. Nevertheless, once the validity of a patent has been put at issue, it is the responsibility of you, the jury, to determine, to review what the Patent Office has done consistent with the

instructions that I am providing you now.

The conception of anticipation.

LG contends that the claims of the '601 and '130 patents are invalid because the claimed invention is not new. For a claim to be invalid because it is not new, all of its requirements must have existed in a single device or method that predates the claimed invention, or must have been described to one of ordinary skill in the art in a single previous publication, or patent that predates the claimed invention.

In patent law, such previous device, method, publication, or patent is called, as you know, prior art, or a prior art reference. If a patent claim is not new, we say it is anticipated by a prior art reference.

The disclosure in the prior art reference does not have to be in the same words as the claim but all of the elements of the claim must be there, either stated or necessarily implied, so that someone of ordinary skill in the field of refrigerator design looking at that one reference would be able to make and use at least one embodiment of the claimed invention. A prior art reference is not limited to its exact words or the scale of its drawings, but rather to what it teaches to one of ordinary skill in the refrigeration design field.

Anticipation also occurs when the claimed

invention inherently, that is necessarily, results from practicing what is disclosed in the written reference, even if the inherent disclosure was unrecognized or unappreciated by one of ordinary skill in the field of the invention.

Here is a list of the ways that a party asserting validity can show that a patent claim -- I think it's invalidity. Right? That's a typo there, it should be invalidity -- can show that a patent claim was not new, ladies and gentlemen.

First. If the claimed invention was already publicly known or publicly used by others in the United States before the date of the invention;

Second. If the claimed invention was already patented or described in a printed publication anywhere in the world before the date of the invention;

Third. If the claimed invention was already patented or described in a printed publication anywhere in the world more than one year prior to the effective filing date of the patent application;

Next. If the claimed invention was already described in another published U.S. patent application or issued patent that was based on a patent application that was filed before the patent application filing date or the date of invention;

And finally. If a device or method using the

claimed invention was sold or offered for sale in the United States one year before the application filing date.

To qualify as a prior art reference, a printed publication must be at least reasonably accessible to those interested in the field, even if it is difficult to find. An electronic publication, including an online or Internet publication, is a printed publication if it is at least reasonably accessible to those interested in the field, even if it is difficult to find.

You must determine a date of invention for each of the asserted patents which the other party claims is anticipated.

If a patent claim is not new as explained above, namely, that all of the elements of the claim are found either literally or inherently in a single prior art reference, you must find that claim invalid.

Each of the parties contends that certain of the asserted claims of certain of the asserted patents are invalid for failure of the patent to provide an adequate written description of the claimed invention. In each of these instances, the party asserting invalidity must prove by clear and convincing evidence that these claims lack an adequate written description.

The written description requirement is satisfied if a person of skill in the art, ordinary skill in the art,

or skill in the field, reading the patent application as originally filed, would recognize that the patent application described the invention of these claims, even though the description might not use the exact words found in the claim. The written description is adequate if it shows that the inventor was in possession of each claim of the invention at the time the application for the patent was filed, even though the claim may have changed or new claims may have been added during the prosecution of the application. It is not necessary that each and every aspect of the claim be explicitly discussed, as long as a person with ordinary skill would understand that any aspect not expressly discussed is implicit in the patent application as originally filed. If you find that one or more of the challenged claims is lacking an adequate written description, by clear and convincing evidence, you must find each such claim invalid.

Now, in this case, each party contends that certain asserted claims of the asserted patents are invalid as obvious. Whirlpool contends that the subject matter of claims 20, 21 and/or 36 of the '121 patent would have been obvious to a person of ordinary skill in the art at the times these respective inventions were made. LG contends that the subject matter of claims 1, 2, 6, 8 and/or 9 of the '130 patent, and claims 1, 4 and/or 15 of the '601 patent

would have been obvious to persons of ordinary skill in the art at the times these inventions were made.

A patent claim is invalid if the claimed invention would have been obvious to a person of ordinary skill in the field of the invention at the time the application was filed. You have the responsibility for determining several factual questions that are needed for me to make this decision.

First. For each claim that is alleged to be invalid, you must decide the level of ordinary skill in the field of the invention that someone would have had at the time the claimed invention was made.

Second. You must decide the scope and content of the prior art relative to each at the time the invention was made.

Are we not agreed on that subject?

MR. SPEARS: We are agreed, Your Honor.

MR. COYNE: Yes, Your Honor.

THE COURT: You can disregard that statement where I just told you that you are going to have to decide the ordinary skill. The parties have agreed on the definition of one of skill in the art. That will make your job a tad easier.

Second. You must decide the scope and content of the prior art relative to each claim that is alleged to

be invalid.

Third. You must decide what difference, if any, existed between the claimed invention or inventions and the prior art.

Finally. If evidence has been presented to you on these issues, you may determine whether or not any of the following secondary factors relevant to nonobviousness have been established by the evidence:

First. Commercial success that is due to the merits of the claimed invention, as opposed to other factors;

Next. A long-felt but unsolved need for the solution provided by the claimed invention;

Next. Unsuccessful attempts by others to find the solution provided by the claimed invention;

Fourth. Copying of the claimed invention by others;

Fifth. Unexpected and superior results from the claimed invention;

Six. Acceptance by others of the claimed invention as shown by praise from others in the field of the invention or from the licensing of the claimed invention; and,

Finally. Disclosures in the prior art that criticize, discredit, or otherwise discourage the claimed

invention and would therefore tend to show that the invention was not obvious.

Now, keep in mind there must be a nexus, or connection, between these factors and the claimed invention. In addition, you must determine whether or not any of the following factors relevant to obviousness have been established by the evidence. They are two:

Independent invention of the claimed invention by others before or at about the same time as the named inventor thought of it;

And secondly. Other evidence tending to show obviousness.

You must determine whether the party attacking validity has proven each of these facts by clear and convincing evidence.

Here we go. Level of ordinary skill.

As you know, I have referred to this creature, this individual, the person of ordinary skill, several times in these instructions.

The parties agree, as I have just told you, that the level of ordinary skill for each of the patents in suit is a person with a Bachelor's degree in engineering and at least two years experience in the design of refrigerators, or a lesser educational level but up to five years' technical experience in the design of refrigerators.

The parties disagree on whether certain reference should be included in the prior art that you will use to decide the validity of certain of the asserted claims of the asserted patents. To qualify as prior art to a patent, a reference must be reasonably related to the claimed invention of that patent. A reference is reasonably related if it is in the same field as the claimed invention, or it is from another field to which a person of ordinary skill in the field would look to solve a similar problem to the problem that the patentee was trying to solve. Prior art is not limited to patents and published materials, but it also includes the general knowledge that would have been available to one of ordinary skill in the field of the invention.

A party asserting a prior art reference must prove with clear and convincing evidence that it is prior art. Prior art includes: that which is patented or described in a printed publication in this or a foreign country before the invention of the patentee; and that which is patented or described in this or a foreign country more than one year prior to the date of the application for the patent in the United States; and finally, that which before the patentee's invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it.

Now, in determining the differences, if any,

between the invention covered by the patent claims and the prior art, you should not look at the individual differences in isolation. You must consider the claimed invention as a whole and determine whether or not it would have been obvious in light of the prior art to a person of ordinary skill in the art at the time of the invention.

One last point about prior art references.

If you find that a reference is prior art, you must evaluate the reference and determine whether or not there are any differences between the reference and the claimed invention.

When evaluating whether there are any differences between the invention and the reference, you must keep in mind that the patent claims define the invention. Therefore, when applying the Court's claim construction, you cannot ignore a claim limitation. Only the language of the claims dictates their meaning and scope. When assessing a reference, however, all of the parts of the reference should be considered by and compared to the claims. A prior art reference is not limited to its exact words or its drawings, but rather to what it teaches to one of ordinary skill in the refrigeration design field. In addition, any patent drawings in a reference cannot be used to measure or determine proportions of the subject matter shown in the reference.

Let's move on to the subject of damages.

If you find that either party has infringed one or more valid, asserted claim or claims of the patent of the other, you must determine the amount of monetary damages to which the patentee is entitled. By instructing you on damages, ladies and gentlemen, I do not suggest that one or the other party should prevail. These instructions are provided to guide you on the calculation of damages in the event you find infringement of a valid patent claim and thus must address the damages issue.

The amount of damages must be adequate to compensate LG or Whirlpool for the infringement, but it may not be less than a reasonable royalty. At the same time, your damages determination must not include additional sums to punish the parties or to set an example. You may award compensatory damages only for the loss that the patentee proves, by a preponderance of the evidence, was caused by the alleged infringer's infringement.

Each party has the burden of proving damages by a preponderance of the evidence, and is entitled to all damages that can be proven with reasonable certainty. On the one hand, reasonable certainty does not require proof of damages with mathematical precision. Mere difficulty in ascertaining damages is not fatal to a party's right to recover. On the other hand, a party is not entitled to

speculative damages; that is, you should not award any amount of loss that, although possible, is wholly remote or the result from mere conjecture.

In determining the amount of damages, you must determine when they began. Damages began on the date that the alleged infringer has both infringed and been notified of the alleged infringement of the patent.

LG and Whirlpool agree that you should assess damages beginning on the following dates for the indicated patents:

For the '121 patent, April 24th of '08.

For the '130 patent, January 23rd of 2008.

And for the '601 patent, May 1, 2008.

Now, let me spend more than a moment or two talking about reasonable royalty.

Under the patent law, the patentee can obtain, as a measure of damages, no less than a reasonable royalty. Therefore, the Patent Act, Statute, sets the floor for damages as a reasonable royalty. A royalty is a payment made to a patent holder in exchange for rights to make, use or sell the claimed invention. A reasonable royalty is the payment that would have resulted from a negotiation between a patent holder and the infringer taking place just before the time when the infringing sales first began. In considering the nature of this negotiation, the focus is on

what the expectations of the patent holder and infringer would have been had they entered into an agreement at the time and acted reasonably in their negotiations. However, you must assume that both parties believed the patent was valid and infringed. In addition, you must assume that the patent holder and infringer were willing to enter into an agreement; your role is to determine what that agreement would have been. The test for damages is what royalty would have resulted from this hypothetical negotiation and not simply what either party would have preferred. In addition, the royalty that would have resulted from this hypothetical negotiation, in arriving at this, you may consider real-world facts, including the following, to the extent that they are helpful to you:

First. Any royalties received by the patentee for the licensing of the patent in suit, providing or tending to provide an established royalty;

Next. The rates paid by the licensee for the use of other patents comparable to the patent in suit;

Next. The nature and scope of the license, as exclusive or nonexclusive; or as restricted or nonrestricted in terms of territory or with respect to whom the manufactured product may be sold;

Next. The licensor's established policy and marketing program to maintain its patent monopoly by not

licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly;

Next. The commercial relationship between the licensor and licensee, such as whether they are competitors in the same territory in the same line of business;

Next. The effect of selling the patented product in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of its nonpatented items; and the extent of such derivative or convoyed sales;

Next. The duration of the patent and the term of the license;

Next. The established profitability of the product made under the patent; its commercial success, and its current popularity;

Next. The utility and advantages of the patented invention over the old modes or devices, if any, that had been used for achieving similar results;

Next. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention;

Next. The extent to which the infringer has made use of the invention; and any evidence probative of the

value of that use;

Next. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions;

Next. The portion of the realizable profit that should be credited to the invention as distinguished from nonpatented elements, the manufacturing process, business risks, or significant features or improvements added by the accused infringer;

Next. The opinion testimony of qualified experts;

Next, the amount that a licensor, such as the patentee, and a licensee, such as the accused infringer, would have agreed upon, at the time the infringement began, if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee, who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention, would have been willing to pay as a royalty and yet able to make a reasonable profit and which amount would have been acceptable by a prudent patent who was willing to grant a license; and,

Finally. Any other economic factor that a normally prudent businessperson would, under similar

circumstances, take into consideration in negotiating a hypothetical license.

We are coming down to the end, ladies and gentlemen.

That concludes the part of my instructions explaining the rules for considering some of the testimony and evidence. After you hear closing arguments of counsel, you will return to the jury room to begin your deliberations. Allow me to finish up by explaining some things about your deliberation in the jury room. And as I said, I am going to forego discussing your possible verdicts at this point in any event.

Once you start deliberating, do not talk to the jury officer, or to me, or to anyone else except one another about this case. The first thing I recommend that you do is select a foreperson.

If you have any questions or messages, you must write them down on a piece of paper, sign them, and then give them to the jury officer, who will be right outside your door. The officer will give them to me and I will respond as soon as I can. I may need to talk to the lawyers, so it may take me some time. Not included in is instruction, but I am instructing you, have your jury foreperson, whoever it is, sign the question before you hand it out .

Another thing about messages. Do not ever write down or tell anyone how you stand on your vote. For example, do not write down or tell anyone that you are split 4-4, or 6-2, or whatever the case might be. That needs to stay secret until you are finished with your deliberations.

Now that you have heard all the evidence, once the arguments are completed, you will be free to talk about the case in the jury room. Indeed, it will be your duty to do so, to talk with each other about the evidence and make every reasonable effort to reach a unanimous agreement. Talk with each other, listen carefully and respectfully to each other's views, and keep an open mind as you listen to what your fellow jurors have to say.

Try your best to work out your differences. Do not hesitate to change your mind if you are convinced that other jurors are right and that your original position was wrong. But do not change your mind just because other jurors see things differently, or just to get the case over with. In the end, your vote must be exactly that -- your own vote. It is important that you reach unanimous agreement, but only if you can do so honestly and in good conscience.

No one will be allowed to hear your discussions in the jury room and no record will be made of what you say, so you should speak your minds freely and openly.

Listen carefully to what other jurors have to say, and then decide the case for yourself.

Your verdict must represent the considered judgment of each of you, each juror.

In order for you as a jury to return a verdict, it is necessary that each juror agree to the verdict. Your verdict, in other words, must be unanimous.

It is your duty, as jurors -- this is somewhat repetitive but important -- to deliberate with a view toward reaching an agreement, if you can do so without violence to your individual judgment. Each of you must decide, again, the case for yourself, but do so after an impartial consideration of the evidence with your fellow jurors.

Again, in the course of your deliberations, don't hesitate to reexamine your own views and change your opinion, if convince it is erroneous. Again, don't surrender your honest conviction as to the weight or effect of evidence solely because of the opinion of your fellow jurors, or for the purpose of returning a verdict. Keep in mind, ladies and gentlemen, at all times that you are not partisans. You are the judges of the facts. Your sworn interest is to seek the truth from the evidence in this case.

A form of verdict has been prepared. That is going to be discussed with you, I believe, by counsel during

the course of their statements, and by me, to the extent that I need to, as a follow-up to these instructions.

You are going to take this form to the jury room. When you have reached unanimous agreement as to your verdict, your foreperson will fill in and date and sign the form. And then you will return to the courtroom and Ms. Walker will announce the verdict, after we obtain the verdict sheet and I have had a chance to examine it.

It is proper to add the caution that nothing said in these instructions and nothing in the verdict form is meant to suggest or convey in any way, ladies and gentlemen, or in any manner any intimation as to what I think your verdict should be, as to what I think you should find in this case. What the verdict shall be is your sole and exclusive duty and province. It is your responsibility, ladies and gentlemen.

Mr. Coyne.

MR. COYNE: Thank you, Your Honor.

Ladies and gentlemen, good afternoon.

I told you at the beginning of the case that I was nervous, I was anxious. Well, I am still afraid. If it wasn't true, if I weren't afraid of what we are doing here today, I shouldn't be doing it anymore. There are important issues at stake for both parties involved and for the system as a whole.

Well, what am I afraid of?

I told you several things that I was anxious about at the beginning of the case. But now I am anxious about something different.

This case is a story. We told you the beginning of the story during the openings. We have tried to present to you through the examination of our witnesses that we have put up, through the cross-examination of Whirlpool's witnesses, the middle part of the story. Now we are at the end of the story. And it's an end that I can't write. Only you can write the end of this story. And that's why I am anxious.

You get to decide the story, and I hope it has a happy ending.

But before we get to the ending, I do want to thank all of the people on my team that I have been working with, who have done such a fine job helping us present this evidence to you this last week.

I wonder if I have done a good enough job. I can't take any of it back now. There is things I would have done different. But we have to go forward and we have to get this case submitted to you today for you to make a decision, to resolve it.

I am eager to talk to you. We have been waiting for two years for this day to come and present this evidence

to you. What we have been waiting for is for you to do justice with the decision that you reach in this case.

Let me talk a little bit about the system for a few minutes, because it's a very important piece of what I want to talk to you about.

Our patent system is over 200 years old. One of my favorite quotes about it is -- there is actually a U.S. President who has a patent, Abraham Lincoln got a patent for lifting canal boats off of sandbars in the Mississippi River when he was living in Illinois. But his experience with the system I found very interesting. And I may garble the quote a little bit. His point of it was that it adds the fuel of interest to the fire of genius. Meaning that this is what drives innovation in our society. The fact that you can get a patent, get rights to it, be able to use it, be able to sell it, is what drives people to make more and more inventions. And we all benefit when the system works properly. But the system has a lot of rules.

This story is about patents. It may seem kind of boring. But what patents are is property, just like a house, just like a piece of land. And the property is based on a deal you make with the government. The government is not there representing itself. It's there representing the entire public. And based on that bargain, you heard during the opening, the early instructions, preliminary

instructions in the case, you saw the videotape that we played from the Administrative Office of the U.S. Court's that talks about how the patent system works.

One of the things they emphasized in there is that a patent is a bargain. That you go in and negotiate the scope of what you are getting with the Patent Office, and that's the deal. That's what the public is entitled to rely on when they see your patent later, and that they can rely on what the metes and bounds of your property are so that they can distinguish where your property line ends and where somebody else's begins so that they know where they are free to start operating and inventing. And you have had some testimony about specifically that issue in this case.

Sometimes the lines get blurred. And when they get blurred, problems happen, and we end up in court like we are today.

There are many lines that seem to have gotten crossed in this case. Several of them are merely distractions.

We have had testimony of Mr. Herrington. It was a very unfortunate event. You have heard the evidence, and you can make your decision about what he did, whether that has anything to do with the issues that you have you to decide in this case.

You have heard testimony the last few days about

trade shows and people taking pictures in the middle of the night. Again, you have to decide the facts, as the Judge instructed you. You have to decide whether that has anything to do with who invented these three inventions first, whether they are being infringed, and whether or not they are valid, and if they are valid and infringed, how much damages are owed for them.

I want to talk to you today about those issues. Those are the important issues that have to be decided.

The patent system can't work, however, when an inventor goes into the Patent Office and tells the examiner one thing, and then comes back in court, usually years later, and tells you something else.

You are not just here as jurors that have been pulled off the street and made to sit and listen to us. You are here as a representative of the government as well. You are here as a representative of the public, not just on your own behalf, but on the behalf of everybody.

You are the second stage of this process. The inventor negotiates with the government through the Patent Office in the first instance, and now you represent the government. You represent the public at this point in the proceeding.

So we ask you when you consider the evidence to look at those considerations, those bigger issues. How does

your decision in this case affect the incentives people have when they are dealing with the Patent Office, when they are trying to make new inventions, when they are trying to avoid other people's patents? Your decisions will send a message not just to these two parties but to everybody who looks at your decision in this case in the future. It's very, very important.

Let's look at how the parties have acted in these negotiations. Specifically, I would like to focus first on how Whirlpool has acted in these negotiations with the Patent Office and with the government, with you, on these issues.

Has it honored its bargain, the bargain that it made with the Patent Office in order to get these patents in the first instance? Has its honored its bargain with you as they are trying to enforce it?

What I said to you at the opening, one of the things I said to you was that cases, trials, are all about making and keeping promises. And I know that you are going to consider the evidence that has been submitted to you in consideration of the promises that both I and Mr. Partridge have made to you during the past seven days -- ten days now. And I do want you to look at that because I think that what the evidence has shown you is that Whirlpool is using the invention of the '121 patent.

We submitted to you evidence from Dr. Bessler.

Could we bring up PDX-11, Mr. Brooks.

Dr. Bessler went through this particular invention with you, and he showed you how Whirlpool's dispenser with its rotating spigot, its redactable tray, and its automatic drive mechanism on a spigot meets every one of the limitations of claim 20 -- if we could see 12 next, please -- of claim 21, and of claim 36. Every element is there. You have that evidence submitted to you. And you have to decide whether or not the proof Dr. Bessler gave you is sufficient to convince you that it's more likely than not, a preponderance of the evidence, that those are features of Whirlpool's product.

Now, you remember when Dr. Bessler was being cross-examined by Mr. Morico. Mr. Morico brought over a mockup, a little box about this big (indicating). And he brought it over to you at the jury stand. And he tried to show you that the product doesn't work that way.

Well, that's a nonoperating mockup. We have got the product right here. And Dr. Bessler demonstrated it for you more than a couple of times during this trial.

Whirlpool is not selling mockups. We are not accusing them of infringing by selling mockups. We are accusing them of infringing for selling refrigerators that include this feature, just like PTX-0552, across the room.

The parties have also agreed, in order to try to simplify this case for you, you have seen that there are literally hundreds of different models of refrigerators involved in this case. It's a consumer product. People demand new, better features all the time. And different people want different features. So both companies make a line of products to try to satisfy that customer demand. So there is a lot of different model numbers.

What we have agreed to is that you can treat all of a certain set of models that are on a table -- it's called a stipulation, where we have talked about it and we have agreed to it. And we have given it to the Judge and it's been signed off. It's a piece of evidence for you to consider in this case.

What it lists is certain categories of features, like in-door-ice, like the tables you saw when Dr. Bessler was being examined that show the rotating spigot, the retractable tray, with the mechanical drive mechanism. All of the models on that list. The parties have agreed, you can treat them the same way.

Now, there are several lists that you are going to get and only some of them are going to apply. But for this particular patent, this '121 patent, it is the list that has the retractable tray and spigot and a mechanical drive mechanism. Even though we have only brought one unit

to you, all of them on that list get treated the same way.

With respect to the '121 patent, the second thing that I promised you a week ago was that we would show you proof that Whirlpool is both claiming that it owns LG's invention of the '121 patent and that they are going to come in and tell you that it's invalid. That just doesn't make sense. But we have, I think, delivered on that promise. We have presented to you evidence from a number of people. First off, Mr. Partridge denied it. He said, no, that's not going to happen.

But what they have come back with and said is, well, we invented the basic invention.

Mr. Brooks, can we please bring up PDX-11 again.

And I think what he means by the basic invention is claims 10. But we are not asserting claim 10. That's not even an issue you have to decide in this case. We are asserting claim 20. With the instructions the Judge just read to you, you have to have all of these features, all three: the retractable tray, the retractable spigot, and a mechanical drive mechanism.

So when Whirlpool says to you, we have invented the basic invention, well, that's not an invention that is at issue in this case. It's not an issue that you have to decide.

What you have to decide is who invented the

combination of all three elements. That's the only thing that really matters.

Luckily, we do have evidence in this case, substantial evidence in it, about who made that first.

You heard Dr. Lee testify when he was on the stand the first time, about a week ago. And he described the development process they undertook of getting together in the room with the desks all pushed against the corner, all the engineers working together with a big table in the middle so that they could be right next to each other and could be bouncing ideas off of each other. What we didn't tell you at the time but what you have subsequently learned was that was part of the work they were doing on the Bics project. They were engaging in this research effort to try to build a new machine. And one of the things that came out of that effort was this '121 patent.

So between Dr. Lee's testimony a weeks ago and his testimony yesterday and Friday, you have the whole picture of what that research effort involved. And what he came up with was all three elements. He showed you, and he walked you through -- and I know at times it might have been somewhat boring, but we had to try to show you exactly where these details are -- and he showed you a January 28, 2003 memo that they sent to the product planning group. And he showed you where each of the three elements were. And then

they did a couple of subsequent memos, one in February, and another one after that, where they had much clearer drawings of the device, where you could actually see that you push the spigot in at the top and it popped out, and that the tray was retractable.

That's the combination of all three elements.

We went ahead. We filed an application in Korea. And we filed an application in the U.S. And we did that all very promptly, very quick.

You have also heard evidence in this case that Whirlpool says they invented that first. Well, Mr. Partridge made some promises to you as well. He said these claims are very narrow, it's limited to this mechanical drive. He is right on that. It does require that mechanical drive as well as the other two components. But you have seen the evidence. You have heard the witnesses testify. You have seen the documents. Whirlpool doesn't have all three elements. They had two of them. And they went forward with two of them. And they built a prototype in June of 2003, and they showed it to some of their buyers, keeping it secret. It still wasn't public yet. When they finally got around to making that prototype, it didn't have a mechanical drive in it.

Mr. Voglewede testified about this. Other witnesses have testified about it. They didn't put the

mechanical drive into the invention until April of 2004. And you have seen those memos, too. Sears came back to Whirlpool. It wasn't Mr. Voglewede that decided, yeah, we have all along thought a mechanical drive would be good, let's go ahead and use it. Sears came back and said, we want you to put a mechanical drive on this. That's the first time you have got any evidence that Whirlpool had this invention. Nonetheless, we had some other witnesses, Mr. Schwyn, for example, testify that Whirlpool is trying to essentially take these claims in a proceeding in the Patent Office. Yet a day later you heard Dr. Karvelis come in here and testify to you that those very same claims are invalid. How can that be? How could you be going to one agency of the government and saying, this is my invention, take it away from LG and give it to me, and come back to essentially another agency of the public, of the United States Government, you, and say, oh, no, it's all invalid?

So that's what the evidence has proved. And I think I have kept that promise to you as well.

Third, I mentioned that Whirlpool is trying to use the '130 patent to try to stop LG from making and selling to you a new and better and different refrigerator. Well, let's look at the evidence on that very briefly.

We talked to Dr. Caligiuri. He specifically said, when I asked him on cross-examination, that it was

straightforward copying. Straightforward. Well, you have now seen all of the evidence. I know Dr. Lee's second testimony was very laborious, going through each page of that final project report. But the reason is, I wanted you to see all of the work that went into the project and what LG did from the time it looked at that original design, that, absolutely, was based originally on the '130 patent. It was an improvement on it. And you saw Mr. Il Shin Kim's patent application that he filed based on it. But you also saw through that progression how the design changed, that LG doesn't just go forward with an improvement on Whirlpool's patent using what was in that basic Whirlpool invention. It modified it. And as the Judge just read to you in the instructions, first off, there is nothing wrong with avoiding somebody else's patent or trying to design around it. That is what the system encourages.

If you think about it for a second, it makes a lot of sense. The system wants companies to do that, because instead of there being just minor variations between the two companies' products, if I have to design around you, now the public has got two. And if you have both got patents on it and other people are competing, too, then they have to design around them, and if they are successful, now I have got four and eight and 16 and a lot of different variations, and commerce grows. And that is what the patent

system is all about. It is trying to encourage people to innovate by using the disclosures in a patent while it's in existence to make something different and better, to build a better mousetrap. And the other incentive is after that patent expires, anybody is free to use it. It's what we call public domain. It's information that nobody can restrict.

You heard Dr. Lee testify that that is exactly what he did with that Hitachi 1967 patent. He used that expired patent as a basis to make something different and, he thought, better than Whirlpool had before him.

That is exactly what the patent system is trying to get people to do.

Let's go back a little bit, because I want to go to the French-door. But before I do, I want to go look at these units and look at the deal that Whirlpool cut with the Patent Office in order to get this '130 patent.

Can we please go to PTX-110, Mr. Brooks.

What you are seeing here is the front page of the patent.

Can we go down to the claims, please.

This is the application, excuse me. 199 is a fine place to start.

Whirlpool files this application, and what they get back from the Patent Office is that these claims 1 to 5

and 9, and there is another paragraph that talks about claims 6 and 8, if we can go down right there, so all these claims that are in the case now, and some of which are being asserted in this case, the examiner issues the first office action, and he rejects all of them. 1 to 5 and 9 are unpatentable over Gould and Buchser, the references that we were talking about with Dr. Caligiuri today. So the patent examiner has taken the position that these two references have everything that is in those claims.

Whirlpool, then, responds. And what they do is, they are trying to deal with the examiner's position that these two patents, Gould and Buchser, make it so that they can't get a patent.

Can we bring up the picture of Gould as well, please.

MR. PARTRIDGE: Objection. We are getting into the claim construction with this line.

THE COURT: I am going to overrule that.

Go ahead, Mr. Coyne.

MR. COYNE: This was the Gould reference the examiner was relying on. And what it is showing is what he calls a freezerless refrigerator. It's got this room right here, where there is an ice maker and an ice bin, and a separate door on the refrigerator door.

So that's one of the references that he is

relying on in telling Whirlpool you can't get a patent on these claims.

Whirlpool then comes back to the examiner. And there is a lot of different ways you can talk to the examiner. You can pick up the phone and call them. You can go in for a meeting. Or, you can do it in writing. They went in for a meeting and met the examiner, had an interview.

During the interview, the examiner changed the position a little bit that he had talked about with them initially. And the examiner said, "It was pointed out that Gould does not have a freezer compartment and a freezer door on which the ice bin is mounted." Then he continues on that there was nothing directly in Buchser that would have led somebody to make in combination that he had originally asserted and put all these pieces together, the bin, the auger, to put all of it on the freezer door.

What you are seeing is the examiner and Whirlpool are kind of negotiating here. And the examiner is backing off a little and saying, okay, perhaps I was too harsh with my initial rejection. Perhaps if I don't combine these two things it really wouldn't have taught somebody how to put them together and replicate your invention.

But you did hear testimony today from Dr. Caligiuri that all of the elements of these claims are there

in Gould and Buchser. What is going on here is the examiner is saying, okay, it wasn't fair for me to put them together and I can't find anything else that puts them together, so I am going to allow you to have these claims. Each and every element is there between the two patents. It's just not fair to treat those as something somebody would have known they had to do, it would have been obvious to do.

So the patent issues based on this deal that was cut with Whirlpool at the time at issue. Whirlpool goes forward, and we have had the discussions that we have had during court the last week and a half about what's a freezer door and a freezer compartment and all the ice makers and all of that discussion.

But what we think you will see is that in getting this patent, the deal Whirlpool cut is that putting this freezer, this ice box into a refrigerator door is not the kind of thing that the examiner and Whirlpool considered this patent to be talking about.

It was talking about the combination of all of these elements and the thing that was missing, after the examiner said, yeah, okay, we won't combine Gould and Buchser, the examiner didn't have access to the '165 Hitachi reference. You have heard testimony from a number of witnesses on that, including Dr. Caligiuri just this morning. He did give an explanation after I asked him. But

when I asked him, you say that '165, Hitachi, is cumulative of Gould and Buchser, that the examiner relied on in that first office action, his first response was -- and you will have to rely on your memories, not mine -- but, yes. Then he went on to explain why he didn't think that was a problem.

What we have got here are three separate references, Gould and Buchser and Hitachi, that are essentially covering the same thing.

What Whirlpool is trying to do now is to have it both ways.

You remember Verne Myers. He testified last week. It was on Wednesday. He was very cooperative on direct with respect to Whirlpool's in-door-ice system, you may remember, because he said it was a game changer for Whirlpool, a very big deal for them. Mr. Myers got a big promotion out of it. So he was an inventor of it. I am sure he is very proud of his invention.

But when we asked him, Mr. Sharma asked him on cross-examination to identify some of these components on the refrigerator, the answers weren't quite as clear. He wouldn't even agree that the GE manual showed a freezer compartment.

So these are things that you have to consider, that you can consider, in assessing the credibility of the

witnesses that have been presented to you.

Now, we understand, Mr. Myers, this is a very important invention for him. It was his baby. And Whirlpool really did have something here.

You will notice I did not cross-examine Dr. Robert Kaplan this morning. That is because we don't contest that this invention was commercially successful.

Yes, you have heard testimony from people like Dr. Rao about the degree of success, how big of a deal was it, how much is it worth. But at the end of the day, I can't stand here and say to you that it wasn't successful. It was a big deal.

[redacted]

Mr. Partridge promised you, another thing he promised you at the beginning of the case is I would get up

[redacted]

We didn't. And we are not. And I am not going to now.

It was successful. We can differ over the degree and how much money it's worth precisely. But you

[redacted]

consumers wanted. And that was what they were trying to compete against and make something better than it.

They picked a spot -- you remember Mr. Schwyn talking about the white space when you do these patent searches, you try to find the white space in area, somewhere where there is nobody there already, where you may be able to practice a technology without getting in somebody else's patent, and you may be able to build some patent properties of your own in that area.

That's exactly what LG, and all the players in this field, try to do all the time. And what LG identified was that Whirlpool had this property on the in-door-ice storage bin, but that LG saw an opportunity to make something better, and different, that freed up not just 90 percent of the shelf space in the freezer compartment, all of it. I think Dr. Lee referred to it as perfect, that he got a hundred percent of the components out of the freezer and onto the door.

So that's what the parties were trying to do. But the one thing I wanted to try to leave you with is, when we talked about the two parties, Whirlpool's and LG's approach to this technology, how much risk were they willing to take? What were they willing to invest in this? What were they willing to do to try to bring you a better product?

Well, Mr. Myers also testified, and this is a promise that Mr. Partridge did make on the opening and I will say he has kept. He said, it's very risky when you start messing with the ice and water system. Mr. Myers said the same thing. You may remember his testimony. He talked about, they have been using the same ice maker for 30 years. They didn't want to start moving things around and changing things up because you get all kinds of problems. And that's a perfectly legitimate business decision. A lot of companies would make that decision. LG decided they were going to take that risk. They were going to invest in the engineering. They were going to try to figure out a better way and go forward and make something that was completely new.

As you will find during the course of this argument, I am kind of fond of quotes, so I am going to share another one with you. This one is from John Paul Jones, the American Admiral during the Revolutionary War, that it seems to be a law of nature that those who will not risk cannot win.

I think that's a good message for what is going on in this case.

Whirlpool did risk. They invested a lot. We have seen the documents. We have seen the investment they made. And they made something new.

LG saw it and decided to make something even newer and better. And it, too, made a substantial investment in doing that.

That is really what it comes down to. Were we successful? Was Dr. Lee and his team at LG successful in making it different enough that it avoids infringement and establishes the benefits and differences that help consumers get a better product?

Years and engineers. We have heard a lot about years and engineers of this case. That is what both parties spent. This wasn't a case of copying. If we were going to copy this, this would have taken no time and no investment. It would have been really easy and you wouldn't have a stack of Bics project reports that are a foot long, because we did invest that level of effort.

With respect to the specific product, let's look at some of the particular claims. You have heard testimony from Whirlpool that LG is infringing both the side-by-side and the French-door models. You have also heard testimony from Dr. Bessler that disagrees with that. The view he gave you on the side by side, apart from Claim 8, I will do that first, because admittedly we have some weakness there, with claim 8, we have said to you, it is the difference between an upper and a lower ice bin. The claim specifically says you have got an upper ice bin where you store the ice and

you have got a lower ice bin where you have -- it's the area formed around the crushing blades where you crush the ice.

And in the LG structure, those are front and back. The front section of the bin, as Dr. Bessler explained you to you, is a storage area. And the back section, that was all enclosed in the white plastic with the little flapper underneath, is the ice-crushing region. Again, there -- I even asked Dr. Caligiuri about it when he was up the first time. And he conceded that that was a front-loading unit that moved the ice from front to back. The claim is very specific that it's got to be upper and lower.

That is why Dr. Bessler was able to tell you, it isn't.

With respect to the other claims, we are relying on invalidity. We are relying on the fact that the Hitachi reference, this is on the side by side, the Hitachi reference shows all of the elements of the claim, just as Gould and Buchser did. We know from Whirlpool's own expert that Hitachi is cumulative to Gould and Buchser. And we know what the examiner thought of Gould and Buchser because we just looked at that a few minutes ago. The examiner thought that these claims were not patentable over Gould and Buchser, at least most of them.

So this isn't a far leap. And with respect to

that side by side, the examiner and Whirlpool identified the specific thing that was missing. It was something to teach you to put an auger and a motor and the bin on the door. You have seen a lot of testimony in this case. Hitachi does it. It's right there in black and white in the Hitachi reference.

So we know that Gould and Buchser would have prevented these claims from getting allowed. It didn't, because they weren't applied together.

We know that Hitachi is equivalent. And the examiner didn't see Hitachi. That's why they got allowed.

But you can see Hitachi. You are here, representing the government, the people, and you have to make a decision on this issue. It's your decision to make in this case whether or not these claims would be allowable over Hitachi.

With respect to the French-door, we have tried to establish for you that the French-door doesn't infringe.

May I approach the unit briefly?

THE COURT: Yes.

MR. COYNE: I will try to keep my voice up and use my best soccer-coaching voice.

We asked Dr. Caligiuri to identify the access opening. And if you remember, we put this green tape on the access opening to what he had identified as the freezer

compartment. And we had some discussion -- can you bring up the claim chart that we used with Dr. Caligiuri, please, Mr. Brooks.

Yes, that's it. Thank you.

Let me step to the other side so I am not in your way.

We have this green tape over what Dr. Caligiuri identified as the access opening. And Dr. Caligiuri is saying that it's the combination of the two doors that constitute the closure member. And as the Judge just read to you, you have to use your common sense, among other things, in deciding what to make of the testimony of the witnesses.

But this is part of a closure member, and it closes the access opening. To try to treat this whole unit as part of the closure member, that would be defined in the closure member as part of itself, which includes the access opening. That just doesn't make any sense. That just violates common sense.

What you have got is a closure member that closes the access opening. And what we have got mounted on it, which is what the claim requires, is nothing.

There is no ice storage bin mounted on this closure member. There is no auger. There is no motor.

All of those are back here in the part that

forms the cabinet for whatever this access opening is.

Dr. Bessler explained all that to you during his testimony.

The fourth promise that I made to you at the beginning of the case was having to do with the '601 patent, the plaques patent, the indentations on the liner of the refrigerator wall.

We showed you a document, a catalog. You heard testimony from Dr. Ching Ho Lee, who works at the plant at Changwon in South Korea, about this particular publication that was done in 1988. It was a catalog that was sent around the world where at least units were distributed, and the catalog was distributed. What it shows is a plaqued liner.

Now, I expect you are going to hear, when I sit down and Mr. Partridge gets a chance to talk, how this is just a picture in a catalog and it doesn't tell you all the details you would need. But let's look at what details you need out of the '601 patent. It's an indentation that has edge portions, that have expansion joints and beam elements. And you have had testimony from -- and one of the things that was probably overdone in this case is the number of expert witnesses. But we have presented to you testimony from three people on this particular issue, primarily because we broke up the testing by people's expertise.

And Mr. Dapkunas came to you and showed you that when you put these plaques in a sheet of plastic, when you put these bends in them, they are more stretchy when you pull on them and tension, and they are less flexible when you try to bend them. They don't fall over as readily.

As three of the witnesses testified for you -- actually four of the witnesses testified for you, including Dr. Lee, it's just an inherent property, when you put a bend in a piece of material like this.

We know what the patent has to say about that, which doesn't require a lot more, because at column 2 of the patent, there is a discussion of what these plaques do. Starting at line 34 to 36, the patent talks about the effect of these plaques, and the plaques increase the structural rigidity of the liner -- that is this increasing the resistance to bending of the liner -- and, therefore, resists thermal bowing.

That's what the plaques do. There is no magic. There is no need to go much further. Once you have established that it's a plaque that has these edges, basically, the edges that are in the direction you are pulling are the expansion joints, and the edges that are on the opposite edges where you are trying to bend against are the beam elements, it's inherent that it is going to have this function to resist.

And as you heard from several witnesses, including Dr. Caligiuri, and Dr. Lee, Dr. Ching Ho Lee, based on the Korea Maritime University report, they studied this and made a model of these things, a mathematical simulation. What they found is these plaques are inherently going to have the ability to resist bending of this liner and resist bowing of the entire structure. It's a small effect. It's a lot less than the steel. But again, we are not denying to you -- Dr. Lee told you specifically the effect is so small, before July, when he got this study, he didn't even know it was there. But it is there. And it's an inherent property of all of these plaques. And as the instruction the Judge read to you on inherent anticipation showed, you don't have to know it's there. What's necessary is that the effect be there. And the effect is there.

We have had testing by Dr. Vannoy, by Mr. Dapkunas, by Dr. Caligiuri himself, and by the Korea Maritime University. And every time all of them tested a plaqued material, they all behaved the same way. Every one of the samples that have been submitted to you that was tested, and you heard evidence about in this case it was more stretchy when you pulled on it, it was less bendable when you tried to flex it, and it reduces bowing when it is installed in a cabinet wall with foam and steel outer shell. It's inherent.

Now, it may sound cruel that we are trying to attack Mr. Williams' invention. We are not. Mr. Williams testified before you. Frankly, although we found some testimony that was inconsistent previously, he came across -- you will make the decision about what you think about his credibility -- but he came across as an honest guy. He probably had just forgotten about the testing he did earlier.

But if you looked at his invention disclosure statement that he sent up to the patent department at Whirlpool, it talked about reducing bowing. And you heard testimony from Mr. Schwyn about what they do in the patent group, that when they get a disclosure, they try to get the broadest possible protection that they can. So Whirlpool went into the Patent Office and tried to get these broad claims to reducing bowing.

Let's look at, if we can, I believe it's PTX-16.

Can we jump to page 21.

Whirlpool files this application at the very beginning. And what they are asking for is a material that reduces the bowing reduction means comprising at least one plaque.

Right now the claim is bowing reduction means and a bowing reduction means, so it's reducing. No dispute there.

The examiner comes back, and what does the examiner say? He says, no.

Can we go to page 83, please.

The examiner comes back and he rejects all of the claims of the patent application. Whirlpool then responds, and they come back at page 163, and make an amendment and an argument to try to change the examiner's mind. And then finally, the examiner comes back again and says no a second time.

So what we know from this negotiation between the patentee and the Patent Office is that the examiner felt that these original claims aren't patentable. Whirlpool then comes in and makes an amendment, and that's at a 180. And they amend their claims to add in the bottom portion of the page, adding in all of these different elements, including expansion joints, beam elements, and preventing bowing of the interior plastic liner when it is in this composite wall structure.

So at that point, the claims get allowed.

So we have before us the negotiation, the deal, the bargain that Whirlpool struck with the Patent Office.

Can we go to the comparison of Figures 3 and 5, Mr. Brooks.

There is other information in the patent as well. There is a Figure 3 and a Figure 5 in the '601 patent

that describes what Whirlpool means by this. And on the left in Figure 3, it is showing a section through one of the exterior walls of an unplaqued refrigerator cabinet, showing the effects of thermally induced cabinet bowing. And on the right-hand side, Figure 5, it shows a plaque illustrating the absorption of surface expansion forces without bowing.

Now, granted, there is disclosure in this patent of reduction of bowing. But there is also disclosure of no bowing, without bowing. And what the examiner allowed was Whirlpool, for those claims that are preventing bowing, the without bowing, and that's the deal Whirlpool struck in order to get this patent.

You have heard testimony from a number of witnesses. You ever heard Dr. Vannoy. You actually heard Dr. Caligiuri himself. And every witness that testified on this issue testified the same way no matter which side they were on: The plaques in LG's product do not prevent bowing. They reduce bowing, just like every other plaque that was tested, but they don't prevent it.

Yet Whirlpool, getting back to my fourth promise, Whirlpool is here before you, having cut a deal with the Patent Office that they have got a claim to prevent bowing, and they are accusing LG of infringement when it's just reducing bowing.

Well, you have heard a lot of witnesses in this

case. And I want to address very briefly what you have heard.

You heard from Warren Bessler and Gary Mellinger. Between them, they have got 50 years of experience at General Electric designing and making these refrigerators. No one in this case has that kind of experience besides these two men. They lived this.

You have had testimony from a number of other people. In particular, you heard testimony from Verne Myers and Ron Vogelwede. And you can assess their credibility. Every witness has an interest in the matter. But you have got a chance to judge their credibility and how they behaved on direct and cross and can assess for yourselves what you think of their credibility.

I would like you to think about the convoluted answers you got from Dr. Caligiuri when I was asking him about the access opening and the closure member on the French-door model. That's something else, common sense you can use to assess credibility.

Dr. Vannoy and Mr. Dapkunas also testified for you. Again, these are people that do testing day in and day out. Sandy Dapkunas worked at a Naval lab and did this for years and years and years. And they came and showed you what their tests had shown on the '601 patent. These are people that got their hands dirty.

But what I want to leave with you most importantly on the witnesses is one of the things that is in the instructions that Judge Sleet read to you, that you can assess the credibility of some of these witnesses based on whether they have been presented with sworn statements they have made in other proceedings that are inconsistent with what they have said to you in this proceeding. Your memory of the evidence will govern. But I would ask you to think back to the number of times that we presented Whirlpool's witnesses with copies of their sworn testimony on various issues in this case and read them a statement that was inconsistent with it. And I don't think there was a single time where that happened with any of LG's witnesses.

Let me talk a little bit about the '130 invention, this in-door ice maker, because you have another issue in this case of willfulness.

Another quote that I love is, a quote by Isaac Newton, who said at one time, "If I have seen further, it is because I stand upon the shoulders of giants."

We are not denying that Whirlpool came up with something that was significant here. Sure, there is debates about just precisely how significant. But it was significant. And we recognize that. You saw that in our internal memos .

You saw the work that we put into getting around

it. You also saw the memos of Whirlpool's own internal documents that showed what Whirlpool thought of what they called their Niagara project. This retractable tray and retractable spigot with a mechanical drive were parts of those components of Niagara.

What you saw in Whirlpool's documents is that Whirlpool internally, in 2004, 2005, 2006, the documents are saying, these things are not only neck and neck, but consumers get it. 80 percent of customers would pay a hundred-plus dollars for the Niagara features, and it's more valuable than in-door ice.

What did their witnesses tell you when they came to testify? Oh, it's nothing. It's a small, minor thing. It's just a spring.

Again, you need to assess the credibility of what the witnesses are telling you based on all of this evidence.

But getting back to the main theme that I wanted to talk to you about today, what is happening here? Whirlpool has gotten claims on two of these patents that are relatively -- the Judge has construed them for you. You will have a chance to apply that construction to the facts in this case. And you will make your decision about how broad you think they are.

But we have seen the deals that Whirlpool cut at

the Patent Office to get it. And you have heard the testimony and the evidence about how broadly they are trying to apply them now to get LG's products.

That really undermines the patent system.

What we are talking about here with the patent system, businesses need predictability. They need to be able to look at a public document, figure out what it means without having to do a lot of detailed investigation, and make a business decision and go forward and either develop a product or change it or do something else. But they need to have the predictability. The public needs the predictability: Who owns it? What are the metes and bounds of the property? Where is the property line? So that people don't get into disputes unnecessarily.

What Whirlpool has done in this case by coming in and telling you something different than what they have told the Patent Office, it has undermined the predictability of that system. And that is a huge problem. That is what cries out for justice. And that's what we are asking you to provide, that justice in this case.

As I talked about before, there is two fundamental benefits from the patent system. Both of them are being violated here. You get to design around a patent, avoid it, while it's existing, and you get to use the expired ones without somebody else coming back and saying

that they can grab you, too. Both of those factors apply here.

And it's not just Dr. Lee who tells you what he was trying to do. You have had testimony from three witnesses, from Hank Marcy, from Mr. Thomas Schwyn, and from Dr. Warren Bessler. All three of them provided you testimony on this issue, about what's the significance of being able to avoid a patent, to design around it.

I am going to talk to you now about what we are asking for in this case. I would like to go through the verdict form with you at the same time.

We are not asking for sympathy. As you have seen from the damages values that we are asking for, yes, it's a lot of money to laypeople. But I am not going to sit up here and pretend, refer to the amounts of money that were spent on R&D on these projects -- yes, it's all relatively modest. But what is significant in this case isn't the actual dollar value. Like I said, we are not asking for sympathy.

Justice has many facets. It's not just money. It's also understanding. And that's what we are really seeking from you. We appreciate that you have heard us, you have listened to our case. But we are asking to be understood when we talk about the criteria of the patent system and how it needs to be protected.

We feel that on the '121 patent, if Whirlpool really thinks it made it first, fine, go to the Patent Office, convince the Patent Office that you made the whole thing, not two-thirds of it. But don't come back here and tell you that it's invalid. That's just not right.

If Whirlpool really feels that, for example, the refrigerator that LG makes, if Whirlpool really feels it's a copy, if we did just use their invention -- can we bring up, Mr. Brooks, Figure 3, side by side again. I want to admit to you that if we had gone forward with Il Shin Kim's original plan, which was to put these improvements on top of Whirlpool's invention, if that's what we had done in this case, sure, I wouldn't be able to sit here in front of you and say it's unjust. We would be using Whirlpool's base invention. We would have made an improvement, which is one of the benefits the patent system offers, but we would have used theirs to do it.

But that's not what happened here. We made something different. And that's why we need justice from you, to vindicate that the efforts we took were successful to make something different.

If you agree, as Whirlpool has alleged, that plaques reduce bowing, well, we know the Patent Office felt that that was unpatentable when Whirlpool filed this application, then don't sue LG for making plaque liners that

simply reduce bowing. If we were making something that really did prevent bowing, okay. But that's not what is happening here.

So what justice do we seek?

If we go through the jury verdict form, if you can turn to page 2 -- Your Honor, do they have the verdict form?

THE COURT: I think so.

MR. COYNE: Thank you.

If you can go to the verdict form, what we are asking for on the '121 patent, it is IA, we are asking that you check off yes on all three questions in row 1 for Question No. 1, that, yes, there is infringement of the three claims.

On Question No. 2, we are asking that you check off no for all three claims. And on the damages amount, we are asking that you put in the amount of royalty that Dr. [redacted]

That takes us to the second page, II. With respect patents in suit, on Question 4, this is for the '130 patent, the in-door-ice bank patent, we are asking on the infringement of the side-by-side refrigerators, question 4, that you check no for claim 8.

We are asking, on question 5, for infringement of the French-door refrigerators, that you check no for all

five rows.

And we are asking, for question 6 on infringement under the doctrine of equivalents by the French-door refrigerators, that you check no under all five rows.

With respect to willful infringement, you have heard Dr. Lee's testimony, we are asking that you check off no on question 6.

And on question 8, has LG proven by clear and convincing evidence that a person of ordinary skill in the field who read the '130 patent would recognize the patent application described the invention as claimed, and by that I mean as claimed against us, we are asking that you check off yes.

For question 9, anticipation, we are asking that you check off yes on all five rows.

On question 10, for obviousness, we are asking that you check off yes for all five rows.

And on damages, we are asking that you insert zero, because there would be no liability if the patent is invalid and not infringed.

And then finally, on Whirlpool's '601 patent, the plaques patent, we are asking that for question 12 you check no for infringement for all three rows. For Question 13, anticipation, and Question 14, obviousness, that you

check yes on all three rows in each table. And then finally, on Question No. 15, that you again insert zero, because there can be no liability if the patent is either not infringed or invalid.

The vision of justice that I want to leave with you today is that you have the power. Justice in this case is in your hands. It's not in mine. Very shortly I will be handing this case over to you, as will Mr. Partridge.

You have the power to do right. You have the power to do what is just. And you have the power to tell the world that companies cannot do what Whirlpool has done. They cannot go into the Patent Office and tell the Patent Office one thing and get narrow claims, and come back in District Court and assert those claims broadly and try to extend the scope of their protection.

Let me paint for you the vision of the justice that LG seeks in this case.

What LG is asking for from your verdict is justice that means that you stick with the bargain that you make at the Patent Office when you get your patent in the first place. Secondly, you be consistent. When you tell the Patent Office one thing, don't come in the District Court and tell the jury something else. Third, you honor your agreements. 4, you increase the predictability of the system. And 5, you are supporting the patent system,

because with your enhancing the values that make it predictable and reliable, companies can base business decisions on and continue to bring you good, new, different products.

What's the justice that Whirlpool seeks? That you are free to make one deal with the Patent Office and come in here in District Court and tell you something different. That you can rewrite your claims years after the fact. That you can expand your rights after competitors have invested heavily -- and you saw Dr. Lee walk through the investment LG made -- in millions of dollars based on what they thought your rights were, only to be surprised later.

That it creates greater unpredictability and therefore undermines the patent system.

We hope you will choose LG's vision of justice.

Time is getting very short for me at this point. I want to tell one little story before I go to the last piece of this.

One day a boy catches a small bird in the forest. And he is kind of conniving, and he says, I know, I am going to go to the wise old man, and I am going to hold the bird in my hand and ask him whether he thinks the little bird is dead or alive. And if he says it is alive, I will just slowly crush it and kill it without him knowing before

I open my hands. And if he says it's dead, I will just open my hands and let the bird fly away.

So the boy runs over, and he goes to the old man with a malevolent grin on his face, and he says, Old man, tell me, is the bird alive or dead? And the old man looks at him and says, Son, I don't know whether the bird is alive or dead, but I know that the fate of the bird is in your hands.

And the fate of our case is in your hands.

Mr. Partridge is going to get up and talk now. This is my last chance to speak with you. He has the right to make the last argument. I have to remain silent. I will not be permitted to speak to you again. This is it. My lips are sealed by law. The last thing that you will hear on closing is the words of Mr. Partridge ringing in your ears.

He is going to tell you several things. He is going to tell you that it's all about the claims, and he is right. And I hope that we focused on the claims for you sufficiently as we presented our case.

He is going to tell you that Whirlpool's long history and dominant history somehow gives them extra credit. It doesn't. It's a very competitive market. And you heard how competitive it is.

He is going to tell you we have resorted to

dirty tricks and taking pictures in the middle of the night. You have had testimony from several witnesses in this case who told you, this is what happens in competitive markets. People are trying to get intelligence about what is going on with their competitors, so that they can figure it out. But this case doesn't involve somebody breaking in somewhere and stealing something. It involves people doing the kinds of things that companies do that you heard about from the witnesses when they are trying to gather competitive intelligence doesn't.

He is going to tell you LG changed the conclusions of the Bics final report. But you we already know the answer, because Dr. Lee told you that is not what happened.

He is going to show you a drawing of a freezer -- of a sketch that has the word "freezer" written on that French-door unit, and he is going to tell you somehow that gives Whirlpool a mulligan, that what happened in an engineer's office a thousand miles away somehow gives them the ability to deny the deal they made with the Patent Office when they got the patent in the first place. It doesn't.

He is going to tell you that Whirlpool values innovation. LG does, too. And you heard testimony from witnesses on both sides.

He is going to tell you that the '121 invention isn't important, that Whirlpool invented the base technology, even though they don't have any proof, that they didn't have all three components together until April.

But this is the law. I can't change it. I can't talk again. Once Whirlpool gets up to argue, I have to remain silent. You will see me squirm. I am not squirming about what Mr. Partridge is going to say. I am going to squirm because I have only one comfort, and that comfort is your good, honest, sound judgment.

You have heard all of the evidence in this case. We trust you to exercise that judgment and reach a just result in this case.

I am going to ask you to do something for me when you go back into that jury room. When you are listening to Mr. Partridge's closing argument, think about the things that I said. You have been living with me for seven days here now. Think about what you think I would say in response to it. You know what our positions are. You have had the evidence. We have presented it all you to you. You know our side of the story. But think about what our response would be to these points when he is making them.

And when you go back into that jury room, keep an open mind. Consider all the evidence. One thing is, the way the case has come in, we weren't permitted to even tell

you about the Bics project, because of the way the evidence has to be presented, until Friday and Monday.

So we appreciate very much your service. And we ask that you keep an open mind and consider all of the evidence and focus on the issues that matter in this case.

Thank you very much.

THE COURT: Thank you, Mr. Coyne.

Ladies and gentlemen, let's take a stretch break for the benefit of the jury.

(Recess taken.)

THE COURT: All right, Ms. Walker.

After Mr. Partridge finishes, I am going to invite the jury, after we swear the jury officer, to simply select a foreperson. It will be up to them. I am going to advise them that they can feel free to commence their deliberations tomorrow morning beginning at 9:30.

(Jury enters courtroom at 3:30 p.m.)

THE COURT: Okay. We will hear from Mr. Partridge.

MR. PARTRIDGE: Thank you, Judge Sleet.

Thank you, ladies and gentlemen of the jury. And good afternoon.

This is one of the rare times in a trial where I have the opportunity to actually speak to you directly and look directly at you. So I welcome that opportunity.

As you know, we are about to turn the case over to you. And we look forward to your collective wisdom on the matters that have been presented to you. We are pleased that LG even agrees that you should apply your common sense as well as the instructions on the law that have been given to you by Judge Sleet in connection with your deliberations on this matter.

You have listened. You have listened intently. You have laughed a little bit, probably sometimes when you couldn't help yourselves. We think that's good. And we look forward to your verdict.

But you are now about to begin the serious business of actually resolving this dispute, to judge the facts and apply the law. And as you know doubt recall, because I think I was a bit adamant about this at the beginning in my opening statement, I sympathized with the dilemma that you faced at that time.

You heard a lot of numbers. You heard a lot of names. You heard legal and factual stuff that probably sounded like a lot of mumbo jumbo. And that was all showered upon you early in the case and throughout.

I did say that I thought that this case, in the end, would not be as complicated for you as all of that seemed to imply.

If you will recall, from the very beginning, I

attempted to focus you on the patent claims. And I believe that, first, I think I indicated that the nature of the property right, it is sort of like a deed. We talked a little bit about that.

And I said that the claims control everything in this case. You have now seen that in the instructions that have been given to you this afternoon.

So the claims become your focus. They are the real deal here.

How is it that that property right, those claims, become the real deal here?

The way our system, our patent system works is a little more as follows, beyond what you have just heard this afternoon. Yes, it's true, the patent system is intended to encourage innovation. But that's only one side of the scale.

The other thing that the patent system encourages, and you can see that this then leads to innovation, is investment - investment in technology, investment in new ideas.

And when our Founding Fathers, in the Constitution itself, included language about promoting the progress of the useful arts, they had in mind rewarding inventors for their inventions, for the reason that that would encourage investment for the betterment of mankind.

Those were the lofty ideals that our Founding Fathers set for the patent system.

And the Patent Act was one of the very first statutes passed in the United States. It goes all the way back to 1790.

So justice in your hands is justice with respect to rewarding the investment that has led over the past decade to better products for people, for consumers in this particular field.

You know, it has taken us a while to get some degree of justice in this case. This lawsuit has been pending for two years. What do you think has happened over those two years? We have asserted infringement of the two refrigerators you see over there. An interesting thing just happened with respect to justice in the last hour. I am going to walk over to the refrigerators and point to one and come back and tell you what that justice finally is.

This refrigerator is LG's side-by-side refrigerator with in-door-ice. For two years they have argued that that refrigerator does not infringe Claim 1 of the '130 patent, until today. Dr. Bessler on that witness stand told you nothing that was different between the subject matter of claim 1 and that side-by-side refrigerator. Two years. Instead, he talked about the French-door refrigerator. And he gave you one reason -- we

have had a lot of reasons in between, but now we are down to one reason -- why it doesn't infringe. And you had to be careful, as you were employing your consciousness about justice, in listening to that testimony, because Dr. Bessler quickly slipped from talking about claim 8 on the French-door refrigerator to saying, and the side-by-side doesn't infringe for the same reasons. Well, he was talking about only claim 8, and made not a single statement about claim 1, the base claim.

So, yes, we believe in justice. And justice has been slow in coming with respect to at least the side-by-side refrigerator. And we are now about to embark on the completion of that journey of justice with respect to the French-door refrigerator as well.

So the claims are, in fact, the real deal. And what we have done to try to assist you in resolving the issues you face here is to bring to you the people at Whirlpool who we thought could help you the most.

We brought a number of executives and engineers. Mr. Tom Catania, who sat in that chair as our corporate representative every day of trial, he was here every day you were here.

Mr. Tom Schwyn, our vice president and associate general counsel, he was here every day you were here for trial.

They testified as well.

Mr. Catania told you about the hundred-year history of Whirlpool.

And the interesting fact, that Whirlpool was founded as a consequence of a patent on a motorized washing machine, I find it a bit ironic that a hundred years later we are here over another important patent to the company.

Mr. Schwyn told you about the modern day patent processing at Whirlpool. He told you about the interference proceeding. We will talk with you about that in a moment.

We also brought you the three leading engineers who developed all of the technologies that are in this case. They developed the technologies in our patents and they developed the technology, the base technology, in LG's patent.

Mr. Verne Myers, who was the project leader on the IDI project. Energetic fellow. I couldn't slow him down, he was so energized to tell you about what he did over that three- to five-year period.

Steve Williams, who I would characterize as sort of the engineer's engineer. He made this discovery that led to these unexpected, unbelievable results in the face of warranty and other problems that had existed for years with respect to the walls of refrigerators. And his excitement about what was his first patent was evident from him.

We also brought you Ron Vogelwede, our dispenser engineer, who told you about all the work they did that predated LG by almost two years. Former executive of Whirlpool. Didn't have to come here, he started a new job last week. And he came here on his own to testify about the importance of IDI technology.

Gary Langbo, our director of sales and marketing, told you about how important IDI is in Whirlpool's business today.

Quite a representative group, honest, hard-working, good people. They represent Whirlpool. They are something that I think we wanted you to know that stands behind the brand that you have known about and heard about for so long.

In the next 40 minutes or so, I am going to do my best to survey the evidence that I think is relevant here and is important for you in making your decision. My own view is that is there has been a lot of what I would call wandering in the desert that has gone on in this courtroom over the last week or so. Maybe we have wandered a time or two, but I don't think very much. We have stayed focused on the claims.

And if the claims be your guide, I think your decision in this case is much more straightforward.

We heard a lot of testimony, for example, about

comparing the LG refrigerator to the Whirlpool refrigerator. You heard comparisons that have nothing to do with the claims.

If you go to the claims to resolve the infringement issue, I think it is pretty straightforward. It's obviously very simple now with respect to the side-by-side, and much simpler even still with respect to the French-door refrigerator.

Let's first start by talking about willful infringement. I am talking about willful infringement of the '130 patent. That is a pretty appropriate place to start, given that we no longer have a defense of noninfringement as to claim 1 of the '130 patent.

We have heard a lot of testimony about efforts to design around, and that LG did this, that, and the other thing. But here we are today with a refrigerator that infringes the claim, the very claim they had in front of them several years ago when they had our patent, they had our refrigerator, and they decided to go forward anyway. That's the refrigerator they were developing. It isn't any different, fundamentally, insofar as the patent is concerned, from the refrigerator that was part of the Bics project some time ago.

So with respect to infringement, you will have two issues; willful infringement, you will have two issues.

You first have to decide infringement, and then secondly, you will need to decide whether or not that infringement was willful.

When you look at the evidence that was presented to you -- and I am skipping some things because of the situation we are in now where the side-by-side refrigerator is an infringement of claim 1. When you look at the evidence that LG presented on willfulness, it was pretty much all out in the desert and fluff because it wasn't connected to the claims.

One of the willfulness factors we presented to you was whether or not LG copied, but copied what? Copied the subject matter of the claims. And what we heard about was testimony about vertical versus horizontal augers, about ice makers, here, there, and everywhere, when the claims had nothing to do with the position of the auger, be it vertical or horizontal.

When you looked at the claims, and you considered the subject matter of the claims compared to the evidence that LG was presenting to defend itself against a charge of willful infringement, it did not stack up.

It was the screws and bolts rather than the fundamental combination of the '130 patent.

And when you see documents like those presented to you from LG where "a dispute is expected," and you saw

that in a number of documents, "a dispute is expected," those words were used in the first draft of the final report, and both were dated December of 2003. We don't know what the period of time was between those two drafts. But they were both intended for December of 2003, after about one year and three months of total engineering work on the Bics project.

One year and three months later.

So here we are with a dispute expected with respect to the '130 patent. What does your common sense tell you a normal business would do in that circumstance? What would you do if you thought you might be using something that belonged to someone else without permission and you thought there might be a legal dispute? What would you do?

Well, one option is you wouldn't do it. Another option is you would ask an attorney whether doing it might get you in trouble.

Would you simply paper over it by issuing a second report that said, gee, we designed around the creative genius of our engineers, overcame what was previously -- I forget the word that was used -- the impenetrable, I believe it was, patent of Whirlpool? Is that reasonable? Is that an acceptable standard to be employed, either personally, and in this case in business?

Do we have higher expectations of businesses when they are faced with a dispute and have identified it as such?

We asked LG whether or not they had any basis for saying they did not infringe. And you will remember the testimony we received from one of LG's engineers, Mr. Eui Yeop Chung. He was instructed by his attorney not to answer. Well, LG can certainly stand on attorney-client privilege. You can also infer, if you so choose, that the answer may not have been favorable to LG. And that wasn't the only occasion on which that occurred. And you heard evidence about those other occasions during the course of this trial.

Let's look at where the willfulness case actually begins.

It does begin with an incident in a trade show back in January 2000, when Whirlpool first introduced its product.

We are talking about willfulness, the kind of conduct that should not be condoned in the operation of business today. It is relevant to willfulness. It is part of your consideration. If that was it, standing alone, I would agree, that wouldn't cut the mustard. But that is not it standing alone. It is one of a number of factors, incidents, documents, demonstrating a course of conduct to ignore our patent.

You heard the deposition testimony from Greg Garavalia about that trade show incident. The middle of the night. Not long after that, LG started developing what we would say is its copy of Whirlpool's patented technology. It started its Bics project.

That project concerned the development of a side-by-side refrigerator. The French-door was way down the road at that point. The Bics project was the side-by-side refrigerator, the very one that now is acknowledged as infringing claim 1 of the '130 patent.

You saw in the documents, over and over again, that LG knew about the '130 patent. Here is Defendants' Exhibit 173, that shows that, and again in Defendants' Exhibit 196. And we know that LG knew how Whirlpool had gone about implementing its version of the patented technology in its products.

And you saw, in Defendants' Exhibit 177 and Defendants' Exhibit 336 evidence of their belief that there would be a dispute over the design they had made.

Why did they expect a dispute? Common sense tells you why. They knew they had taken something from Whirlpool. They knew that in that year and three months they were cutting short the amount of investment that would be required by having a head start with Whirlpool's patented technology, because they knew what would work at that point

in time, and they ignored the patent in going forward with their technology: that infringing refrigerator we have before us.

They did try to cover it up with the final report. I would call it a whitewash. There may be other terms that are appropriate for it. But it was suddenly, in a short period of time with no change in design, a remarkable design-around. I think those were the words that were used to describe what had happened.

Let's take a comparative look at those two versions of the completion report, Defendants' Exhibit 335, and I think it's also 770, and let's look at the first statement.

"Since Whirlpool has the uniquely advanced technology and rights in this area, a dispute is expected when the product is developed."

That same page says, "Other companies' current patents that are expected to be problematic" are listed here. And what is listed? Whirlpool's patent. That is the only one listed.

Sure, they say they tried to design around. But the differences you heard described, like vertical auger, like ice maker on the door, they don't matter to the claims. The claims only care about the components that are actually in the side-by-side refrigerator now admitted to infringe.

It doesn't matter to copying whether that auger now is horizontal in their design. It doesn't matter whether they moved the ice maker. It doesn't matter whether or not they put a water filter someplace or put a water tank here, there or everywhere. The '130 patent doesn't care about those things.

When you put the conclusions next to each other -- Mr. Roberts, let's put them both up there. We have the first draft of the report, with the language I just read to you, and then the second draft, or final draft of the report, that says We were successful in avoiding the existing Whirlpool patent. And interestingly, it goes on to acknowledge Whirlpool's patented layer seemed to be too strong and solid. This is said at the end of the project, more than a year after they already had the Hitachi publication, that they now tell you somehow invalidates the patent.

Let's apply a little common sense to this. Doesn't it strike you as odd when the design didn't change as between these two documents? One would think that fearing a dispute, someone within LG said, you need to change that document, and that that's what the final completion report is actually about.

Dr. Lee, on the stand, the first Dr. Lee, Manny Lee, told you he wrote the relevant portion of that final

report. But he also told you he didn't understand patent claims, that he was only looking at this from an engineer's perspective.

If that was so, was that reasonable conduct on the part of LG?

Is reliance on an engineer who doesn't understand patent claims reckless, when we all know, and everybody has acknowledged that the claims are the key, they define the property right? Common sense tells you that wasn't reasonable, that wasn't the right way to go about this.

Common sense tells you that, when you consider the clai0ms, LG copied.

We also have other evidence that supports the notion that LG copied Whirlpool's invention. We know several other things about their capabilities at the start of the Bics project. Defendants' Exhibit 16, at page 780, you saw this document a number of times, it indicates they are less experienced, they have all these problems in the weakness section, and compared to Whirlpool, it took, with engineers with 20 and 30 years of experience, three years to develop the in-door-ice concept to the point where it could move towards production.

They had shortcomings, they had weaknesses, and they did this in a year and three months. And Whirlpool,

almost 10 years earlier, with engineers much more experienced, took three years.

What does that tell you? Apply your common sense to that.

What we really had was a very aggressive effort on the part of LG to get into the United States market. That's what really was at the root of this. And Defendants' Exhibit 186, at 266, tells you how anxious they were to get into this market.

They wanted to take market share away from Whirlpool, and they couldn't do it without IDI. That's particularly evident when you look at this chart with respect to sales to Home Depot, which was a big customer of Whirlpool. What you see from this chart is that once LG introduced IDI in its refrigerators, the sales history at Home Depot changed dramatically. That turned out to be the before and after key.

It's true that if you take someone else's fundamental technology, you are freed up to spend time on colors and aesthetics and other things because you didn't have to make the investment to make and develop that fundamental technology.

As more or less a last-ditch effort to establish that maybe they didn't copy the invention, we saw a couple of Korean patent applications from the 1990s. When you look

at those Korean patent applications that were referenced during the last day or so of testimony, they are very, very different from anything in this case. And, in fact, curiously, if they had something to do with the '130 patent, don't you think Dr. Bessler would have relied on one of those? He didn't. They haven't it. They never have.

What really shows the relative state of development at LG when they started the Bics project is Defendants' Exhibit 158. That exhibit shows Whirlpool's refrigerator in the upper right, and a direction that LG intended to go on the bottom. And on the upper left, it says preexisting technology, preexisting ice and water systems, and it's completely blank.

The evidence shows that LG took from Whirlpool what mattered, the subject matter of the claims, and it defended itself here with what didn't matter to those claims.

Let's talk about infringement of the '130 patent.

Dr. Caligiuri gave you testimony about Claims 1, 2, 6, 8 and 9 of the '130 patent, and he went through each and every element.

As to claim 1, Dr. Bessler didn't point to a single difference. As to the French-door refrigerator, Dr. Bessler relied on the fact that there was a double door.

And LG's counsel did the same thing a few minutes ago. And the argument seems to be that the fact that there is a double door makes a difference.

Well, double doors permit access to the freezer. One of those doors has the freezer on it, the storage bin on it. That's not a difference. Any difference that might exist with two doors rather than one door is not a substantial difference with respect to that refrigerator. You have testimony that if you find that to be a difference, you can find infringement under the doctrine of equivalents, which means that the differences really are insubstantial and/or that the device operates in substantially the same way to achieve substantially the same result. That's in your instructions. And you can find infringement under the doctrine of equivalents as well. You will see that in the verdict form. It will be a separate entry on the verdict form.

When I think about this French-door refrigerator and the claim, I know there is a lot of legal mumbo jumbo associated with it. And I would ask you to apply a little common sense to your analysis of that refrigerator. And the way I do that is I ask myself, well, first, I know there is an upper freezer in there. I know that. How do I know that? Well, I can stand outside the refrigerator and see that there is an ice dispenser, so I know something in there

is making ice. And I know that in order to make ice, something has to be freezing.

So I ask myself, first of all, how do I get access to what's inside that door?

It's interesting that when Mr. Coyne was over here, he started from this position (indicating). And he talked about getting access after he had already gotten access. You cannot get access to that bin without getting access by opening this door.

And the fact that there is a cover on this that allows it to freeze does not make it different. In fact, let's take a quick look. I don't know how well you can see, if you can see it better up there, the one on the left is the infringing side-by-side refrigerator. The one on the right is the French-door.

When you look here, and you compare it to here, you really don't see a difference.

The argument that you can only consider an access door once you have gotten access to the inside of the refrigerator ignores common sense. You must open the outside door in order to get access, and the claims really don't require any more than that.

Our burden with respect to infringement is a mere preponderance of the evidence. And I say here because that's to distinguish it from the clear and convincing

evidence that relates to invalidity. So if the scales tip even slightly in our favor, we win on that issue.

Let's talk a bit about the validity of the '130 patent.

We started with a presumption of validity. That's where we start. Why do we have that presumption of validity, as you see it in your instructions? It's because, in our country, we have a Patent Office that has trained examiners who examine patent applications. They look at the prior art. The examiner here looked at the prior art. He cited over 20 references, professionally trained patent examiner. And there was a back-and-forth with the examiner over those references. That's why under our law there is a burden of clear and convincing evidence, and it's a heavy burden.

How does the invalidity case you heard from LG stack up in the face of that?

Well, the whole thing turns on the Hitachi publication. Without that, LG doesn't have an invalidity case. And LG had the Hitachi publication throughout its development of its side-by-side refrigerator, and not once did any of their documents say that any of those engineers thought that our patent, the '130 patent, was invalid over Hitachi.

So in the face of a presumption of validity, who

are you going to believe, LG's engineers from the 2002-2003 time period, when they had the '130 patent, when they had the Hitachi publication, or Dr. Bessler in 2010, when he was hired to tell you that the '130 patent is invalid over that same Hitachi publication?

It doesn't make sense to me.

That's the same Dr. Bessler who told you that the addition of a spring to a manually movable water spigot was a great invention, or words to that effect. How credible can Dr. Bessler be in the face of arguing that a spring makes the '121 patent different, inventive, valid, when he is the same guy who tells you that this invention, for which you have heard lots of evidence about its success, its importance, and about the differences that exist between it and the prior art, is somehow invalid, after the kind of examination we had in the Patent and Trademark Office?

It's not credible. He was an advocate.

Now, we have seen a lot of exhibits during the course of this case that talk about Whirlpool's patented technology being uniquely advanced, advanced technology, words to that effect. I am not going to go through that again with you today. You have seen enough of those documents.

I have looked at a couple of them a few minutes ago. The final reports, which themselves, at the end of the

project, acknowledge the unique, uniquely advanced nature of the patent and the technology.

Now, we heard from Mr. Coyne that the examiner who allowed the '130 patent had the Gould and Buchser references in front of him, and that somehow that could be equated with the Hitachi reference and that Dr. Caligiuri made such a statement. You heard the testimony from Dr. Caligiuri. And, in fact, the irony in that argument is that the examiner allowed these claims over the combination of Gould and Buchser. The hypothetical that was asked of Dr. Caligiuri makes no sense in light of the fact that the combination had already been found patentable. It makes no sense when you consider what's missing from the Hitachi reference itself.

Dr. Caligiuri talked to you about the Hitachi reference. He told you that it does not describe an automatic ice maker. It doesn't show it, among other things.

Remember the part of the specification that talks about pleasure? The only pleasure one can find in that Hitachi reference is the pleasure -- I am not sure any of us would express it that way -- but of twisting an ice tray mechanically to dump ice into a bin so it's available for later use.

It's not about an automatic ice maker.

That alone enables you to answer the question about anticipation, that is, is there any difference between the Hitachi publication and the '130 claims, claim 1? Only one difference is required in order for you to say: No anticipation. One difference alone.

So that brings us to obviousness.

The testimony went further than that. But that one difference, when you compare it to the claims, is sufficient.

As for the defense of obviousness. Dr. Caligiuri talked to you about the fact that this was a top-mount refrigerator. That means the freezer is on top. You couldn't put a dispenser in a top-mount freezer unless your customer base consisted of very tall NBA players. It just won't work there, even to this day. It remains incompatible with a top-mount freezer.

Best Buy, hundreds of top-mount freezers. You can go to Loews -- of course, you are not allowed to do this as part of your deliberation -- but you won't find a top-mount freezer that contains one of these ice dispensers.

In fact, one could even argue -- we didn't push the envelope on this, because we think the differences are so clear to begin with -- but would you even think of going to a top-mount refrigerator to try to knock out a claim to an ice maker that's at your waste level in a side-by-side

refrigerator or French-door refrigerator or other type of refrigerator? It makes no sense.

Hitachi was published a quarter of a century before the invention that was made by Whirlpool. It took three-plus years for Whirlpool to make that invention. It doesn't make sense that Hitachi had it all 25 years earlier and nobody did anything with it. It doesn't make sense that we invested three years, it doesn't make sense that LG itself invested a year and three months, if that publication knocks out what took Whirlpool so long to develop.

You listened to Judge Sleet this afternoon read the jury instructions. One of the things he told you about was secondary considerations. And I told you they were more objective, a more objective basis with respect to evaluating obviousness. Why is that? Well, because there are certain things that don't make sense if they happen when someone else is claiming something is obvious.

For example, if someone is copying the subject matter, it doesn't make sense, copying the subject matter of a patent, it doesn't make sense that something else made it obvious.

If something is this huge commercial success, huge commercial success, it doesn't make sense that someone wouldn't have done that 25 years earlier when the Hitachi publication was issued. It doesn't make sense. It doesn't

make sense that people would be praising Whirlpool's invention if this was something done 25 years earlier.

Those are the kinds of things that just don't make sense. And you can weigh those things in considering whether or not this invention is obvious. And I would suggest that when you do so, you can't help but conclude this invention is valid, the claims are valid, it is not obvious.

The testimony by Dr. Seth Kaplan earlier this morning, totally uncontroverted as to the success of this invention, both for Whirlpool and after copied by LG by LG.

It's a remarkable story. Common sense tells you that story leads to a certain result. And that result is the validity and infringement of the patent.

On your verdict form, you will see that same set of questions that Mr. Coyne referenced. I am not going to go through the whole verdict form, because the way we wrote this verdict form, we indicated in parentheticals on each of the questions, when you made a decision, whether that favored LG or favored Whirlpool. It's easy for you to see that. So you will know already what my position is with respect to how you ought to mark the verdict form.

A few words about the plaques patent. This was the invention of Steve Williams, who solved a substantial warranty problem at Whirlpool. It stopped shelves from

falling. It prevented cracks. It improved the sealing. It did a number of things.

And it did it without having to redesign the basic structure of the refrigerator.

It's interesting, something that seems so simple had such unexpected results here. It made a big difference without having to start all over again with respect to wall construction and refrigerators. That is the benchmark of a valuable invention.

The battle we have here appears to be over how much prevention is enough prevention. You heard enough about that. You can make that judgment for yourselves. We now appear, again, after two years, it's taken two years to get to the point where we have an acknowledgment that bowing is reduced with the plaques that are in LG's accused refrigerators. And it's up to you to decide whether that amount of bowing is enough.

I bring you back to two things that Dr. Caligiuri said about that during his testimony. He was asked, actually on cross, about birth control bills preventing pregnancy. If you will remember, he said, nothing is absolute. He then went on to say, that's true in the materials sciences, too. In the materials sciences, there is no material in all of science that is perfect. No one could possibly think that that claim means that you have

to eliminate all bowing in order to be able to accuse a product of infringing. That makes no sense.

And, in fact, when you look at LG's documents, Defendants' Exhibit 430, it talks about changing the depth of the bead, which is the plaques, to support the case's strength. That is a plaque.

The GE change order document also was discussed with one of LG's experts today. That document said, beads needed to be added to remove the generation or flexion of the inner wall of the inner case. That's preventing bowing.

On invalidity, the same presumption, the same burden applies. They have a fundamental problem in proving invalidity. They didn't test any of the prior art you have. What they have are pictures without data. And you cannot tell from those pictures whether bowing was prevented in those references or not.

It's a lot of fluff. It's nice-looking pictures, but without descriptions and data and information in that prior art that establishes that, in fact, what was accomplished there was the prevention of bowing.

As to the '121 patent, it remains a puzzle to me. LG filed this lawsuit apparently to assert that patent. It adds a spring. What is it added to? There is some real confusion here about what it is adding it to. It is, from our point of view, adding a spring to a prior art system of

Whirlpool.

We invented what is in claim 10, and claims 20 and 21 depend on Claim 10. So the only material difference for you to consider in this case is whether the addition of a spring to Whirlpool's prior invention of the manual spigot and manual tray is valid. Is it obvious to add that? And our point is that it is -- cup holders, CD players, and, in fact, the very document relied on by LG to support its conception of this invention was a CD player.

I mean, come on. The spring was there. We had a manual spigot, and you are going to make it come out automatically.

There is a dispute in the Patent Office. We are consistent in the Patent Office. In the Patent Office, we have said, and Mr. Schwyn told you this, we are asserting that claims like claim 10 belong to Whirlpool. And we are asserting that claims that varied from that base claim do not patentably vary from that base claim and therefore cannot be awarded to LG. That is the issue. That's entirely consistent with the position we are taking here.

As to infringement, you go look at this thing and determine for yourself whether that spigot, that water spigot, is outside the front surface of that refrigerator.

You can tell that for yourself.

That brings us to damages.

Up front, I am going to tell you what we want. At a minimum, this is what we are seeking. 18 million dollars, at a minimum, for the '130 patent.

This is the same graphic we used during the testimony of Mr. Nawrocki.

I would ask you to make a note for yourselves as to the number of units in that royalty base with respect to both patents. You see the royalty rate that Mr. Nawrocki [redacted] **of the number of units. You aren't going to have this graphic back in the jury room. Please write those numbers down.**

Those are the units sold by LG. You heard from two damages experts, Mr. Nawrocki, 25 years in patent valuation and licensing, straightforward, understandable presentation of the reasonable royalty analysis and how it's done.

Dr. Rao, an incredible story about how a spring added to a manual spigot that was invented by somebody else [redacted] **technology is something that is not totally useless but something that is not of much value. How credible is that? Technology that was a game changer and has been almost acknowledged as such here this afternoon, not worth much in the years eyes of Dr. Rao. Strains credulity.**

Mr. Nawrocki walked you through all the factors involved in making a determination. He gave you this chart. And again, I ask you to make notes. What's on that chart? He went through the reasonable royalty factors. That green bar is Mr. Nawrocki's opinion. And if you will recall, he told you that was a conservative number.

And he told you that he was going to give you the data and information necessary for you to decide whether that was enough.

This is the data and information he gave you. You can see, when you look at that, the ranges of those various factors. The first three, upwards of a [redacted] [redacted] a unit. One of them up to [redacted] Various ranges with respect to those different factors.

It's for you to decide what the damages are. But you must do so consistently with the evidence that you have heard. And what Mr. Nawrocki has told you is that his [redacted] all of the factors involving profitability, lost market shares, the contribution of the invention to the price of the Whirlpool and LG units, all of those things he told you about during his testimony.

Lastly, as to the '121 patent, Mr. Nawrocki looked at it from the point of view of what does it mean to add a spring to a previous device that was manual. And he

came up with a number. You know, he does give conservative [redacted]

So I say, in the end, when you compare the credibility of the people who appeared before you, when you compare the credibility of the Whirlpool witnesses and the LG witnesses, and then you back that up with what the documents told you, I think your choice here is clear.

Yes, we had Mr. John Herrington come. He destroyed documents. He is a vice president of sales at LG. We didn't call him. LG put him on because of something that happened earlier in the case.

You heard about all this innovation bravado during the course of the case from LG, innovations that had nothing to do with any of the three patents that are in this case.

What did we do? We put up another Whirlpool patent filed on the same date as the '130 patent that had the ice maker in the door. You know, we weren't asserting that patent in this case. But after all of the innovation bravado we heard, we decided we were going to put that before you. The fact that you heard all of that fluff, the fact that we spent time wandering in the desert in this

case, should tell you something about the end results in this case.

We would ask you on the verdict form to check every box for Whirlpool on that form.

I thank you for your jury service. There are thousands of people around this country who have been sitting in jury boxes this week. And some people would say this -- this sounds trite, but I truly believe it -- day after day they are making our democracy work. This is where the people get to decide.

And we are very pleased to have our case in your hands for you to decide.

Thank you very much for giving up this time in your lives for this case.

THE COURT: Thank you, Mr. Partridge.

All right. Ladies and gentlemen, it is now time for me to turn the case over to you to commence your deliberations.

Now, Ms. Walker has just left to locate our jury officer. Rather than detain you, we will swear him or her, and that individual, actually, it will be a series of individuals you will see in the vicinity of the deliberation area.

It's rather late in the day. But I am going to leave this decision up to you. It's entirely up to you as

to how you are going to conduct your deliberations.

What I would recommend is that you spend a wee bit of time and select a foreperson, and then go home, and come back tomorrow at the beginning of the day, at 9:30, and begin your deliberations. Now, you are free to reject that advice, if you want, get at it, you can do that. I will leave that up to you collectively.

So as soon as I can get Ms. Walker back here, I am going to have her escort you back to the jury room. Just bear with us just for a moment. We have someone on the way. Why don't we wait for a second.

(At this point the jury officer was sworn.)

THE COURT: So all you need let know our jury officer is what your druthers are, and he will either preside -- watch over you during the evening, or however long you say, or he will report to me as to your decision one way or the other.

You are free to go.

(At 4:28 p.m. the jury retired to deliberate.)

All right, counsel. Those in the well of the court can be seated, remain or leave.

Have you discussed how you want to proceed with the remainder of the matters that we have to attend?

MR. COYNE: We have, Your Honor. But I would like to bring up a more immediate issue with respect to the

argument we just heard. I did not want to interrupt Mr. Partridge.

THE COURT: I got to tell you, Mr. Coyne, I am pretty sure I mentioned this during the PTC -- if I didn't, I apologize -- but it would generally be, it's generally my advice that if there is something worth objecting to, it should be done in realtime.

What is it you want to say?

MR. COYNE: Mr. Partridge specifically said that they could infer that the answer was bad to the instruction not to answer on privilege grounds. We feel that is improper under Seagate and Knorr-Bremse.

THE COURT: What do you want me to do at this point?

MR. COYNE: We would request a curative instruction, Your Honor.

THE COURT: I will mull it over the evening.

First let me hear from the other side. We will discuss it.

MR. PARTRIDGE: I tried not to go too far, Your Honor. If I did, I apologize.

THE COURT: Here is what we will do. Mr. Maurer will transcribe that portion of the argument, and we will discuss it tomorrow.

MR. PARTRIDGE: I thought --

THE COURT: I don't remember what you said. What you thought may be inconsistent with what you actually said.

I don't recall, quite frankly. What's done is done. If it is as reported by Mr. Coyne, perhaps the curative is in order. We will see. I am not going to bring them back in here to do that.

MR. COYNE: The other issue was the Bench trial. We have had further discussions. I think what -- I will confirm with Mr. Partridge, I think we will let him confirm, I think we have resolved right now that we do not wish to proceed on anything but the prosecution history estoppel and the disclaimer issues. And we feel, I don't know whether Mr. Partridge agrees or not, but we feel that the evidentiary record is sufficient for Your Honor to resolve that.

We do not need any further evidentiary hearings. So what we are going to propose, subject to Your Honor's issues, is that we brief the issue for you on whatever schedule you issue. You can deal with that issue in the papers.

THE COURT: What I would suggest is you confer and agree on a briefing schedule. I can choose to adopt it or not. Let's do it that way.

MR. PARTRIDGE: We agree, Your Honor.

THE COURT: Anything else? All right, counsel.

As far as tomorrow is concerned, you need not report here. But we need to know where we can reach you, quickly.

(Recess taken.)

THE COURT: Please, take your seats.

Let me put a finer point on the prosecution history submission. What was the second issue, prosecution history estoppel?

MR. COYNE: Prosecution history estoppel on one, and disclaimer out of the prosecution history on both of the patents.

THE COURT: Prosecution history estoppel and disclaimer.

MR. COYNE: And disclaimer on '130 and '601.

THE COURT: A couple of things. First, I only want, in terms of exhibits, one submission, a joint appendix.

My inclination at this point is to have simultaneous submissions, rather than opening, answer, reply. Like Markman, just simultaneous submissions.

Frankly -- I will hear you on this -- I don't see a need for more than 20 pages a side, on both issues.

MR. COYNE: That is fine, Your Honor.

MR. PARTRIDGE: That is fine with us, Your

Honor. The one problem I have is, I am not entirely sure that we have a clear articulation of the point that they want to make.

If they could give us a disclosure so we could write our first brief.

THE COURT: What the issue is, you mean?

MR. PARTRIDGE: Exactly what the issue is.

THE COURT: Sort of a law school kind of exercise.

MR. COYNE: I will be happy to send it over in writing.

THE COURT: That would be great.

Then I understand there are some exhibit concerns.

MR. PARTRIDGE: I thought we had resolved that.

THE COURT: Ms. Walker reported to me, when she was assaulted over here --

MR. PARTRIDGE: It may be Mr. Cottrell. He was engaged in that conversation. I was back here. Maybe I am speaking out of turn.

THE COURT: Mr. Herrmann.

MR. HERRMANN: Good afternoon, Your Honor. We have supplied to Ms. Walker a list for each juror of the exhibits that will be available for the jury.

We have the plaintiffs' exhibits in these two

boxes.

Mr. Cottrell is going to be arranging for the same from the defendants.

THE COURT: So you have an agreed on list?

MR. HERRMANN: Yes, sir.

THE COURT: I thought we had talked about the jury books being the exhibits that were going to be needed by the jury. But you apparently have a different view?

MR. COTTRELL: Your Honor, they have two boxes of one set of their exhibits. We have two boxes of one set of our exhibits.

We proposed that they go back along with the list Mr. Herrmann has already provided. Then they are free to look through as much or as little as they like.

THE COURT: If there is agreement on it, that is fine. And they are in good order, so the jury can have quick and easy access to them.

MR. HERRMANN: Your Honor should know, the plaintiffs' are in numerical order. The defendants' are in order by patent, I understand. So there is a difference between the order of the binders.

THE COURT: But there is a key for each?

MR. HERRMANN: There is a list of each exhibit by number, with a description of each exhibit.

THE COURT: They are gone. The jury elected to

leave.

I can tell you, they have already got a list of questions. I returned them, I gave the jury -- the jury officer gave them to me. I didn't read them. I sent them right back, and I said I will consider the questions tomorrow.

You might as well come over at 9:30, when they get here.

MR. HERRMANN: One last question, Your Honor.

What would the Court like us to do with the refrigerators -- let me rephrase the question. Would the Court like us to immediately remove the refrigerators, remove them tomorrow? Leave them until the jury has deliberated?

THE COURT: They may need the exhibits. Was PTX-134 of used? I don't think PTX-134 was used.

MR. PARTRIDGE: I don't remember it.

THE COURT: You can take that out.

So we used 23, we used 22. And we used 552. Okay.

In the interests of self-preservation, my law clerk has asked that I clarify something. That's one brief on the two issues, not two briefs. Okay?

MR. COYNE: Yes, Your Honor. We understood that.

MR. PARTRIDGE: Understood.

THE COURT: One brief.

MR. PARTRIDGE: One thing we did together to try to make sure it was clear what's going back to the jury is that we have created a stipulation that identifies all the exhibits. We both looked at everything we think is legitimately in the record. That will either be filed today or tomorrow.

MR. HERRMANN: That is the list I was referring to, Your Honor.

THE COURT: Has this been filed yet?

MR. HERRMANN: We have not filed it yet. But we are prepared to do that.

THE COURT: That is fine.

Are you asking me to execute the stipulation? Is it necessary?

MR. HERRMANN: We will e-file it. The Court can decide whether the Court wants to do a "So ordered" on it.

THE COURT: All right. The courtroom is not going to be needed tomorrow. I believe we should just leave these exhibits, except for 134 can be removed, leave them here. If the jury needs to see them, the jury officer will escort them out, we will lock the courtroom and they can deliberate.

(Court recessed at 4:55 p.m.)