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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
ATTENDS HEALTHCARE §
PRODUCTS, INC., §
§
Petitioner, §
§ Patent 8,152,788
VS. §
§ Patent 8,784,398
PAUL HARTMANN AG, §
§ Patent 8,771,249
Patent Owner. §
§ Patent 8,708,990
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ORAL, VIDEOTAPED AND ZOOM DEPOSITION OF

TONY BUTTERWORTH

Vol. 1

(Pages 1 through 114)

AUGUST 25, 2021

The Oral and Zoom Deposition of TONY
BUTTERWORTH, produced as a witness at the instance of
the petitioner, and duly sworn, was taken in the
above-styled and numbered cause on AUGUST 25, 2021, from
9:04 a.m. to 1:55 p.m., before Nicole A. Hatler, CSR No.

Page 1

1 11275 in and for the State of Texas, reported by machine
2 shorthand, in their respective locations via Zoom,
3 pursuant to the Texas Rules of Civil Procedure, the
4 Current Emergency Order Regarding the COVID-19 State of
5 Disaster, and the provisions stated on the record or
6 attached hereto.

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8 ----oOo----

9 APPEARANCES ALL REMOTELY VIA ZOOM

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1 THE REPORTER: Good morning. My name is
2 Nicole Hatler, Texas Certified Shorthand Reporter No.
3 11275. This deposition will be stenographically
4 reported pursuant to the rules governing depositions in
5 the State of Texas.

6 Do both counsel stipulate that I can swear
7 in this witness remotely.

8 MR. ALBRIGHT: Yes.

9 MS. DALEY: I -- I do.

10 TONY BUTTERWORTH,
11 sworn as a witness
12 testified as follows:

13 Q. EXAMINATION BY MR. ALBRIGHT: Good morning,
14 Mr. Butterworth.

15 A. Good morning.

16 Q. Is there any reason at all today that you
17 cannot testify truthfully and accurately?

18 A. No.

19 Q. Okay. So I'd like to start by introducing your
20 declaration, which I believe is Exhibit 2004 in the 788
21 patent proceeding. Let me know when you can access
22 that.

23 (Exhibit 2004 was marked for identification.)

24 THE WITNESS: I have accessed it.

25 Q. BY MR. ALBRIGHT: Okay. Great. And so, I'd

1 also like to go ahead and introduce Exhibit 1001 in the
2 788 patent proceeding, which is the 788 Beckert patent.

3 (Exhibit 1001 was marked for identification.)

4 THE WITNESS: One moment, let me get that.

5 Q. BY MR. ALBRIGHT: Of course.

6 A. I have it.

7 Q. All right. Great. Okay. So starting with
8 your declaration, I'd like to ask you some questions
9 about your paragraph 37. And so, there you testify
10 about the 788 patent's claims, correct?

11 A. Yes.

12 Q. Okay. And you -- you opine that one of
13 ordinary skill in the art would understand that the
14 retaining forces between the main part and the
15 mechanical closure and the retaining forces between the
16 side parts in the mechanical closure must be sufficient
17 to secure the diaper on the wearer; is that right?

18 A. Yes.

19 Q. Okay. And so, where do you find that
20 requirement in the 788 patent's claims?

21 A. Could you ask me the question again, please?

22 Q. Right. So it's your opinion that the 788's
23 patent claims require retaining forces between the main
24 part and the mechanical closure and retaining forces
25 between the side part and the mechanical closure, that

1 each must be sufficient to secure the diaper on the
2 wearer, right?

3 A. Yes. That's correct.

4 Q. And I'm asking, where does that appear in the
5 claims of the 788 patent?

6 A. It -- it appears in the general narrative of
7 the patent. I would have to read through the claims to
8 tell you whether or not that appeared in the claims. I
9 simply do not remember that answer, and so, I will look
10 at the claims and see if I can help you there.

11 Q. Okay.

12 A. For the retaining forces to be sufficient to
13 enable the diaper to be worn, the actual retaining
14 forces are given in Claim 2.

15 Q. So Claim 2, in your opinion, recites retaining
16 forces between the main part in the mechanical closure
17 that are sufficient to secure a diaper on the wearer?

18 A. When you take the teachings of the patent in
19 Claim 2, you have the minimum -- excuse me -- the range
20 of retaining forces for the closures sufficient to keep
21 the diaper on the wearer.

22 Q. So Claim 2's retaining forces aren't recited in
23 Claim 1, though, right?

24 A. Claim 2 is talking about the diaper of Claim 1.

25 Q. Okay. So let's take 20 newton per

1 25-millimeter, for instance. Is that a normalized
2 value?

3 A. No.

4 Q. So what is the 25 -- what -- what does the
5 25-millimeter mean in newton per 25-millimeter?

6 A. Let me go back to the previous question. The
7 way you phrased the question was incorrect, and you did
8 not express the numbers properly. So I answered not
9 what the patent shows but what you said.

10 Q. Okay. So is 20 newton per 25-millimeter a
11 value for a fastener normalized to one with a
12 25-millimeter width?

13 A. That is --

14 Q. A value that's normalized to a fastener with a
15 25-millimeter width?

16 A. The normalized dimension is 25 -- excuse me,
17 yes -- 25 -- 20 newtons per 25 millimeters.

18 Q. And so, in order to know what the retaining
19 force would be in newtons, you would need to know how
20 wide your fastener was, right?

21 A. When you normalize in this particular test, you
22 adjust the load measured as the retaining force
23 according to the width of the sample that you actually
24 run the test on. And in this case, the values for the
25 retaining force have been normalized to 25 millimeters

1 of width, which is approximately one inch, and, in fact,
2 is about the dimension of the typical fastener on a
3 diaper.

4 Q. So a fastener in a non-woven that would have a
5 retaining force between them of 20-newton per
6 25-millimeter -- you know, scratch that.

7 So if your fastener was 25 millimeters wide
8 and you had a 20-newton per 25-millimeter retaining
9 force between it and a non-woven, the actual newtons
10 that could be carried by the fastener non-woven
11 interface would be 20 newtons.

12 Am I understanding that correctly?

13 A. No. Because the actual fastener was wider than
14 25 millimeters --

15 MS. DALEY: Objection. Scope.

16 THE WITNESS: -- it would be -- if it was
17 50 millimeters, then the load would be twice what you
18 had. 20 is given as a normalized value in 20 newtons
19 per 25 millimeters to secure -- it's a minimum value.
20 It must be at least that, from my recollection of the
21 patent.

22 Q. BY MR. ALBRIGHT: So any fastener and non-woven
23 between which you have 20-newtons per 25-millimeter of
24 retaining forces is going to be sufficient to hold a
25 diaper on a wearer?

1 A. That is the number given. It must be at least
2 that normalized value.

3 Q. And so, to answer that question, you don't need
4 to know the fastener width for it?

5 A. Yes, you do need to know the fastener width.

6 Q. Okay.

7 A. Because not all fasteners are 25 millimeters.

8 Q. What -- what if your fastener was
9 12 millimeters wide, would 20 newtons per 25 millimeters
10 be a sufficient retaining force between that fastener
11 and a non-woven to secure a diaper on a wearer?

12 A. No, that would not.

13 THE REPORTER: I'm sorry. Repeat?

14 Q. BY MR. ALBRIGHT: Yes.

15 So if your fastener was 12.5 millimeters
16 wide and it had a retaining force between it and a
17 non-woven of 20 newtons per 25 millimeters, would that
18 be sufficient to hold a diaper on a wearer?

19 A. Yes, it would.

20 Q. Okay. Same question, what if your fastener was
21 10 millimeters wide?

22 A. And if it had 20 newtons, it would just
23 qualify. Because remember, it -- the patent teaches and
24 says that at least 20 newtons. And so, if you had 20
25 newtons on a 10-millimeter wide fastener, that would be

1 sufficient.

2 Q. Well, if your fastener was 10 millimeters wide
3 and the retaining force was 20 newtons per
4 25 millimeters, you wouldn't actually get 10 newtons,
5 right -- I'm sorry. You wouldn't actually get 20
6 newtons, right?

7 A. You said it was 20 newtons. So yes, you would
8 get it.

9 Q. So if you had a fastener that achieved a
10 retaining force with a non-woven of 20 newtons per
11 25-millimeter, but the fastener was 10 millimeters wide,
12 would that fastener non-woven work to hold a diaper on a
13 wearer?

14 A. If that 10-millimeter wide fastener had a
15 measured retention force of at least 20 newtons, it
16 would hold the diaper on the person.

17 Q. Oh, so you said 20 newtons; was that correct?

18 A. Yes.

19 Q. So you're talking in a unit of force there,
20 right?

21 A. All along we have been talking about a unit of
22 force, capital N, the newton.

23 Q. Okay. And so, it's -- it's your opinion that
24 20 newtons of retaining force is required between a
25 fastener and a non-woven to hold a diaper on a wearer?

1 A. If you get a value measured by a reproducible
2 standard test, and for that 10-millimeter wide piece of
3 mechanical fastener, you achieve a load on that fastener
4 of 20 newtons, then you will have a fastener that will
5 hold the diaper on the patient.

6 Q. And so, with a 10-millimeter wide fastener and
7 20 newtons of retaining force, what would that be in
8 units of newtons per 25 millimeters?

9 A. It would be 2 1/2 times 20. So that would be
10 50 newtons per 25 millimeters.

11 Q. Okay. I understand.

12 So what are retaining forces that are
13 sufficient -- well, no. We've, kind of, been through
14 that. Scratch that.

15 When you say retaining forces sufficient to
16 secure the diaper on the wearer, who is the wearer?

17 A. The wearer can be a patient who is standing up
18 and ambulatory; a patient can be ambulatory and sitting
19 down in a wheelchair; a patient can be horizontal,
20 confined to a bed. All those three conditions must be
21 addressed.

22 Q. What about a patient who is engaged in physical
23 therapy?

24 A. The -- I see no reason why an ambulatory
25 patient could not be engaged in physical therapy.

1 Q. And what do you mean by ambulatory?

2 A. Ambulatory, given its common meaning, means
3 walking about and doing things that you and I would do
4 except that you and I are not wearing a disposable
5 diaper.

6 Q. What about a patient engaged in exercise?

7 A. There's nothing about a disposable diaper for
8 an incontinent patient that would prevent them from
9 doing any exercise while wearing it.

10 Q. Would a patient that was exercising place more
11 force on a diaper's fastener non-woven interface than a
12 patient who was bedridden?

13 A. It depends on the exercise. Because the change
14 in volume and motion between the hips and the abdomen
15 are not as dramatic as the movement of the legs,
16 movement of the arms. So you can engage in a pretty
17 wide range of exercise motions and still be able to keep
18 the diaper on your body.

19 Q. But there would be some exercise motions that
20 would stress a fastener non-woven interface more than it
21 would be if the patient was bedridden?

22 A. It's always conceivable that somebody would
23 have an exercise mode that did put high strains on the
24 disposable diaper, but that may, because it's a
25 releasable fastener, simply pop the fastener and it

1 needs to be closed again.

2 Q. And would retaining forces sufficient to secure
3 a diaper on the wearer depend on the wearer's size?

4 A. To some extent. But when you put the diaper on
5 the patient, it -- you close it according to the
6 dimensions of the patient. And if you've chosen the
7 correct size, you're in good shape.

8 Q. But would a diaper designed for a large person
9 need to support larger fastener retaining forces than a
10 diaper designed for a smaller person?

11 A. Not necessarily so. Because the hips are fixed
12 in dimension, the crotch doesn't move when you're doing
13 exercises, the groin dimension around the gluteus
14 maximus is not going to change. It's hard to say. It
15 depends on the exercise, but I wouldn't expect major
16 changes to occur going from a large person to a small
17 person.

18 Q. So fastener retaining forces that are
19 sufficient to secure a diaper on a small person are also
20 going to be sufficient to secure a diaper on a larger
21 person. Am I understanding that correctly?

22 A. Remember the patent is saying that that is the
23 minimum force, and there may be some fluctuation --
24 small fluctuations there, but generally, yes.

25 Q. So if there was a diaper that had retaining

1 forces that were sufficient to hold the diaper on a slim
2 wearer who was bedridden, would you say that those
3 retaining forces were sufficient to secure the diaper on
4 the wearer?

5 A. Yes.

6 Q. Okay. Even if that patient then got up and
7 walked around and then the diaper popped off, or would
8 that change your opinion?

9 A. It wouldn't change my opinion.

10 Q. Okay. So provided that the diaper has
11 retaining forces sufficient to hold the diaper on the
12 wearer while the wearer is -- is laying still, that's
13 going to be sufficient retaining forces to secure the
14 diaper on the wearer?

15 MS. DALEY: Objection to the form.

16 THE WITNESS: I'm waiting for the question.

17 Q. BY MR. ALBRIGHT: Oh, okay. Yeah. So if I
18 understand you correctly, if we had a diaper on a slim
19 wearer with fastener retaining forces that were
20 sufficient to hold that diaper on the wearer while they
21 were laying in bed, that would satisfy the requirement
22 for sufficient retaining forces to secure the diaper on
23 the wearer, correct?

24 A. Yes.

25 Q. And that's -- that's true even if that patient

1 then engaged in another activity and the diaper popped
2 off?

3 A. Yes. I'm sure you can determine some extreme
4 exercise which would cause the diaper to pop one of the
5 closures, but that, in itself, is not a problem, and it
6 would have to be a pretty extreme exercise to do it
7 under the circumstances which you described.

8 Q. Okay. And so, if -- if a diaper has sufficient
9 fastener retaining forces to hold onto -- in proper
10 position -- onto a wearer laying in bed, it's likely
11 that even if that wearer gets up and ambulates, the
12 diaper is not going to pop off?

13 A. For most instances, absolutely right.

14 Q. Okay. I'd like to go ahead and introduce
15 Karami 626, which is Exhibit 1004 in the 788 patent
16 proceeding.

17 (Exhibit 1004 was marked for identification.)

18 THE WITNESS: I have it.

19 Q. BY MR. ALBRIGHT: Okay. Great. And I'd like
20 to -- I'd like you to turn to Karami 626's figures 9 and
21 10.

22 A. I have that.

23 Q. Great. Is this a T-shaped diaper shown in
24 figures 9 and 10?

25 A. No.

1 Q. What kind of diaper is shown in figures 9 and
2 10?

3 A. It -- it -- it's a sketch of what would be
4 considered to be a typical diaper.

5 Q. How would a user put this diaper on?

6 A. The user may not put this on by themselves. It
7 may be put on by somebody else. An example would be
8 that the patient is lying flat, the back of the diaper
9 is about at the waist underneath the patient, the
10 absorbant core, not unlike a T-diaper, is brought up
11 between the legs, and it's fastened at the waist. But
12 the fastening at the waist is -- is not described in
13 detail, so it's hard to understand what is going on
14 there.

15 Q. So where do fastener 76, for example, attach?

16 A. It shows that those fasteners are attached on
17 the wings between the top part and the front -- the back
18 part and the front part of the diaper.

19 Q. Is it possible for fastener 76 to attach to the
20 main part of the diaper?

21 A. Not according to the illustration.

22 Q. So what if the figure 9 and 10 diaper were worn
23 by a smaller-waisted person?

24 A. It would still be attached to the wings and
25 probably not as tight. Because there is no discussion

1 about the nature of the fastener and the extent of the
2 fastening surface. So it's -- it's hard to comment on
3 that. I think we're handicapped not knowing what is
4 meant by those pictures.

5 Q. So I'd like you to take a look at Karami 626 at
6 paragraph 55.

7 A. Paragraph 50 -- excuse me?

8 Q. Paragraph 55.

9 A. Thank you. I see it.

10 Q. So here, Karami 626 states that, It will be
11 appreciated by those skilled in the art that the same or
12 analogous improvements in the fit, appearance, and
13 economy of diapers 14, according to the present
14 invention, may be realized, right?

15 A. Yes, but that -- I see that.

16 Q. And Karami 626 is discussing figures 9 and 10
17 specifically here, right?

18 A. That's correct.

19 Q. So what are the improvements in the fit that
20 Karami 626 is describing here?

21 A. You know, having read the patent, I really
22 don't know.

23 Q. Would a POSITA understand what Karami 626 was
24 referring to with "improvement" --

25 (Reporter clarification.)

1 MR. ALBRIGHT: Oh, I'm -- okay. So,
2 POSITA, P-O-S-I-T-A.

3 Q. BY MR. ALBRIGHT: And actually,
4 Mr. Butterworth, are you familiar with the term POSITA?

5 A. Yes, I am, Mr. Albright. Thank you for at
6 least catching me on that. There will be other words I
7 may need your help, as well.

8 Q. Sure. So would a POSITA, or a person of
9 ordinary skill in the art, understand what improvements
10 in the fit Karami 626 was describing in paragraph 55?

11 A. I think it would be difficult for them to do
12 that because everything in 626, up to that point, has
13 been dealing with a T-shaped diaper. And the T-shaped
14 diaper, as you would recognize, is -- is quite different
15 from a conventional diaper. And in fact, conventional
16 diapers were developed to overcome the inadequacies of
17 the T-shaped diaper and brought on new technologies
18 peculiar to themselves.

19 So I think a POSITA is going to have great
20 difficulty understanding what that paragraph means in
21 the context of a big discussion on T-shaped diapers.

22 Q. So can we turn to Karami 626 at paragraphs 10
23 and 11?

24 A. Yes. I see those paragraphs.

25 Q. And so, in paragraph 10, Karami 626 explains

1 that a fastener assembly provides size adjustability,
2 right?

3 A. Well, it says that, but it also says the
4 fastener assembly provides adjustability or other
5 features at the cost of only an additional mini-hook
6 fastener element, and the -- the -- the diagrams 9 and
7 10 just use single fasteners as would a diaper of that
8 sort. So that's confusing.

9 Excuse me.

10 Q. Sure.

11 Well -- and then in paragraph 11, he
12 explains that his disposable article can be a diaper, a
13 T-shaped brief, or a pull-up, right?

14 A. True. But in looking at figures 9 and 10,
15 unfortunately all we have to go on is that there is a
16 fastener, apparently, holding onto the front -- excuse
17 me -- to the front of the wings of the diaper. And yes,
18 you can move the closure down the wings or across the
19 front. It's not clear where -- where the extra closure
20 would go or how it would be used to adjust the size.

21 I'm just saying it's a little difficult
22 because the information is very sparse, and it would be
23 hard for a person of skill in the art who's looking to
24 make a product that's really going to perform to figure
25 out from that what -- what he would do with the

1 fasteners.

2 Q. And when you say say the closure, are you
3 talking about element 76?

4 A. I'm sorry. Closure -- I should say that
5 you've -- you've got two parts to a closure, you've got
6 the hooks and you've got the loops. And so, the
7 closure, when it's engaged, would have to be positioned
8 somewhere on the wing -- on the front or back of that
9 wing to ensure fit.

10 And that's certainly true when you look at
11 figure 8, which is one of the products referenced in
12 paragraph 10, and the closure, which is shown in
13 phantom, what it is attaching to is not clear, and
14 that's why I say I'm having difficulty with figures 9
15 and 10 to know what T-shaped diaper improvements I can
16 use on that shape of product.

17 Q. Well, let's look at Karami 626 at paragraph 7.
18 Maybe it will help.

19 A. I see that paragraph. Yes.

20 Q. And do you agree that paragraph 7 applies to
21 Karami's figures 9 and 10?

22 A. I believe that that applies to all the T-shaped
23 diapers in Karami 626. Moving to a disposable diaper
24 like that, that could work, but we don't know that that
25 is exactly what he's talking about.

1 Q. So it's your opinion that figures 9 and 10 may
2 not include a fastener assembly consisting exclusively
3 of a mini-hook fastener element without any mini-loop
4 fastener element beyond a conventional non-woven
5 material?

6 A. The way figure 9 and 10 are drawn, it could be
7 the more conventional type of fastener, that is, not
8 using a mini-loop fastener that is part of a non-woven,
9 but using a hook fastener which is engaged to a loop
10 fastener, both of which are made as a combination.

11 Q. So let's -- let's look at Karami at paragraph 6
12 as well -- Karami 626. I'm sorry.

13 A. I have it. Now let me a moment read it,
14 please.

15 Q. Of course.

16 A. Yes. I -- I see that. I understand it.

17 Q. So Karami 626, in this paragraph 6, is
18 disparaging the use of a dedicated mini-loop fastener
19 like you just described, right?

20 A. Yes.

21 Q. And so, would a POSITA expect his figure 9 and
22 10 diaper to utilize a dedicated mini-loop fastener?

23 A. I'm sorry. Could you ask the question again,
24 please?

25 Q. Sure.

1 So Karami 626 disparages the use of a
2 dedicated mini-loop fastener, right?

3 A. Yes.

4 Q. And so, in view of that, would a person of
5 ordinary skill in the art understand his figure 9 and 10
6 diaper to use a dedicated mini-loop fastener?

7 A. It could, but because, as I said, 9 and 10 are
8 showing you a different style of diaper than the
9 arrangement for the T-shaped diaper that occupies most
10 of the patent. So the -- the POSITA would be looking at
11 both options.

12 Q. But Karami 626's invention is the use of a
13 conventional non-woven as the loop material in a hook
14 and loop closure system, correct?

15 A. Karami 626 is teaching the use of non-wovens
16 that have the ability to engage with a closure made up
17 of hooks.

18 Q. And so, wouldn't you expect that sort of
19 closure system to be present in his figure 9 and 10
20 diaper?

21 A. It could be. Yes.

22 Q. In fact, if we look back at Karami 626 at
23 paragraph 11, he even refers to a diaper as a preferred
24 embodiment of his invention, right?

25 A. Well, what he's referring to goes back to

1 paragraph 2. In paragraph 11, he's saying the present
2 invention relates to an absorbant having a fastener
3 element that doesn't require a loop providing landing
4 zone that is a non-woven.

5 Q. And then in paragraph 11, he goes on to say,
6 Such a disposable article in one preferred embodiment is
7 a diaper, right?

8 A. Yes. I see that.

9 Q. And so, looking back to figures 9 and 10, to be
10 consistent with the portions of Karami 626 we just read,
11 that diaper would have a non-woven that was the loop
12 material for engaging with a hook-type fastener,
13 correct?

14 A. It could be, yes.

15 Q. And what else could it be?

16 A. I don't know because Karami is silent on that.
17 The other illustrations in the patent are pretty --
18 pretty comprehensive. In the case of figures 9 and 10,
19 we only see the region where the fastener can be applied
20 as being very small, and we're not informed about how
21 the fastener is attached. The extent, for example, that
22 you would expect to be shown for an adjustable diaper is
23 absent. So we're left to guess the span over which
24 those fasteners can be engaged.

25 Q. But there is a span over which those fasteners

1 can be engaged, correct?

2 A. It's a very short span where the fastener is
3 and to the extent that there is interface contact
4 between the front and back wings.

5 Q. Could fastener 76 engage at the front part of
6 the diaper where element 22 is, for example?

7 A. Only if the front part of the diaper were
8 covered with an appropriate mini-loop material.

9 Q. What if the front part of the diaper was a
10 backsheet non-woven, like the one Karami describes as
11 suitable for engaging a fastener?

12 A. If it had a mini-loop fastener attached to a
13 moisture barrier, that could be made to work, but that
14 is not what is shown here.

15 Q. But what if, instead of a mini-loop fastener,
16 it was just the non-woven of a backsheet?

17 A. Then you would have to -- you would not have a
18 mini-loop area where you could apply the fastener.

19 Q. But Karami 626's fasteners are specifically
20 designed to engage a conventional non-woven, right?

21 A. No.

22 Q. So let's go back to Karami at paragraph 7 --
23 Karami 626 at paragraph 7.

24 A. I have it.

25 Q. Here he explicitly says -- he talks about a

1 fastener assembly consisting exclusively of a mini-hook
2 fastener element without any mini-loop fastener element
3 beyond a conventional non-woven material, right?

4 A. I see that. Yes.

5 Q. So Karami 626's fastener is -- well, scratch
6 that.

7 Karami 626's system is a fastener that
8 engages with a conventional non-woven material, right?

9 A. There are many types of non-wovens. You need
10 to have a non-woven which will engage with a hook-type
11 fastener to make a closure. One of the design features,
12 which is very important in making disposable diapers, is
13 that you choose the right non-woven to do the function
14 of that non-woven at that particular point in the
15 design. And to say you can take a conventional
16 non-woven, to me, does not mean it will necessarily
17 attach to the surface. The surface has to be receptive
18 to the hooks.

19 Q. But going back to figures 9 and 10, if the
20 backsheet of this figure 9 and 10 diaper included the
21 non-woven that Karami 626 describes as engageable as a
22 hook-type fastener, then the fasteners could engage with
23 the main part of the diaper, right?

24 A. If the -- if the drawing in figures 9 and 10
25 showed a mini-loop fastener covering the backsheet,

1 then, yes, the hooks would engage, but that's not what's
2 shown or described.

3 Q. Well, setting aside the mini-loop fastener,
4 what if the backsheet of the diaper itself was a
5 non-woven material like Karami describes as engageable
6 with a hook-type fastener, could the hook-type fasteners
7 then attach to the main part of the diaper to the
8 backsheet non-woven?

9 A. If that were the case, they could.

10 Q. And if that were the case, if you had a
11 larger-waisted wearer, the fasteners might attach to the
12 wings, right?

13 A. As it's shown, the only place that the
14 attachments occur are on the wings.

15 Q. But if the diaper's backsheet were one that
16 Karami describes as engageable with hook-type fasteners,
17 if you had a smaller-waisted wearer, you could then
18 attach those fasteners to the main part of the diaper to
19 the non-woven?

20 A. That could be.

21 Q. I'd like to go back to your declaration and
22 specifically paragraph 166.

23 A. That was paragraph which?

24 Q. 166, please.

25 A. Thank you. Give me one moment, please.

1 Q. Of course.

2 A. Yes. I see that.

3 Q. Okay. And I want to ask you about the last
4 sentence. There you explained, discussing figures 9 and
5 10, that the most one of skill in the art would take
6 away from this embodiment is that any backsheet covering
7 the diaper would have to function more like the wings in
8 a T-shape brief embodiment in order to be able to retain
9 the diaper on the wearer, right?

10 A. Yes.

11 Q. So how would a backsheet covering the diaper of
12 figures 9 and 10 function like the wings in a T-shaped
13 brief embodiment?

14 A. For that to happen, they would have to have a
15 backsheet which was more of a belt around the top of the
16 diaper.

17 Q. How would the backsheet function like a belt in
18 a T-shaped diaper?

19 A. If you look at -- if you look at the first page
20 of the patent and you see the illustration shown there
21 on page 1, you will see that the positioning of the
22 fasteners is within the geometry of a belt going around
23 the top of the diaper.

24 Q. And so, that sort of geometry -- well, scratch
25 that.

1 With that sort of geometry, how would a
2 person of ordinary skill in the art achieve size
3 adjustability?

4 A. It's not clear. Because, as I've said in my
5 declaration, we don't know from Karami whether there is
6 a backsheet or front sheet or what it would be made of.
7 So as far as we know, it's just got a front portion and
8 a back portion. And if you're looking for a person of
9 skill in the art looking at this is, as I've said
10 several times already, they would have difficulty
11 understanding what figures 9 and 10 really show in terms
12 of all the components. And all we have is an outline
13 sketch. We don't have the indication where the
14 components are. And so, one would fall back to the
15 comment just made, that it would have to function more
16 like a T-shaped diaper to make any sense of the
17 improvements that Karami is talking about. And if a
18 belt were in place there, that would allow for placement
19 of a hook, but here again, it's not clear exactly where
20 that would have to be and whether the hook would be on
21 the front or outer surface of the front at the front of
22 the diaper.

23 Q. So if fastener 76 were attachable -- let's see.
24 Backing up.

25 If -- if you could do it, if you moved

1 fastener 76 toward one another as the diaper is drawn in
2 figure 10, that diaper would then fit on a
3 smaller-waisted person, right?

4 A. Let me refer back to that, please.

5 Q. Sure.

6 A. Could you ask the question again --

7 Q. Sure.

8 A. -- so I can look at the picture at the same
9 time?

10 Q. Sure. So if it were possible and you moved
11 fasteners 76 toward one another in figure 10, that
12 diaper would then fit around a smaller-waisted person,
13 right?

14 A. That would, except for the fact that Karami
15 doesn't teach the backsheet of the front and back
16 portions of -- in a T-shaped diaper would be able to
17 hold a fastener to secure it on the wearer. So we're
18 missing some information there.

19 Q. Well -- and if it were possible and you moved
20 fastener 76 away from one another in figure 10, that
21 diaper would then fit on a larger-waisted wearer, right?

22 A. That would be the normal process to use for any
23 disposable diaper. That of and by itself isn't shown
24 here, but on other diapers, yes, that can be done.

25 Q. So let's look at Karami 626 at paragraphs 15

1 and 16.

2 A. I have them. Allow me to just read them
3 quickly, please.

4 Q. Of course. Take your time.

5 A. Yes. I see those.

6 Q. So in paragraph 15, he says, The article
7 comprises non-woven defining an exposed outer surface of
8 at least one of a front sheet and a backsheet, right?

9 A. Yes, I see that.

10 Q. Is that not a description of the figures 9 and
11 10 diaper?

12 A. No. Because it doesn't point to it. It's a
13 general expression talking about a third preferred
14 embodiment because it's talking about T-shaped diapers.

15 Q. Well, then let's turn to paragraph 16 right
16 below it. There he says, Preferably the non-woven is in
17 the article backsheet or, in the case of a T-shaped
18 brief, the article wings, right?

19 A. Yes, I see that.

20 Q. So if it's not a T-shaped brief, the non-woven
21 is preferably in the article backsheet, right?

22 A. That's what it says, but it doesn't connect it
23 with figures 9 and 10.

24 Q. Well, figures 9 and 10 isn't the T-shaped
25 brief, right?

1 We agree on that?

2 A. Correct.

3 Q. And so, if we give -- if we read paragraph 16,
4 it indicates that the non-woven would be in that
5 article's backsheet, right?

6 A. -- the same --

7 MS. DALEY: Objection to the form.

8 THE WITNESS: Excuse me. Could you ask the
9 question again?

10 Q. BY MR. ALBRIGHT: Sure.

11 So reading paragraph 16, that would
12 indicate that the non-woven would be in that diaper's
13 backsheet, right?

14 A. It doesn't say that, and normally if there is a
15 figure, it will refer to it, but we are left to guess
16 which that would be.

17 And you are talking about a person of skill
18 in the art. If you're trying to get the alleged
19 improvements from 626 into a diaper, you'd have to look
20 only at the wings of a T-shaped diaper for creating a
21 surface, not the front and back portions of figures 9
22 and 10. And in the T-shaped diaper, those surfaces are
23 wrapped around the belt and present on the front or back
24 surfaces of the belt, and everything in that T-shaped
25 diaper fastens to the belt.

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1 So I -- I have to suggest that this is not
2 obvious to take the T-shaped diaper information and
3 simply paste it onto a disposable diaper. We have to --
4 you have to adapt quite significantly to put the
5 fasteners and the closure on figures 9 or 10 to really
6 get a diaper that would perform.

7 Q. What kind of adaptations would you have to
8 make?

9 A. Well, you'd have to know whether there were
10 wings or not on the diaper because that makes all --
11 makes a big impression on how you can attach the
12 fasteners. And the other problem is that when you are
13 putting in adjustability into a product, you have to
14 consider other points in the diaper which have to
15 perform, and I'm talking, for example, about the leg
16 openings.

17 And when you have an over-sized diaper
18 being put on an under-sized patient, it's one thing to
19 be able to get the -- the hooks and loops to engage to
20 pull the product tight around the waist, but it's
21 another thing to, at the same time, seal the leg opening
22 so that the product doesn't leak.

23 And therefore, figure 9 is leaving some
24 things out that are important in trying to understand
25 whether or not the T-shaped modifications would fit on

1 that product. It would have to be more descriptive for
2 us to know and then be able to take that information and
3 use it intelligently.

4 Q. I know we've been going for a little over an
5 hour. Does anyone want to take a short break or --

6 A. Mr. Albright, thank you for the offer. I would
7 like to take just a five-minute break. And I thank you
8 for bringing that up.

9 Q. Of course.

10 (A recess was held from 10:10 a.m. until 10:17 a.m.)

11 MR. ALBRIGHT: So we're back on.

12 Q. BY MR. ALBRIGHT: Mr. Butterworth, I'd like to
13 introduce Damaghi, which is Exhibit 1028 in the 788
14 patent proceeding.

15 (Exhibit 1028 was marked for identification.)

16 THE WITNESS: I have it.

17 Q. BY MR. ALBRIGHT: Great. And I'd like to point
18 you to paragraphs 6 and 7 of Damaghi.

19 A. Let me just quickly read them.

20 Q. Of course. Take your time.

21 A. Yes. I've read it.

22 Q. Thank you.

23 So in paragraph 6, Damaghi is discussing US
24 patent application publication number US20030220626A1,
25 correct?

1 A. Yes.

2 Q. And that's Karami 626, isn't it?

3 A. Yes.

4 Q. And he says -- Damaghi being "he," so scratch
5 that.

6 Damaghi says that, Karami's loopless
7 fastener system allows for diapers or briefs in which
8 the entire outer surface of the diaper or brief can
9 function as a landing zone for hooks, right?

10 A. That's what it says here. Yes.

11 Q. And so, for Karami's figure 9 and 10 diaper,
12 with what Damaghi is describing here, the entire outer
13 surface of the diaper would function as a landing zone
14 for hooks, right?

15 A. No. Because Karami only talks about size
16 adjustability by using the wings, so one would
17 concentrate on the wings.

18 Q. Just a couple more questions on figures 9 and
19 10. I believe you testified earlier, and correct if me
20 if I'm wrong, that if you could move fasteners 76 closer
21 to one another then they're shown in figure 10, the
22 figure 10 diaper would fit a smaller-waisted person
23 from --

24 A. Hang on. May I just turn to that, please?

25 Q. Of course.

1 A. Thank you. Ask the question again, please.

2 Q. So and -- and we've -- we've gone through this,
3 so I apologize. Just, I'll be quick. If -- if you
4 could move fasteners 76 closer to one another in the
5 figure 10 diaper, that diaper would then fit a
6 smaller-waisted person, right?

7 A. If you could do that, it would fit around the
8 waist, but it would not necessarily fit properly around
9 the legs. And because Karami is only talking about
10 adjustability involving the wings, we're talking only
11 about the wing area.

12 Q. Okay. And if you could move fastener 76 and
13 figure 10 further away from one another, the figure 10
14 diaper could fit around the waist of a larger-waisted
15 wearer?

16 A. If the wings were extended to cover that
17 additional span, yes.

18 Q. And what we're discussing here is size
19 adjustability, right?

20 A. Yes.

21 Q. Okay. So moving back -- and I'm sorry for all
22 the flipping around.

23 Moving back to your declaration, so
24 Exhibit 2004, I'd like to ask you about your paragraph
25 92.

1 A. Yes. I see that.

2 Q. And you testify here that Karami 626 does not
3 describe the further treatment used to create the fuzzy
4 non-woven, right?

5 A. What I said was calendering usually ties down
6 loose fibers and will not create fuzzy non-wovens.

7 Q. And then you go on to say that Karami 626 does
8 not describe the further treatment used to create the
9 fuzzy non-woven, right?

10 A. Yes.

11 Q. What is a fuzzy non-woven?

12 A. Where fibers are visible standing up away from
13 the plane of the non-woven. It's loose fibers that
14 are -- very few fibers, but you can see a fuzziness on
15 the surface. That was Karami's definition, not mine,
16 and I'm interpreting what I think he meant by that.

17 Q. Is -- is fuzzy non-woven a term of art?

18 A. Fuzzy, if you want, I can pull a dictionary
19 down and describe it. It is a term used in the business
20 and characterizes the presence of fiber ends on the
21 surface of a non-woven as opposed to a non-woven that
22 has been calendered and usually all the fibers are laid
23 flat in the plane of the non-woven unless it's been
24 treated to create a three dimensional effect of some
25 sort. It is not the kind of surface to which you would

1 consider attaching hook closures.

2 Q. Why wouldn't you consider attaching hook
3 closures to a fuzzy non-woven?

4 A. Because the -- usually the fuzzy non-woven is
5 fibers that are only attached at one end, and that
6 fuzziness is not -- does not allow the fibers to snag
7 the hooks from a closure to create a close -- closure
8 system. Fuzziness is also -- it doesn't define the
9 density. It's just a very gentle -- excuse me -- very
10 general definition of the presence of fibers on a
11 surface.

12 Q. But Karami 626 is non-woven that he's
13 describing here in his paragraph 62 and 63 -- so
14 actually, let's just pull up Karami at paragraph 62 and
15 63, Karami 626.

16 A. Okay. Yes. I've read that.

17 Q. And so, the non-woven he's describing here is
18 intended to engage with a hook-tie fastener, right?

19 A. Yes.

20 Q. And you testified that a fuzzy non-woven would
21 not be a suitable non-woven for engaging with a hook-tie
22 fastener, right?

23 A. Well, Damaghi goes on to describe that the
24 engagement of the hooks is into the pores present or
25 what he calls interstices in the non-woven.

1 Q. And in sticking with fuzzy just for a couple
2 more questions, is it possible that Karami 626's
3 understanding of fuzzy is different than the one that
4 you described to me?

5 A. No. If you look at paragraph 63 in Karami, he
6 says, The bonded fibers, that is, the bonded fibers in
7 the non-woven, define there between a plurality of
8 interstices, also called pores, apertures, openings,
9 prefer -- E-T-C.

10 A preferred non-woven has a 30 -- 13 to 50
11 GSM spunbond where the fibers have an average size of
12 1.3 to 3 denier, and the average size of the interstices
13 is at least 644 microns.

14 While the bonding pattern may be uniform in
15 both machine direction and cross direction, preferably
16 the pattern differs for the machine direction and cross
17 direction. See so and so.

18 So he's talking about the importance of
19 interstices into which the hook elements will, in fact,
20 penetrate. And the fact that the non-woven is fuzzy
21 is -- is just incidental.

22 Q. Aren't all non-wovens, to some extent, fuzzy?

23 A. No.

24 Q. Aren't most non-wovens, to some extent, fuzzy?

25 A. No.

1 Q. So is it typical non-woven, to some extent,
2 fuzzy?

3 A. It can be, but fuzziness is something you
4 avoid. First of all, most non-wovens are wound up on
5 rolls, and that tends to flatten them. Biggest use of
6 non-woven is on diaper topsheets. And if you have
7 children, go and grab one of those diapers and look at
8 the topsheet. It is very, very smooth. That's the
9 classic example of a non-woven.

10 Non-wovens that are used on a band-aid,
11 they're not fuzzy. Big volumes, it's not fuzzy. Look
12 at carpet backings which are non-woven, they're not
13 fuzzy.

14 You can make a non-woven fuzzy. It's
15 difficult to handle because fuzziness means the surface
16 is going to pill, and when it pills, it's an undesirable
17 texture.

18 Q. So sticking with Karami 626's non-woven here,
19 fuzziness, I believe you said, are loose -- fibers with
20 a free end. Is that fair to say?

21 A. A lot of fibers with a free end. Fibers that
22 are raised up from the surface. And as I say, that's
23 part of what Karami is talking about. But when he talks
24 about interstices, he's talking about holes in the body
25 of the non-woven. That is, in the -- below the level of

1 the fuzziness, and that's where the hooks can attach.

2 I'm sure some of the hooks will attach to a
3 fuzzy part, but fuzziness isn't the characteristic one
4 is looking for when you're trying to make a strong
5 closure where hooks and loops engage and give you a
6 strong closure retaining force.

7 Q. Okay. So you wouldn't expect a fuzzy non-woven
8 to engage a hook-type fastener better than a non-fuzzy
9 non-woven?

10 A. If both non-wovens have apertures into which
11 the hooks can penetrate and catch, that will be fine,
12 and any difference between a fuzzy and a non-fuzzy
13 non-woven would, in my book, be very, very small.

14 Q. Okay. So you mentioned interstices, right?

15 A. Yes. Interstices, it's a ten-dollar word
16 describing the holes between the fibers in the
17 non-woven.

18 Q. Interstices, did I say that right?

19 A. You did.

20 Q. I'm going to try to keep saying that right. I
21 may fail.

22 So what is an interstice of a non-woven?

23 A. Unfortunately, Karami doesn't define it, but
24 what it is, he's attempting to say that, when you have
25 an array of fibers interconnected in a non-woven, that

1 there are visible holes in that non-woven, and you're
2 counting upon those holes to accept the end of a hook or
3 a mushroom, whatever the rough surface is, to engage the
4 non-woven and be able to resist separation.

5 Q. Does an interstice extend all the way through a
6 non-woven?

7 A. Yes, it can.

8 Q. Okay. Does it have to?

9 A. Doesn't have to. You need to have spacing
10 between the fibers into which one of these hooks -- and
11 sometimes it looks more like a mushroom -- can actually
12 mechanically intrude, and so, when you try to separate
13 it, it hooks onto fibers and that retains or resists
14 pulling it out.

15 Q. Okay.

16 A. So you strike a balance between no fastening
17 and overly-tight fastening that you can't remove,
18 because all these fasteners have to be what we call
19 re-closeable. You have to be able to close them, then
20 you've got to inspect the diaper to see if it's been
21 used or not.

22 Q. And so, what is the size of an interstice?

23 A. It can be anything from one micron to a
24 thousand microns. And that means it can be anything
25 between thousandths of an inch and 644 microns, I forget

1 what that is, but it's -- a micron is a thousandth of a
2 millimeter.

3 Q. So if we're looking at an interstice, how do we
4 measure its size?

5 A. Karami doesn't tell us.

6 Q. What's your understanding of what the -- what
7 the size of an interstice is as Karami describes it?

8 A. As I said, it can be anything from a thousandth
9 of an inch to an eighth of an inch, typically. It's a
10 wide range. And what you have to do is try to
11 characterize the range so that you get a uniform number
12 of holes into which the hooks or asperities can engage.

13 Q. But is the size of an interstice expressed as a
14 unit of transverse dimension?

15 A. It -- Karami, unfortunately, doesn't tell us,
16 and so, I can't answer your question as it pertains to
17 the work we're doing here.

18 Normally, you would do a scan of a surface,
19 and you could measure the holes optically by the area of
20 the individual holes, or you can measure the holes
21 indirectly by measuring the air flow through the
22 non-woven, and from that information, getting an idea of
23 what the hole-size distribution was.

24 Because you're always going to have some
25 very small holes, some very big holes, and then a

1 cluster that's in the middle which should be the target
2 you need to make a suitable attachment surface.

3 Q. But it's not clear, precisely, what about an
4 interstice Karami is describing when he says the size of
5 the interstice is 644 microns. Do I understand that?

6 A. You're correct.

7 Q. Okay.

8 A. We don't know the extent to which -- how Karami
9 measured it, and we don't know if that is the average
10 size, or the modal size, or at least that size. It's a
11 fairly big hole that he's talking about and one that I
12 would have -- from my professional experience, I would
13 think he would have been looking for -- I think I
14 measured it. I translated it.

15 It's about a -- 644 microns is very large
16 when you compare it with a typical fiber diameter. And
17 a typical fiber, the type of polyester or polypropylene
18 fibers we're talking about here, is 10 to 20 microns in
19 diameter. So he's got large holes, and I don't think
20 having all those large holes would help him. He needs
21 to have a lot of smaller holes.

22 Q. Again, I believe you were discussing your
23 paragraph 92, right?

24 A. That's right. Yes.

25 Q. So what do you mean when you say, in your

1 paragraph 92, that Karami 626 is also loose with the
2 numbers that he provides?

3 A. The numbers that he's using -- for example,
4 he's talking about a basis weight of 32 -- excuse me --
5 13 to 50 grams. That's, kind of, a very large range,
6 and it indicates to me or to a person of skill in the
7 art that the weight isn't that important.

8 And so, he has to try and bring that down
9 to a choice of an optimal size, and he may get that
10 optimal size by measuring and deciding that, if he gets
11 that particular weight, he's going to get that
12 particular closure behavior.

13 I don't think he does it. I'm not sure
14 where his optimal values come from. And so, we're left
15 with a lot of numbers, but it's hard to tie down exactly
16 what we should be doing.

17 Q. Have you ever seen a non-woven with interstices
18 that were 40 times larger than the fibers?

19 A. I'm sure I have.

20 Q. What would that look like?

21 A. It would look -- well, for example, it would be
22 porous, and if I held it up to the screen here, it's
23 about -- almost half a millimeter in size. If I held it
24 up to the light, you'd see points of light coming
25 through it.

1 Q. Would a non- -- would it be possible to make a
2 non-woven with interstices that were 40 times larger
3 than its fibers, that had a basis weight of 13 GSM?

4 A. Yes, it would. Because we have techniques
5 where you can take a sheet of fibers and you can -- you
6 use a high pressure water jet series, very --
7 needlepoints of high pressure water rearranging the
8 fibers in the non-woven, and you can get holes of any
9 size you want without damaging the fibers. So control
10 of hole size is not difficult.

11 Q. But does Karami 626 describe that sort of
12 treatment to produce his non-woven?

13 A. Not Karami 626.

14 Q. And so, I believe you testified earlier, and
15 it's also in your paragraph 92, that interstices -- I'm
16 sorry -- interstices that are 40 times larger than the
17 fibers will make it hard for a hook to engage the
18 fibers, right?

19 A. That's right. I think that the rule is you
20 want a large number of small holes rather than a small
21 number of -- excuse me -- you just need a lot of small
22 holes. Not too small, but small enough to allow the
23 hook to intrude.

24 Q. So I'd like to point you to Karami 626 at
25 paragraph 57.

1 A. All right. Let me read it. I have it.

2 Q. Sure.

3 A. I've read that. Yes.

4 Q. And so, here he talks about a preferred
5 fastener element, right?

6 A. Correct.

7 Q. And he says, Preferably, each pin has at a base
8 thereof an average diameter of at least 300, preferably
9 390 microns, and at the free end thereof, an average
10 diameter of at least 375, preferably 427 microns, right?

11 A. Yes.

12 Q. So Karami's preferred pin, under your
13 interpretation of his interstice size, would pass
14 completely through the interstice, right?

15 A. It would -- if -- if I -- as I said, I do not
16 know how Karami calculated the diameter. If it was a
17 perfect circle, which is unlikely, then the answer would
18 be, yes, it would be a loose fit.

19 But if it is a ragged perimeter around the
20 hole, then the -- the -- the little hook piece, which is
21 not a hook piece in his article, you see it's more like
22 a mushroom, that would engage.

23 Q. And so, you are interpreting the interstice
24 size as a diameter, if I understood you correctly?

25 A. No. I'm just taking it as 644 microns and

1 finding that to be too large for the fibers that we're
2 talking about and the hook types.

3 Q. But it's a -- the size of the interstices, in
4 your view, is measured in a one dimensional unit; is
5 that fair?

6 A. I am assuming that it is some sort of
7 circularity and that there is doubt as to whether the
8 hook-type element will engage sufficient fibers at that
9 particular stated diameter.

10 Q. So I'd like to turn your attention to Karami
11 626, paragraph 15, please.

12 A. I have read it.

13 Q. So here, he says, The average size of the
14 interstices is at least 644 microns squared, right?

15 A. Yes.

16 Q. Which is a different unit than he uses in his
17 paragraph 63, which is just microns?

18 A. I'm reading paragraph 15. You're -- direct me
19 to the line you're reading.

20 Q. Sure. It would be 1-2-3 --

21 A. I have it, I think. Yes.

22 Q. Line 8.

23 A. Yes. I've got it. Thank you.

24 Q. Sure.

25 A. Please ask the question again.

1 Q. Yeah. So there he says the average size of the
2 interstices is 644 microns squared, right -- at least
3 644 microns squared?

4 A. That's right. And that is --

5 Q. And that is different -- sorry. Go ahead. I
6 didn't mean to interrupt.

7 A. No, no. My apologies. That is a different
8 unit. So what he is doing is giving us the area of the
9 whole rather than implying it is a diameter of some
10 sort.

11 Q. If the average size of the interstices was at
12 least 644 microns squared as opposed to just microns,
13 would that change your opinion on the ability of the
14 non-woven to engage a type fastener?

15 A. It would, if I knew what he meant by that and
16 told me how he measured it.

17 Q. But he doesn't provide that detail, right?

18 A. He doesn't provide that information. And so, I
19 can't answer your question. And further to that, if I
20 look at paragraph 15, he -- he tells us that the
21 non-woven is 13 to 50 GSMs. That is, it's 13 grams per
22 square meter to 50 grams per square meter. And when you
23 have that kind of a range, you can't necessarily get the
24 interstices to all be the same average diameter or area.
25 13 to 50 grams is just too large a range, and he's

1 trying here to specify a particular non-woven, which he
2 doesn't do.

3 Q. Okay.

4 A. He gives us the fiber size, which is helpful,
5 but the size of the interstices -- you -- you just can't
6 determine how that will fit relative to the hooks
7 because we're missing information.

8 Q. And so, if I understood you, a non-woven's
9 basis weight is going to affect its interstices size?

10 A. Yes.

11 Q. Would a non-woven's fiber thickness impact its
12 interstice size?

13 A. Yes, it would.

14 (Reporter clarification.)

15 MR. ALBRIGHT: Of course.

16 Q. BY MR. ALBRIGHT: Would a non-woven's fiber
17 thickness or fiber size, I'm sorry, impact its average
18 interstice size?

19 A. Yes, it would.

20 Q. What -- so absent the water jet treatment or
21 aperturing that you mentioned earlier, what, other than
22 a non-wovens fiber size and basis weight, would impact
23 its average interstice size?

24 A. Whether it was calendared or not; how tightly
25 it was wound on the delivered roll; whether there was an

1 additional binder added to the fibers to hold them
2 together; the degree of hydro-entangling, which is
3 knotting the fibers together using pinpoint jets of
4 water; the whole range of characteristics.

5 For example, laminating a backsheet to a
6 non-woven will change the pore dimensions in the
7 non-woven.

8 Q. Is interstice size an important parameter to
9 know when assessing a non-woven's ability to engage a
10 loop-type fastener?

11 A. Yes, it is, and it can be helpful.

12 Q. Do the Beckert patents discuss interstice size?

13 A. Not to my knowledge.

14 Q. Was an average interstice size a typical
15 parameter to specify for a non-woven?

16 A. No.

17 Q. So I'd like to move on to Karami at paragraph
18 69.

19 A. Let me read it.

20 Q. Of course.

21 A. I've read it.

22 Q. Okay. So here, Karami 626 is explaining that
23 higher fastener retaining forces play an important role
24 psychologically for a wearer of a diaper, right?

25 A. Yes, that's correct.

1 Q. So what -- what -- what is he -- sorry.
2 Scratch that.

3 How do higher fastener retaining forces
4 play an important role psychologically for a wearer of a
5 diaper?

6 A. Not necessarily higher forces but adequate
7 forces that allow for the diaper to be releasably
8 fastened around a person. By that, that the fastener
9 can be undone and the diapers opened partially to
10 determine if there's any wetness in the diaper or
11 soiling and then allowing the fastener to be reclosed.

12 It can be that the sound of the -- of the
13 closure opening is a, sort of, audio reinforcement that
14 there is a fastener there and it's working. You can't
15 have it too high because then it starts distorting the
16 diaper. And you can't have it too low because then the
17 closure will open when you don't want it to open, that
18 is, when the patient moves.

19 Beckert is more specific and teaches that,
20 if you use certain fibers and make a fabric in a
21 particular way and emboss it a particular way, you will
22 get a force level appropriate to do what you want to do.

23 Here, Karami is talking about T-shaped
24 diapers and he's talking about how he understands a
25 closure to work.

1 Q. Well, and he says that a greater peel strength
2 provides reassurance to a wearer against accidental
3 opening of a facet assembly, right?

4 A. That's correct, but he doesn't specify what
5 that force is. So we're left to guess or use our own
6 experience.

7 Q. Of course. But is it fair to say that this is
8 a teaching that an area of the diaper that provides
9 higher fastener retaining forces is going to provide
10 reassurance against accidental opening of a facet
11 assembly to a wearer of the diaper?

12 A. It's a very general statement that one would
13 take to mean that the product -- ask the question again,
14 please.

15 Q. Sure. Wouldn't a POSITA understand this to be
16 a teaching that a user would be encouraged to fasten a
17 diaper to an area of the diaper that provided greater
18 fastener retaining forces because it would reassure the
19 person wearing the diaper -- or provide some assurance
20 to that person against accidental opening of the diaper?

21 A. You know, it's almost a throw-away phrase. I
22 think what they're saying there is the strength has got
23 to be adequate to hold it on, and each diaper
24 manufacturer has their own specifications as to what
25 that should be because diapers are constructed

1 differently and what one person might do to a disposable
2 diaper when turning over in bed will elicit forces at
3 the closures different from another design of diaper.

4 So in general, you -- let's see how to say.

5 He -- he's saying the size of interstices affects the
6 peel strength. That's correct. A higher pore size
7 provides greater peel strength. It's not so much the
8 higher pore size. It's the -- the higher number of
9 hooks that are engaged that affects the peel strength.
10 And you certainly don't want to have a zero peel
11 strength, but you need to have a peel strength that's
12 adequate to do the job. Greater is kind of nebulous.
13 It's got to be adequate.

14 Q. But fair to say what he's describing here is
15 that a greater peel strength is going to provide
16 reassurance to a wearer against accidental opening of a
17 facet assembly?

18 A. We don't know what greater peel strength is.
19 And I'm sorry if I'm being pedantic, but adequate peel
20 strength is what you need.

21 Q. Well, after reading this paragraph --

22 A. You can make the peel strength go greater and
23 greater and greater until it's ripping out the non-woven
24 to which it's attached. And so, you need to have either
25 some solid numbers that says, This is what you need to

1 have. He knows how to measure peel strength. We know
2 what peel strength means. He just says greater, and
3 that's too nebulous.

4 It's got to be adequate peel strength for
5 the fastener elements. Then a person of skill in the
6 art isn't just going to look at greater. He's going to
7 figure out what -- what adequate would be more him and
8 back-figure what he needs to do to make the non-woven.

9 I don't disagree with him saying higher
10 pore size can provide greater peel strength, but here
11 again, that's peculiar to whatever fastener he's using
12 on his products.

13 Q. So let's say you had two adequate peel
14 strengths with one higher than the other. Isn't Karami
15 teaching us here -- or a POSITA here, that the one --
16 the greater peel strength is going to provide
17 reassurance to the wearer that the diaper is not going
18 to accidentally open?

19 A. I don't see that. Because if it's adequate,
20 it's adequate. And any adequacy does have a range. You
21 will end up with a range of values for each combination
22 of closures that you create.

23 Q. But Karami 626 does say that that peel strength
24 plays an important role psychologically in providing
25 reassurance against accidental opening, right?

1 A. Yes, it does. And I say again, the peel
2 strength has to be adequate. It -- there's -- there's
3 no definition there of what they're talking about other
4 than peel strength. And so, what I'm saying is once you
5 get to a level of peel strength that's adequate for that
6 product under the most common wearing conditions, you
7 have adequate closure retention force.

8 Q. Okay. So I'd like to introduce Karami 772,
9 which is Exhibit 1003 in the 788 patent proceeding.

10 (Exhibit 1003 was marked for identification.)

11 THE WITNESS: I have that.

12 Q. BY MR. ALBRIGHT: Okay. And do you still have
13 Karami 626 handy? Because we're going to be referring
14 to both of them.

15 A. I can arrange for that. One moment.

16 Q. Thank you.

17 A. Yes, I have both.

18 Q. Okay. So let's start with Karami 626 at
19 paragraph 40.

20 A. I have paragraph 40. Let me just read it
21 quickly.

22 Q. Of course.

23 A. Okay. I have -- I have read paragraph 40.

24 Q. And here Karami 626 is explaining that his
25 hook-type fasteners can engage with his wing non-woven,

1 right?

2 A. Yes.

3 Q. Because this is -- this is discussing Karami's
4 T-shape brief 12, right?

5 A. Yes.

6 Q. And the engagement between that wing non-woven
7 and hook-type fastener is sufficient to secure the
8 diaper on both small- and large-waisted persons,
9 correct?

10 A. Yes.

11 Q. So let's then go to Karami 626 at paragraph 65.

12 A. I see that. I've read it.

13 Q. And so, the preferred basis weight of Karami
14 626's wing non-woven is from 20 to 40 GSM, correct?

15 A. That's what it says here, yes.

16 Q. And Karami 626's wing non-woven isn't water jet
17 treated, is it?

18 A. Not to my knowledge.

19 Q. And Karami 626's wing non-woven isn't
20 apertured, right?

21 A. That's right.

22 Q. Is it fair to say that Karami 626's wing
23 non-woven is a conventional non-woven?

24 A. No.

25 Q. What is unconventional about -- unconventional

1 about Karami 626's non-woven?

2 A. That it is a non-woven that, either by
3 pre-treatment or other means, does engage with a hooked
4 fastener.

5 Q. So let's --

6 A. Excuse me. He's talking about a spunbonded
7 non-woven.

8 Ask your question, please.

9 Q. Sure. So let's also look at paragraph 70 of
10 Karami 626.

11 A. I've read that, yes.

12 Q. And so, what he says here is his preferred
13 fastener element is preferred for use only with
14 conventional non-wovens, correct?

15 A. That's right. And by conventional, he is
16 talking about spunbonded non-wovens.

17 Q. Okay. So is it fair to say that Karami 626's
18 wing non-woven is a conventional spunbonded non-woven?

19 A. He is calling it that, but in 772, Karami talks
20 about the fact that you have to really work a spunbonded
21 material to make it perform properly as a closure
22 element.

23 Q. And so, is it your opinion that Karami 626's
24 wing non-woven is -- is not a conventional spunbonded
25 non-woven?

1 A. Karami is calling it a conventional non-woven.
2 I'm not sure what he means by the term conventional
3 here. What he does say is what he is talking about is
4 putting on a spunbonded non-woven with a basis weight of
5 34 GSM. And we know from Karami 772 that spunbondeds,
6 according to the teachings of Karami, need to be
7 wet-processed to give the surface of the spunbond
8 sufficient texture that it will engage with a hooked
9 closure.

10 Q. But we agreed that Karami 626's wing non-woven
11 for his T-shaped diaper isn't water jet treated, right?

12 A. No, but I think right here he's talking about
13 that. Excuse me one second.

14 Q. Sure. Take your time.

15 A. No, he is not.

16 Q. So what would make Karami 626's wing non-woven
17 an unconventional spunbonded non-woven?

18 A. The spunbonded non-woven which he has,
19 apparently, will engage a closure to give him the peel
20 strength that he needs.

21 Q. And so, the use of the non-woven is
22 unconventional, if I understand you correctly?

23 A. No. He's talking about spunbonds, and we're
24 hung up with the word conventional. There really is
25 nothing like -- there is no such animal as a

1 conventional non-woven. All non-wovens are different.

2 And in this case, like others, there are
3 non-wovens that you can buy that will engage with a
4 hook-type fastener, and there are a lot of non-wovens
5 that are made that will not engage with a hook-type
6 fastener. And even if they do engage with a hook-type
7 fastener, it may not be the range or minimum level that
8 is required to form a closure.

9 MS. DALEY: Jeremy, just -- I'm just going
10 to note by my calculation we've gone about an hour and
11 five minutes, so I'm -- at some point when you finish
12 here, it might be suitable for another break or even
13 possibly a lunch break.

14 MR. ALBRIGHT: Yeah. Actually, I'd love a
15 break, and I'm happy to do lunch now. It's whatever you
16 and Mr. Butterworth would like to do.

17 MS. DALEY: Mr. Butterworth, do you want a
18 break now, you want to continue, you want lunch?

19 THE WITNESS: I think lunch now would be a
20 good idea. I share Mr. Albright's concern about getting
21 lunch.

22 MR. ALBRIGHT: Yes. All right.

23 THE WITNESS: How long will lunch be
24 allowed?

25 MR. ALBRIGHT: It's totally up to -- up to

1 you guys.

2 THE WITNESS: I could suggest a 1:00
3 resume, if that makes sense to everybody else.

4 MR. ALBRIGHT: Sure.

5 MS. DALEY: That's acceptable to me.
6 Nicole?

7 THE REPORTER: Sounds good.

8 THE WITNESS: Good.

9 MR. ALBRIGHT: All right. Thank you both.
10 I'll see you at 1:00 your time.

11 (A recess was held from 11:20 a.m. until 12:02 p.m.)

12 MR. ALBRIGHT: Back on the record.

13 Q. BY MR. ALBRIGHT: All right. I'd like to step
14 away from the Karami for a minute and direct your
15 attention to Damaghi, which I believe was previously
16 introduced as Exhibit 1028 in the 788 patent proceeding.

17 A. I have Damaghi.

18 Q. Perfect. And specifically, I'd like to talk
19 about his figure 3 diaper.

20 A. I have the figure 3.

21 Q. Great. So Damaghi's figure 3 diaper includes a
22 stay-away zone on its non-woven backsheet to which
23 hook-type fasteners cannot attach, right?

24 A. I see that. Yes.

25 Q. And hook-type fasteners cannot attach there; is

1 that right?

2 A. That is correct. That is what Damaghi says.

3 Q. So the purpose of the stay-away zone is to
4 prevent a user from attaching hook-type fasteners,
5 right?

6 A. Yes.

7 Q. Okay. And so, I'd like to direct your
8 attention to paragraphs 48 and 49 of Damaghi.

9 A. Yes, I have that.

10 Q. Okay. And in paragraph 48, Damaghi is
11 discussing what he refers to as loopless fasteners which
12 are mini hook fasteners that engage with a conventional
13 non-woven, right?

14 A. No.

15 Q. No?

16 A. And the reason I say that is that, if you look
17 at the description that is used in Karami for the
18 non-woven, we -- we come up against this conventional
19 issue again. And with respect, I think we need to look
20 at the fact that the -- what he's calling a conventional
21 non-woven is, in fact, a particular non-woven
22 constructed with pillows that he refers to a particular
23 manufacturer.

24 And so, that is a non-woven which has a
25 surface structure which will allow hooks to engage to

1 it. So it -- it would not be in the terms used here
2 conventional. And I apologize. Conventional is used
3 very -- in a very confusing way as far as I'm concerned.

4 Q. Okay. Well, is Damaghi talking about Karami
5 626's non-woven in paragraph 48?

6 A. Not specifically, no.

7 Q. And so, does Damaghi mention the particular
8 non-woven you were discussing, I believe you said it had
9 pillows?

10 A. No. I was incorrect.

11 Q. So setting aside the -- the issue with
12 conventional, though, in paragraph 48, Damaghi is
13 explaining that these loopless fastener systems that
14 allow a mini hook fastener to engage with a non-woven
15 provides flexibility, right?

16 A. Yes.

17 Q. And then in paragraph 49, he points out a
18 problem with that flexibility, correct?

19 A. Yes.

20 Q. And that problem is wearers may use the wrong
21 size diaper then, correct?

22 A. Yes.

23 Q. And he gives a specific example. He says a
24 large diaper may be worn by a medium-sized person
25 because of the flexibility of the loopless fastener

1 system, and that's wasteful, right?

2 A. Yes.

3 Q. And why is that wasteful?

4 A. It's wasteful because a large size diaper costs
5 more per use than a medium size or a small size, and
6 that is the waste that I believe he is referring to.

7 Q. And so, Damaghi addresses that waste by
8 preventing the use of a mis-sized diaper, correct?

9 A. He doesn't actually prevent, but he's trying to
10 teach to use the appropriate size.

11 Q. And how he, at least, encourages the use of an
12 appropriate size diaper is this stay-away zone 100,
13 right?

14 A. Yes.

15 Q. And his stay-away zone -- moving on to his
16 paragraph 51, so actually I'll give you a chance to
17 review paragraph 51.

18 A. I have read that. I understand that, yes.

19 Q. And what his stay-away zone is it eliminates
20 the ability of a portion of the non-woven backsheet to
21 engage a hook-type fastener, right?

22 A. Yes.

23 Q. He says the fastener just can no longer attach
24 to that portion once it's a stay-away zone, right?

25 A. That's right.

1 Q. Okay. But if it wasn't for the stay-away zone,
2 the fastener would attach to that portion of the diaper,
3 right?

4 A. If you replaced the stay-away zone with a
5 non-woven that would attach to the hooks, it is
6 conceivable that it would attach in that same area.

7 Q. But before the stay-away zone is created, the
8 area in which it is later created could attach to
9 hook-type fasteners, right?

10 A. Well, the stay-away zone can be created by
11 having a space there, and they do teach that there is a
12 space where there is nothing to hook onto.

13 Q. But he created a stay-away zone on a portion of
14 the diaper that would otherwise have engaged fasteners,
15 right?

16 A. That's not what he says, but -- for example,
17 you would not -- it would be wasteful to put a perfectly
18 good non-woven that would engage fasteners and then
19 destroy it. You might as well just leave it blank,
20 which I think is one of the options that he does talk
21 about.

22 Q. Well, for example, one way he creates the
23 stay-away zone, he says, is, By selectively modifying
24 areas of non-woven backsheet 30, such as by heat or
25 compression, to destroy its ability to adhere to the

1 hooks of a loopless fastener, right?

2 A. Correct.

3 Q. So before he selectively modifies that area of
4 the non-woven to destroy its ability to adhere to the
5 hooks of a loopless fastener, that area of the non-woven
6 was capable of engaging fasteners, right?

7 A. It could have been if it was a non-woven that
8 would perform as a loopless fastener.

9 Q. But if it wasn't a non-woven that would perform
10 as a loopless fastener, then Damaghi wouldn't need the
11 stay-away zone, right?

12 A. By definition, he would have already had a
13 stay-away zone by the way he positioned the non-wovens
14 as he assembled the diaper.

15 Q. And so, if this area of the diaper we're
16 talking about was a non-woven that was incapable of
17 engaging the fasteners to hold the diaper on the wearer,
18 it would already be a stay-away zone; is that what --

19 A. No. I think Damaghi is more specific than
20 that. He says that, if there is a non-woven present,
21 the stay-away zone is selectively modifying areas of
22 non-woven backsheet, such as by heat or compression, to
23 destroy its ability to adhere to the hooks of a loopless
24 fastener.

25 Now that would apply whether or not a

1 non-woven could engage with a hook or not, But he's --
2 he's quite clear about saying that. So it could be
3 either type of non-woven. All he's saying is he wants
4 to make sure that that portion of the diaper would not
5 connect with a hook closure.

6 Q. But if it already was incapable of engaging
7 with a hook-type fastener, then what does making that
8 portion of the diaper a stay-away zone add?

9 A. First of all, if you put the non-woven on the
10 front of the product, one of the things that does make
11 an otherwise stay away non-woven surface become a stay
12 away non-woven surface -- it may, in the process of
13 manufacturing the diaper, be sufficiently worked and
14 flexed that it would have an attachment possibility, and
15 that's what Damaghi wants to completely avoid. He wants
16 a fastener that will not attach to a stay-away zone
17 that's defined by selectively modifying non-woven
18 backsheets. And he tells you how he does that there.

19 What I'm saying is that if you have a
20 non-woven there and you're not going to use it and you
21 have to hang a 7-inch by 11-inch sheet to make the
22 stay-away zone, you wouldn't put the non-woven there in
23 the first place because these people are trying to make
24 products where every cent of cost is very important in
25 terms of making a profitable product.

1 Q. But Damaghi does have a non-woven in his
2 stay-away zone, right?

3 A. Well, yes. He is saying that, but I'm telling
4 you what a person of skill in the art would do when he's
5 faced with that. I think Damaghi -- yes, he does say
6 the stay-away zone could be obtained by modifying the
7 non-woven backsheet. My point is, as a P-O-S-I-T-A,
8 that, to me, is a waste of money and may bring with it
9 other problems.

10 For example, when you are to destroy the
11 ability of the hooks you may, in fact -- or you will, in
12 fact, change the texture of that non-woven on the
13 plastic film. And the whole concept of putting the
14 plastic film -- giving the plastic film a coating of a
15 non-woven is to make it feel good. And if you're going
16 to destroy that non-woven, it isn't going to feel good
17 in that particular area. It will no longer feel like a
18 cloth-like material, and there you've got a stay-away
19 zone which in itself then becomes a teaching tool.

20 Q. Okay. Then going back to paragraph 50, Damaghi
21 says the stay-away zone eliminates this type of misuse,
22 which we discussed was wearing an improperly sized
23 diaper, right?

24 A. Paragraph 50?

25 Q. Yes.

1 A. Yeah. I see that. And the question is?

2 Q. Yes. So he says to ameliorate this type of
3 misuse, which I believe we agreed is wearing the wrong
4 size diaper, a stay away could be provided on a portion
5 of the outer surface of the diaper, right?

6 A. Yes.

7 Q. And so, if the portion of the outer surface of
8 the diaper on which the stay-away zone is provided was
9 incapable of engaging fasteners already, how would the
10 stay-away zone ameliorate diaper mis-sizing?

11 A. That's not what he's saying. He's saying,
12 quite specifically, that a stay-away zone is a place
13 where a hook will not attach, plain and simple. It will
14 not connect.

15 Q. Right. And he does that because if you had
16 attached a fastener there, it would have facilitated
17 diaper mis-sizing, correct?

18 A. If it were not a stay-away zone, it would be a
19 reason that the diaper was too large and needed -- and,
20 in fact, was contributing to waste, yes.

21 Q. And in fact, in order to ameliorate diaper
22 mis-sizing, it only makes sense to put a stay-away zone
23 on a portion of the diaper that could have otherwise
24 engaged fasteners with sufficient retaining forces to
25 hold a diaper on a wearer, right?

1 A. What -- what Damaghi is saying is that he is
2 creating a stay-away zone in one way by destroying the
3 hooks in a particular area. And the question of whether
4 or not that surface would be used for securing the
5 diaper is not even mentioned. He's concerned with
6 creating a stay-away zone.

7 It doesn't matter to him if it has
8 sufficient adhesion to hold the diaper on the wearer.
9 That is not the point. The point is the stay-away zone
10 should not have an ability to position the hooks because
11 that would, in fact, waste that diaper. And so, he
12 wants to have a non-attachment zone, which is all he's
13 teaching.

14 Q. So you said he puts the stay-away zone a
15 portion of the diaper -- well, scratch that. I don't
16 want to -- let me look at that.

17 You said if the fasteners were attached on
18 the portion of the diaper that then becomes the
19 stay-away zone, it would waste that diaper. Did I say
20 that correctly?

21 MS. DALEY: Objection. Mischaracterizes
22 testimony.

23 THE WITNESS: Well, what I was trying to
24 say is that the importance of the stay-away zone is to
25 prevent the location of the hook closure in a place

1 where the size adjustment results in wasting that
2 particular product, and hence the reason to use a
3 stay-away zone where that hook will not form a retention
4 force with anything in the stay-away zone.

5 Q. BY MR. ALBRIGHT: And the waste we're
6 discussing is, for instance, wearing a diaper that is
7 larger than you should be wearing?

8 A. That is certainly one of the reasons.

9 Q. Well, because in paragraph 49, he explains how
10 such waste can occur, correct?

11 A. Let me just re-read it. That's exactly the
12 waste that I have been talking about in paragraph 49.

13 Q. And he says, for example, a large diaper being
14 placed on a medium-sized person is wasteful, right?

15 A. Yes.

16 Q. Is that correct?

17 A. Yes.

18 Q. And how that happens is someone fastens --
19 places the fasteners -- or secures the fastener, he
20 says, to a more remote portion of the non-woven outer
21 surface of the diaper, right?

22 A. There -- that's true. What he's saying is that
23 there is more and more opportunity to put the fasteners
24 in the wrong place, and to prevent that, he wants to and
25 does describe how to create a stay-away zone which

1 causes the person to understand who's fitting the diaper
2 that they have the wrong size diaper and this will not
3 engage in the stay-away zone, causing the person caring
4 for the person who needs the diaper to go and get an
5 appropriate sized diaper.

6 If you make it impossible for them to
7 attach the closures on the diaper, it sends an immediate
8 message you've got the wrong size of diaper.

9 Q. Okay. And so, in paragraph 49, he explains you
10 can put the wrong size diaper on someone securing the
11 fasteners to a more remote portion of the non-woven
12 outer surface, right?

13 A. Yes.

14 Q. And so, he ameliorates that type of misuse,
15 sticking with this example, by creating a stay-away zone
16 on that more remote portion of the non-woven outer
17 surface that would lead to the wasteful use of too large
18 of a diaper?

19 A. Paragraph 51 says that the stay-away zone can
20 be created by spraying a solution over a portion of the
21 non-woven backsheet to which the fastener could not
22 attach.

23 Alternatively, stay-away zone could be
24 defined by selectively modifying areas of the non-woven
25 backsheet.

1 I think, as I said before, yes, you can do
2 that and destroy it in place, but a POSITA would be more
3 inclined not to put a non-woven in that area because
4 you're adding cost to the product.

5 And if -- for example, he talks about even
6 putting a patch, dimension 7 inches by 11 inches, to
7 make a stay away -- a stay-away zone. And you're
8 covering up three-quarters of a square foot of
9 non-woven, and all that adds up when you're making
10 thousands of these products. So a POSITA would avoid
11 having to destroy a non-woven, at least that's my
12 professional opinion.

13 Q. Okay. And -- and I understand that. What I'm
14 asking about is paragraph 49, starting there, Damaghi
15 gives us an example of using a too-large diaper on a
16 medium-sized person, right?

17 A. Yes.

18 Q. And he says how that occurs is someone secures
19 the fasteners to a more remote portion of the non-woven
20 outer surface of the diaper, right?

21 A. Yes.

22 Q. That's what is -- it leads to the waste because
23 the diaper is too large, right?

24 A. Right.

25 Q. And so, he addresses that by creating his

1 stay-away zone, correct?

2 A. Yes.

3 Q. And so, all I'm asking is, the stay-away zone
4 would be created at that more remote portion of the
5 non-woven outer surface that otherwise someone would use
6 to wastefully secure too large of a diaper?

7 A. What I'm saying is you wouldn't put the
8 non-woven there in the first place.

9 Q. I see. I see. But if you did have the
10 non-woven there, as Damaghi does, even if it's not the
11 best solution, then you would put the stay-away zone on
12 that remote portion of the non-woven outer surface to --
13 to prevent the waste that he's describing?

14 A. Well, no. I -- the -- when he says this type
15 of misuse is wasteful, a person of skill in the art
16 would automatically determine one doesn't put the
17 non-woven there. It's a waste of non-woven. It's a
18 waste of resources. There -- that's the way you would
19 tackle what is wasteful.

20 Q. But sticking with Damaghi himself -- and I
21 understand what you're saying, and it makes sense to me.

22 He does have a non-woven where he creates
23 the stay-away zone, right?

24 A. I don't see that. He said -- he's talking
25 about what could be. He is not saying that he's going

1 to put the non-woven there.

2 Q. Well, in paragraph 51, the example he gives is,
3 stay-away zone 100 can be created by spraying a solution
4 or attaching a film over a portion of non-woven
5 backsheet 30, correct?

6 A. That's one way of doing it. Yes, certainly.

7 Q. And then his next example is a stay-away zone
8 could be defined by selectively modifying areas of
9 non-woven backsheet 30, such as by heat or compression,
10 to destroy its ability to adhere to the hooks of a
11 loopless fastener, right?

12 A. That's right, but another way of doing it is
13 simply not putting the non-woven in the area of the
14 stay-away zone in the first place.

15 Q. Okay. So specifically addressing his second
16 example, which is creating a stay-away zone by
17 destroying the ability of the non-woven in the stay-away
18 zone to adhere to the hooks of a loopless fastener, the
19 area of the non-woven that a POSITA would apply heat or
20 compression to to destroy its ability to adhere to the
21 hooks of the loopless fastener would be the more remote
22 portion of the non-woven outer surface of the diaper
23 Damaghi discusses in paragraph 49 because it is
24 attachment there that creates the waste that the
25 stay-away zone seeks to address, right?

1 MS. DALEY: Objection to form.

2 THE WITNESS: I -- I, with respect,
3 disagree. Because it says quite clearly, Such as by
4 heat or compression or whatever to destroy its ability
5 to adhere to the hooks of a loopless fastener. The
6 simplest way of doing that is removing the hooks --
7 the -- the loops.

8 Q. BY MR. ALBRIGHT: At that point, would it be a
9 modified area of non-woven backsheet 30?

10 A. Yes. A modification is you cut out a piece of
11 non-woven.

12 Q. Okay. So let's -- let's go to his first
13 example then. Stay away 100 can be created by spraying
14 a solution or attaching a film over a portion of
15 non-woven backsheet 30, correct?

16 A. On the one hand, you could spray a solution on
17 the backsheet, or you could attach a film over a portion
18 of the non-woven backsheet. Here again, he's saying
19 the -- the key statement is, To which the fasteners
20 could not attach.

21 What he's teaching here is you got to have
22 something where the fasteners will not, could not
23 attach. And one of the best ways is not putting the
24 non-woven there in the first place.

25 Q. Well, let's say a POSITA is going to use a

1 film, and they're going to dispose it over a portion of
2 non-woven backsheet to create the stay-away zone 100.
3 Damaghi encompasses that, right?

4 A. Damaghi says that a patch having dimensions of
5 7 by 11 inches and made from stay-away zone material may
6 be attached to the outer surface of the front of the
7 diaper to prevent misuse. He's saying you could attach
8 it to the front of the diaper. He doesn't say that that
9 diaper has, in fact, got a non-woven on it.

10 Q. Okay. Well, if the patch having dimensions of
11 7 inches by 11 inches were placed on the outer surface
12 of the front of the diaper to prevent misuse, wouldn't
13 there have to be a non-woven under that patch?

14 A. Not necessarily. In fact, putting that panel
15 there would be good.

16 Q. Okay. And so, it's your opinion that one of
17 ordinary skill in the art reading Damaghi would create
18 the stay-away zone by removing a portion of the
19 non-woven?

20 A. That is the -- if we're talking waste, that is
21 the best way to reduce the waste.

22 Q. And the portion of the non-woven that they
23 would remove is the more remote portion of the non-woven
24 he's discussing in paragraph 49, which would
25 otherwise -- otherwise allow wasteful attachment of

1 fasteners, right?

2 A. What he's -- what he's saying is that the
3 stay-away zone covers the area which, if used to attach
4 a hooked fastener, would, in fact, allow them to use
5 that incorrect diaper on a patient who required a
6 different size, particularly if it's a large size diaper
7 on a patient who could only -- who only needs a medium
8 size diaper.

9 Q. Okay. And Damaghi's backsheet non-woven has a
10 5 to 45 GSM basis weight, right?

11 A. Here again, 5 to 45 range is -- is, with all
12 due respect, very broad, and it's telling me several
13 things. We know for a fact that, by itself, a
14 non-woven -- excuse me -- weighing 5 GSM is no better
15 than gossamer. It's not going to work. So what I think
16 is being said there is that the weight really isn't
17 important, and you could pick any weight within that
18 range if you wanted to.

19 Q. Sure.

20 A. And the rest of the question was?

21 Q. Well, and Damaghi's backsheet non-woven is one
22 that engages hook-type fasteners, right?

23 A. Yes.

24 Q. Damaghi's backsheet non-woven isn't water jet
25 treated, is it?

1 A. Not to my knowledge. It doesn't say so. That
2 doesn't mean it isn't.

3 Q. Well, Damaghi doesn't say it is, right?

4 A. That's true.

5 Q. And Damaghi also doesn't say that his backsheet
6 non-woven is apertured, right?

7 A. Excuse me a minute while I just check here.

8 Can you ask the question again, please?

9 Q. Sure.

10 Damaghi's backsheet non-woven isn't
11 described as apertured, correct?

12 A. I do not remember that. I would have to
13 re-read the whole patent, but I do not remember that.

14 Q. So let's now turn to Karami 772, which I don't
15 know that we've talked about today. So --

16 A. Could you allow me a minute just to clear my
17 throat, please?

18 Q. Of course.

19 (A recess was held from 12:38 p.m. until 12:39 p.m.)

20 Q. BY MR. ALBRIGHT: Okay. So I'd like to
21 transition to Karami 772, which is Exhibit 1003 in the
22 788 patent IPR proceeding. And if it hasn't been
23 introduced, we'll be doing that now.

24 A. I have it.

25 Q. Great. And so, I'd like to ask you first about

1 his figure 8 diaper.

2 A. Yes, I have it.

3 Q. Okay. And so, this diaper has a stay-away zone
4 on its backsheet, too, doesn't it?

5 A. Yes, it does.

6 Q. And here that's labeled element 160. And we
7 can look at paragraph 53 of Karami 772, as well, to help
8 with our discussion.

9 A. Yes, I've seen it.

10 Q. And so, stay-away zone -- the stay-away zone in
11 figure 8 is labeled element 160, right?

12 A. Yes.

13 Q. And that stay-away zone can be a non-water jet
14 and non-apertured portion of this backsheet, right?

15 A. Yes, I see that.

16 Q. And Karami 772's backsheet has a basis weight
17 of from 5 to 45 GSM, right?

18 A. Doesn't say it in those two paragraphs there.

19 Q. Right. I think it -- it appears -- Karami 772
20 in paragraph 31, I believe, gives the basis weight for
21 his backsheet 32.

22 A. Well, there isn't a backsheet 32 on figure 8.

23 Q. So I'm going to, kind of, take paragraph 31 in
24 conjunction with paragraph 52. So let's look at that
25 also.

1 A. There's no 130 in figure 8.

2 Q. Well, isn't figure 8 just another view of
3 Karami's figure 6 diaper with a stay-away zone added?

4 A. It doesn't say so. It says in another
5 exemplary embodiment as shown in figure 8.

6 Q. Well, go ahead and look at figure 6.

7 A. I have figure 6.

8 Q. So figure 6 shows fasteners 150A to 150D,
9 right?

10 A. Yes.

11 Q. And it shows a containment assembly 120, right?

12 A. 220.

13 Q. I believe you're looking at figure 7.

14 A. My apologies. I am. Yes, I see it.

15 Q. So then returning to figure 8, we see fasteners
16 150A to 150D, right?

17 A. Yes, we do.

18 Q. And we see containment assembly 120, right?

19 A. Yes, we do.

20 Q. So figure 8 includes the structures labeled for
21 the diaper in figure 6, right?

22 A. Okay. Let me look at that in conjunction with
23 it.

24 Okay. Okay. Ask your question, please.

25 Q. Well, the figure 8 diaper's labeled structures

1 are the same as figure 6's except for the stay-away zone
2 in 160, right?

3 A. The backsheet opening 130 is not present,
4 though.

5 Q. Okay. I'd like to you to look at Karami 772 at
6 paragraph 7 to 9.

7 A. Okay. I see that, yes.

8 Q. Okay. So here Karami 772 is describing objects
9 of his invention, right?

10 A. That's an object of the invention.

11 Q. Right. And so, the first one that he describes
12 in paragraph 7 is to provide an absorbant article which
13 does not require a loop type fastening element, right?

14 A. Correct.

15 Q. And the second object he describes here in
16 paragraph 8 is to provide a fastener assembly that
17 affords enhanced sheer and peel strength, right?

18 A. That's correct.

19 Q. So how does Karami 772 afford enhanced sheer
20 and peel strengths?

21 A. By using what he refers to as the inventive
22 concept of water jet treating the non-woven.

23 Q. So are Karami 772's teaching limited to diapers
24 that have enhanced sheer and peel strength?

25 A. Can you ask the question again, please?

1 Q. Yeah. Are Karami 772's teachings limited to
2 diapers that have enhanced sheer and peel strength?

3 A. They would appear to be because he talks about
4 the patent being for an absorbant article having a
5 loopless fastening system. And for that, the inventive
6 concept is how to make the loopless part by water jet.

7 Q. So in paragraph -- paragraph 8 where he's
8 talking about enhanced sheer and peel strength, he says
9 at least one embodiment has enhanced sheer and peel
10 strength, right?

11 A. Yes.

12 Q. So that means that there are embodiments
13 encompassed by Karami 722 that don't have enhanced sheer
14 and peel strength, right?

15 A. That could be.

16 Q. Well, in such a diaper or absorbant article
17 without enhanced sheer and peel strength, would fall
18 within the scope of the object of Karami 772's invention
19 he describes in paragraph 7, right?

20 A. Paragraph 7 is quite straightforward. It
21 really describes an absorbant article having a loopless
22 fastening system.

23 Q. And it does not refer to enhanced sheer and
24 peel strength, right?

25 A. It doesn't specifically, but he is talking --

1 the very fact that he's talking about a loopless
2 fastening system is the title, and then talks about
3 including a hook-type fastening element that does not
4 require corresponding loop-type fastening element. He
5 is trying to describe an absorbant -- a loopless
6 fastening system. That's the title of the patent.

7 Q. Well, and again, paragraph 7 doesn't require
8 enhanced sheer or peel strength, right?

9 A. It's implicit in the statement. You're not --
10 not going to devise a fastening system that doesn't give
11 you the force in peel and the force in sheer that you
12 want.

13 Q. Well, how does Karami 772 achieve his enhanced
14 sheer and peel strength?

15 A. Using the inventive concept of the patent,
16 which is that you use water jet treatment to a spunbond,
17 which otherwise would not adhere to a hook fastener.
18 And the very act of using the water jet treatment
19 creates a surface that will accept hook-type fasteners.

20 Q. Couldn't paragraph 7 be describing a loopless
21 fastening system like Karami 626's that does not require
22 water jet treating or aperturing?

23 A. By saying he's including a hook-type fastening
24 element that does not require a corresponding loop-type
25 fastening element, he's saying that this hook fastener

1 will attach to the -- the non-woven that he's been
2 talking about.

3 And he talked in paragraph 0005 about the
4 need to provide a mini loop fastener element, and in 006
5 he's talking about the need remains for a fastening
6 system that does not require a loop fastening element to
7 mate with a hook type fastener.

8 So the whole thrust is that we need to find
9 another structure that will give us more flexibility and
10 not require us to buy the more expensive mate to a
11 hook-type fastener.

12 Q. So Karami 772 makes three-point reference to,
13 quote, secure engagement of a hook-type fastener with a
14 non-woven, right?

15 A. Yes.

16 Q. So what does secure engagement mean?

17 A. I think to a POSITA, it means it provides
18 adequate retention force to withstand use conditions.

19 Q. Use conditions such as what?

20 A. Being worn by -- well, for every step: When
21 you're putting the diaper on, when you're sliding it
22 under the body, when you're bringing it around to the
23 front, when you're fastening the hook to the closure --
24 under those conditions of normal donning of the product,
25 that it will give -- in use, which can be walking,

1 running, lying in bed -- will not allow the closure to
2 become unfastened, also at the same time be able to
3 fulfill what is called a refastenable, re-closeable
4 feature.

5 Q. And so, Karami 772's references to secure
6 engagement are referring to his enhanced sheer and peel
7 strength in paragraph 8, right?

8 MS. DALEY: Objection to form.

9 THE WITNESS: A person of skill in the art
10 when reading this patent, the securing means an adequate
11 retention. Securing means joining the parts so that the
12 product performs. You don't want it to be insecure.
13 You want it to be secure.

14 Q. BY MR. ALBRIGHT: Well, it looks like we've
15 been going for another hour. Do you guys want to take
16 our final break of the -- of the day?

17 A. That sounds like a good idea. Five minutes?

18 Q. Sure.

19 A. Thank you, Mr. Albright.

20 Q. Thank you.

21 (A recess was held from 1:00 p.m. to 1:07 p.m.)

22 Q. BY MR. ALBRIGHT: So returning to your
23 declaration, Mr. Butterworth, in paragraph 124, there
24 you opine that Karami 772 states throughout that the
25 non-woven is treated so that the fasteners can attach to

1 the treated portion --

2 A. Paragraph 124?

3 Q. That's right.

4 A. Okay. Thank you.

5 Q. And I'm asking about the first full sentence
6 following the block quote, where you explain that Karami
7 states throughout that the treated portions of the
8 non-woven are treated so that the fasteners can attach
9 to those portions, right?

10 A. Yes.

11 Q. So Karami 772, in your opinion, treats portions
12 of his non-wovens where fasteners are intended to
13 attach; is that right?

14 A. That the fasteners can only attach to treated
15 portions of the non-woven.

16 Q. Well, and he treats those portions so that the
17 fasteners can attach, right?

18 A. That's right.

19 Q. Okay. And then moving to your paragraph 125,
20 and it's the second sentence I want to ask you about.

21 You testify that, with the exception of one
22 modified T-shaped diaper embodiment, Karami 772 teaches
23 attaching the fasteners to the wings, not the front
24 portion of the diaper, correct?

25 A. Yes.

1 Q. So let's return to Karami 772's figure 8 and
2 paragraph 63 -- I'm sorry 53. That's a typo.

3 A. Which figure? Figure 8?

4 Q. Figure 8.

5 A. Yeah. And paragraph --

6 Q. 53.

7 A. Okay. I have read that.

8 Q. So outside of stay-away zone 160, the entire
9 front waist portion of Karami 772's figure 8 diaper is
10 water jet treated and/or apertured, right?

11 A. The wings are treated according to Karami.

12 Q. Well, he says the entire front waist portion,
13 doesn't he, in paragraph 53, except in the stay-away
14 zone can be treated, right?

15 A. All he teaches in his patent is treating the
16 side wings.

17 Q. So when he says the entire front waist portion
18 can be water jet treated and/or apertured except for a
19 portion of the front waist portion that forms the
20 stay-away zone 160, he's not saying that you can treat a
21 portion of the backsheet covering his diaper's chassis?

22 A. Oh, let me just look at that. Thank you.

23 (Reporter clarification.)

24 MR. ALBRIGHT: Chassis. Yes, ma'am.

25 THE WITNESS: I think the way I read it is

1 that, for the diaper embodiment here, Karami is teaching
2 that the wings of the front portion of the diaper are
3 those that get treated to engage hooks and that Karami
4 doesn't teach engaging the fasteners to the main body
5 portion of the diaper. He's, all the way through,
6 looking at the wings for treatment.

7 Q. BY MR. ALBRIGHT: So the front waist portion of
8 his figure 8 diaper includes no portion of his chassis,
9 in your opinion?

10 A. No. The term -- with respect, sir, the
11 terminology is that the chassis is that center portion
12 of the diaper which runs from the front waistband
13 through the crotch and up to the back, if the chassis is
14 the part trapped between those two vertical lines that
15 run from the crotch up to the waist.

16 Q. And no part of the non-woven outer surface of
17 the chassis would -- would be considered part of the
18 front waist portion of the figure 8 diaper; is that
19 right?

20 A. Right. You've got two wings, one wing either
21 side of the chassis.

22 Q. So what would a POSITA understand of the
23 portions of the non-woven overlying the chassis on the
24 left and right side of what he's labeled as 160?

25 A. Well, 160 is, in fact, the stay-away zone, and

1 that is depicted being over the chassis.

2 Q. But not all of the chassis, right?

3 A. According to the picture, no.

4 Q. And so, the portions of the chassis that are
5 not included in the stay-away zone 160 would be treated,
6 right?

7 A. No. Only the wings would be treated. That's
8 the portion that lies outside the two lines. Those are
9 the wings. And it's a particularly poor drawing. But
10 if you looked at this laid out, you would see that the
11 wings and -- it -- the wings look like figure 7, and the
12 stay-away zone would be the outside of the central
13 chassis.

14 Q. Yeah. Figure 7 actually doesn't show a
15 stay-away zone, right?

16 A. No, that does not. But it shows the type of
17 diaper that, I believe, Karami is talking about. Here
18 again, it's not a very good illustration.

19 Q. But you agree that it does show portions of the
20 backsheet non-woven overlying the chassis being outside
21 the stay-away zone 160?

22 A. No. The treated non-woven is on the wings. If
23 there's any untreated non-woven by the stay-away zone,
24 it doesn't make that clear.

25 Q. Well, the stay-away zone is an untreated

1 non-woven, right?

2 A. That's right. Because the only way the
3 non-woven will attach to the hook closures is by being
4 water treated, and it will not attach to the hooks if it
5 is untreated.

6 Q. So we agree that stay way zone 160 is an
7 untreated portion of Karami's 772's backsheet non-woven,
8 right?

9 A. Could you say that again, please? I --

10 Q. Well, we agree that stay-away zone 160 is an
11 untreated portion of Karami 772's backsheet non-woven,
12 right?

13 A. No. 160 is the stay-away zone. That's it.
14 160 is the stay-away zone.

15 Q. And the stay-away zone is an untreated portion
16 of Karami 772's backsheet non-woven, right?

17 A. Yes.

18 Q. Okay. And there is a portion of the backsheet
19 non-woven shown in figure 8 that overlies the chassis
20 and is outside of stay-away zone 160?

21 A. The problem that I have with that is that, in
22 paragraph 53, it talks about the stay-away zone being
23 exposed through an opening in the backsheet 130. 130 is
24 not there. And so, we are left wondering just exactly
25 what that means.

1 Without it, we can't really define where
2 the boundary of the stay-away zone is. We've got those
3 hatch marks, but 130 doesn't show. So it's an
4 incomplete description that leaves me puzzled.

5 Q. So at Karami 772's treated non-woven portions,
6 the retaining forces with a hook-type fastener would be
7 sufficient to hold a diaper on a wearer, right?

8 A. Yes.

9 Q. Okay. Why don't we move to Benning, which I
10 believe we have not introduced. So that will be
11 Exhibit 1002 in the 788 proceeding.

12 (Exhibit 1002 was marked for identification.)

13 Q. BY MR. ALBRIGHT: So let me know when you
14 get --

15 A. Okay. I am there.

16 Q. Okay. Great. All right. So the chassis of
17 Benning's diaper has a fluid impermeable underlayer 30,
18 which forms the outer visible side of the chassis,
19 right?

20 A. Correct.

21 Q. Okay. And so, a fluid impermeable underlayer
22 that forms the outer visible side of the -- of the
23 chassis, that's going to be a film, right?

24 A. Yes.

25 Q. And Benning's closures, they can be designed to

1 grip mechanically or adhesively; is that right?

2 A. Correct.

3 Q. So -- and when Benning says mechanical --
4 mechanically adhere -- sorry. Let me just scratch that.

5 So when Benning discusses closures which
6 can be designed to grip mechanically, what he's
7 referring to are hook-type fasteners, right?

8 A. He's referring to a fastener that is compatible
9 with whatever the backsheet is, and in this case, it is
10 a film.

11 Q. Well, he says that the closures can grip
12 mechanically or adhesively, right?

13 A. I believe that is so, and I -- I simply added
14 that, whatever the closure is on those sides, it has to
15 be adapted to form a releasable closure with the film
16 backsheet.

17 Q. Well, what would a POSITA understand a
18 mechanical closure to be?

19 A. He'd want to look at it more closely and to get
20 better definition. If it's just a hook, it will be a no
21 go. If it was just a -- an adhesive, he'd want to know
22 quite a lot of information about that adhesive to get it
23 to stick to films.

24 Q. So if the -- go ahead.

25 A. But -- if he said it was a mechanical adhesive

1 closure, then again, I think the POSITA would also want
2 to know more about it, but would assume that if they say
3 it will form a closure, it will form a closure.

4 Q. Okay. So if Benning's closures are hook-type
5 fasteners, they would not be able to engage his film
6 underlayer, right?

7 A. That's correct.

8 Q. And so, in order for such a hook-type fastener
9 to engage Benning's chassis, you would need a landing
10 zone, right?

11 A. Either a -- yes. A landing zone, yes.

12 Q. Which would be, like, a piece of loop material,
13 right?

14 A. Yes.

15 Q. Okay. And I'd like to now go to Benning at
16 paragraph 32.

17 A. I've read paragraph 32.

18 Q. Perfect. And so, here, Benning is describing
19 his wings, correct?

20 A. Yes.

21 Q. And he says that preferably they're non-wovens,
22 right?

23 A. Yes.

24 Q. Would a person of ordinary skill in the art
25 consider the non-wovens that Benning describes here to

1 be conventional non-woven?

2 A. No.

3 Q. And why not?

4 A. First of all, the first material mentioned is a
5 spunbond meltblown material called SMS, and that is a --

6 (Reporter clarification.)

7 THE WITNESS: It is a spunbond material
8 named SMS, and that is a very unique type of non-woven.
9 Non-woven laminates are not conventional, everyday
10 non-wovens. You're talking about very specially
11 engineered constructions that some people would not even
12 call a non-woven. They'd call it a laminated polymer.
13 So far from it. They're not conventional.

14 Q. BY MR. ALBRIGHT: Well, how about the spunbond
15 materials he describes here?

16 A. Spunbonds may, in some instances, fall into the
17 commodity character -- category. But here again,
18 spunbondeds are the most -- are the strongest non-wovens
19 that we have, and that -- their strength and flexibility
20 is very unique. It's nothing like some of the cheaper
21 non-wovens that are made by carding.

22 So here again, we're not talking
23 conventional non-wovens, and nobody would specify a
24 non-woven by saying it was just a conventional
25 non-woven. You have to get down to the, how is it made,

1 what are the fibers in it, what are the diameters of the
2 fibers, how is it bonded, what's the weight per unit
3 area, what's the bulk, and is it thermally stable.

4 All those characteristics make it a
5 material that has some unique properties that can be
6 adapted in various ways. So I'm sorry to disagree with
7 you, but I have to. These are not conventional.

8 Q. Okay. All right. Let's pivot back to Karami
9 772, please.

10 A. Okay.

11 Q. And it's -- we'll look at his figure 6.

12 And the first question I have is this
13 diaper 100 is an hourglass diaper, right?

14 A. Yes. That would be characterized as an
15 hourglass.

16 Q. Okay. And Karami explains that backsheet 130
17 defines the perimeter of this diaper, right?

18 A. 130 refers to the extent that the wings extend
19 laterally from the main chassis.

20 Q. But the wings in Karami 772's diaper are
21 continuous with the backsheet that overlies the
22 containment assembly, right?

23 A. No, because wings can be just added. They
24 don't have to be continuous. And secondly, Karami in
25 772 points out that the wings alone are subjected to a

1 water jet treatment. And so, they are distinctly
2 different from the chassis.

3 Q. Okay. So Karami 772 could be describing a
4 configuration in which the wings were separate and then
5 attached to the chassis?

6 A. Yes, it could.

7 Q. Okay. And that would be advantageous, for
8 example, when you wanted to perform a treatment just on
9 the wings or just on the chassis, right?

10 A. Yes.

11 Q. Would it also facilitate the selection of
12 different materials for the wings and for the backsheet
13 of the chassis?

14 A. Yes, it would.

15 Q. Okay. Why would somebody of ordinary skill in
16 the art want to use a different material for a wing
17 non-woven than for a chassis non-woven?

18 A. Various reasons. The chassis needs to be
19 stable to support the absorbant core and to maximize
20 absorbancy. The wings, on the other hand, may wish to
21 be elastic, they may wish to be stiff, they may be
22 thicker than the backing film on the chassis because the
23 wings are subjected to more pulling and tension than the
24 backsheet directly.

25 The wings may need to be treated, and

1 treating the wing material alone using a calendaring and
2 heat bonding operation would enable you to just attach
3 wings which had the pattern on the non-woven that would
4 give you good bonding, as taught, for example, in
5 Beckert or other patents.

6 The thermoplastic properties of a non-woven
7 are manipulated to make the non-woven on the wings more
8 receptive to hooks, for example, or they could just be
9 water jet treated.

10 And you don't want to water jet treat the
11 wings. Because in the process making the diaper, it's
12 running too fast. And you would have to treat the wing
13 material separately off line before combining it to the
14 chassis. So a whole bunch of reasons why the -- you do
15 that separately and why the side wings could be
16 different.

17 Q. Okay. So if Karami's figure 6 was a
18 configuration in which the backsheet fully defined the
19 outer parameter of that diaper, would that be a
20 reasonable configuration?

21 A. As I said, I would not get that past
22 manufacturing. Because manufacturing would not want to
23 have the water spray making a diaper where the core is
24 in the middle. They would want to have the backing
25 material that was going to be water jet treated run

1 separately, and a person of skill in the art would
2 recognize that that would have to be done. You could
3 not do it all in one sheet.

4 You'd -- you'd -- there are -- there are
5 machines or adapters that can be put on a diaper line
6 that will put on the left wing and the right wing as the
7 diaper is being made, and the main chassis runs the
8 length of the machine.

9 Q. And so, would it be more expensive, then, to
10 manufacture a diaper like figure 6 with a unitary
11 backsheet that extended the full extent of the diaper,
12 as opposed to having separate wings?

13 A. If you were just putting separate wings of
14 plastic either side, it certainly would be cheaper just
15 to run it with a plastic backing.

16 Q. But what if you wanted to have a non-woven
17 backing, as well?

18 A. Well, there again, you've got a problem with
19 waste. Because you'd be chopping out a good amount of
20 the waste material. And that, like other parts that we
21 deal with, becomes expensive. So you -- the person of
22 skill in the art would not be inclined to do that.
23 They'd be inclined to put those wings on separately for
24 separate wings.

25 Q. Okay. When you say waste material,

1 specifically with figure 6, where would that waste
2 material come from?

3 A. It would be the waste cut out for the leg. And
4 what they would do is take the two left side wings and
5 one would be flipped. Because you'd take a strip of
6 material, cut the diagonal in it, and then a transverse
7 piece. Stick one end to one end and flip the other end
8 to stick it to the bottom end, and that way you'd save
9 on cost. It wouldn't be an exact curvature like that,
10 but it would save quite a bit of non-woven material in
11 making the diaper.

12 Q. So what happened to the pieces of material that
13 would have been cut away, typically?

14 A. Well, they go to waste, and they hang around
15 for years. It's -- the problem you have there is that
16 you've got the -- the side piece here, which is
17 non-woven, probably has hot melt glue in it, and it's a
18 difficult material to recycle. You can try, but it'd
19 need recycling.

20 Q. So then would a diaper manufacturer store that
21 waste?

22 A. Usually what --

23 MS. DALEY: Obstruction. Scope.

24 THE WITNESS: I'm sorry. Your question
25 was?

1 Q. BY MR. ALBRIGHT: Would a diaper manufacturer
2 store that waste?

3 A. Initially, yes, but they need to get rid of it.
4 And it -- they will send it to a recycling facility
5 hoping they can get some value out of it and put it into
6 something else.

7 Q. Was there any machinery required to handle the
8 scraps?

9 MS. DALEY: Objection. Scope.

10 THE WITNESS: You probably -- what you
11 would do is where the scrap was generated off the
12 cutter, you would have a vacuum tube that would suck
13 that particular piece of waste away. It would be
14 collected on a drum. The air would go back and be
15 recirculated, and the drum would carry all these
16 materials which would be dropped into a hopper and then
17 put into bags.

18 Q. BY MR. ALBRIGHT: And so, were there -- were
19 employees required in order to handle the scraps --

20 MS. DALEY: Objection to scope and form.

21 THE WITNESS: Can you ask your question
22 again, please?

23 Q. BY MR. ALBRIGHT: Sure. Sure.

24 So did handling the scraps require
25 personnel?

1 A. It could. It depends on the sophistication of
2 the equipment.

3 Q. And would there have been downtime if scraps
4 were not removed fast enough?

5 A. Yes, that would be a problem. If you're
6 talking about problems, scraps can get caught up in the
7 process. So you have to take precautions, obviously.

8 Q. And when you say scraps can get caught up in
9 the process, what do you mean?

10 A. You're dealing with a high-speed machine, and
11 some of the patents we've talked about have described
12 how you accordion-pleat the -- the lateral side parts,
13 which are the closures, so that they don't become
14 entangled in the machinery.

15 You're dealing with machinery where there's
16 a lot of windage, and that wind, created by the speed of
17 the process, will entrap or tangle some of those
18 materials. So you have to take some precautions to make
19 sure that the soft, floppy materials are under control.
20 And where there are loose pieces, getting rid of those
21 loose pieces and away from the machine as soon as you
22 can.

23 Q. Okay. So then let's go briefly back to
24 Benning, please.

25 A. Sure. What was the number on Benning, please?

1 Q. Of course. Give me a second. Benning is
2 Exhibit 1002 in the 788 patent IPR proceeding.

3 A. Thank you.

4 Q. Of course.

5 And specifically, I want to ask you about
6 his figure 4 diaper.

7 A. Okay. I have it.

8 Q. And so, this is an example of a diaper, like we
9 discussed earlier, with separate wings that are then
10 attached to its chassis, right?

11 A. That's right.

12 Q. Okay. And so, this sort of configuration could
13 have been accomplished without scrap like we discussed
14 for Karami's 772 diaper?

15 A. Yes.

16 Q. Okay. So I'd like to move to your declaration
17 again, paragraph 149.

18 A. Okay. I have it.

19 Q. Perfect. And, really, a technical question.
20 So you state that once distinct wings are manufactured,
21 they may require spooling, right?

22 A. Yes.

23 Q. What is spooling?

24 A. That's putting them on a spool to feed. It's
25 like a very narrow roll. Toilet paper is spooled around

1 a cardboard core. The wings are typically a continuous
2 structure wound on a spool, but the spool may be four
3 feet or even six feet in diameter so that a diaper
4 machine that's running at, say, 800 diapers a minute
5 can -- doesn't run out of material.

6 Q. Are spooling machines expensive compared to
7 other typical diaper manufacturing equipment?

8 A. Just about anything is expensive when you come
9 to a high-speed diaper machine simply because you're
10 trying to deliver materials which have marginal
11 strength, the least -- the least beefy or strong
12 materials that you can put in a diaper and still have it
13 produce a working product that satisfies the consumer.

14 And so, the cost of all these things is so
15 great, you try to cut down the weight. And as a
16 consequence, you'll end up with materials that you have
17 to control the tension incredibly well to make the
18 product. And those are expensive.

19 Q. Okay. And so, you also explained that when the
20 wings are needed, there needs to be an employee that's
21 going to deliver the wings to the area of the mill where
22 the wings are needed, correct?

23 A. I was just going through the entire number of
24 steps that I could see involved, putting another unit
25 that is -- any component is a unit -- what would be

1 involved and how that might contribute to cost.

2 Q. Okay. But the wings could be made in line with
3 the chassis, right?

4 A. There are steps that you can take to make a
5 wing by doing it in line, but here again, the question
6 becomes one of waste.

7 Q. Well, whether you made, for example, Benning's
8 wing in line or in a separate area of the mill, there
9 wouldn't be -- have to be any waste, right?

10 A. There would -- no, there would not.

11 Q. Okay. I'd like to now direct your attention --
12 switching gears -- to paragraph 154 of your declaration.

13 And so, if you're ready, I'd like to ask
14 you a question.

15 A. Yes, I'm ready.

16 Q. Okay. So in paragraph 154 of your declaration,
17 you opined that a POSITA would not have sought to
18 increase the basis weight of wings 131 to 134 of Karami
19 772 because that would be less comfortable for the
20 wearer, correct?

21 A. Correct.

22 Q. Okay. And so, if you go back to Benning now --
23 sorry. There's so many diapers -- and we go to his
24 paragraph 33.

25 A. Okay. Remind me of the Benning number again,

1 please.

2 Q. Sure.

3 A. Oh, wait a second. I can find it here.

4 Q. Exhibit 1002, in case you --

5 A. Got it. Got it. Thank you.

6 Q. Of course.

7 A. Which figure?

8 Q. Paragraph 33.

9 A. Paragraph 33. Okay. Okay. I have Benning
10 paragraph 33. Just let me read it and I'll be with you.

11 Yes. And your question is?

12 Q. So Benning explains that his wings, or material
13 sections as he sometimes calls them, are skin friendly
14 that are experienced as pleasant by the wearer, right?

15 A. Correct.

16 Q. And then moving up to Benning's paragraph 32,
17 which we discussed earlier, he explains the basis weight
18 of those wings can be from 10 to 150 GSM, right?

19 A. Yes, that's correct.

20 Q. And he -- and he gives a more specific range of
21 25 to 50 GSM, right?

22 A. That's correct, yes.

23 Q. So a 25 to 50 GSM non-woven would have been
24 experienced as pleasant by the wearer as a wing?

25 A. As made by Karami -- excuse me. As made by

1 Benning.

2 Q. And so, I think we've got about four minutes
3 before we're -- our four hours are up.

4 Is that about right?

5 MS. DALEY: That's about right. Yeah.

6 MR. ALBRIGHT: Okay.

7 MS. DALEY: Or five or so.

8 MR. ALBRIGHT: Just one more question for
9 today then.

10 Q. BY MR. ALBRIGHT: And that is, if you know a
11 non-woven's basis weight, fiber size, and interstice
12 size, could you calculate its thickness?

13 A. No, you could not.

14 Q. And why not?

15 A. Because we're dealing with fibrous materials
16 and density, and you do not know how much air is
17 contained in the non-woven. The attainment of a
18 particular pore size and reassembly -- excuse me --
19 reorganization of the fibers around the pores can, in
20 fact, make the product thicker than normal.

21 The calendaring that is used to improve the
22 attachment of a hooked piece can make the non-woven
23 thinner. And to actually determine what the thickness
24 would be, would be very difficult. It -- it's the kind
25 of thing you would just have to measure under a given

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1 pressure.

2 And here again, the pressure is carefully
3 specified because the thickness is dependent upon how
4 much pressure is applied to the surfaces when you're
5 trying to measure it.

6 Q. Okay. And I think with that, we can conclude
7 day one, if that's all right with you guys.

8 MS. DALEY: That's acceptable to me.

9 THE WITNESS: That's very acceptable to me.
10 And thank you for your time, Mr. Albright.

11 Q. BY MR. ALBRIGHT: Thank you for your time.

12 A. I will be --

13 Q. You had the hard job.

14 A. Excuse me?

15 Q. You have the hard job.

16 A. Well, you make it hard, that's for sure.

17 MS. DALEY: Just to confirm, Jeremy, we're
18 resuming his -- while Mr. Butterworth is on -- that
19 we're resuming it tomorrow at 10:00 a.m. eastern time,
20 correct.

21 MR. ALBRIGHT: That's correct. And we're
22 treating the time between now and then as, sort of like,
23 just a break in the deposition, right?

24 MS. DALEY: That's correct.

25 MR. ALBRIGHT: Okay.

1 THE WITNESS: Thank you. So noted.

2 MR. ALBRIGHT: All right. See you guys
3 tomorrow.

4 MS. DALEY: See you.

5 THE REPORTER: Are we off the record?

6 MS. DALEY: Yes. We're off the record.

7 THE REPORTER: Did you need a rough or
8 anything like that?

9 MS. DALEY: Sure.

10 MR. ALBRIGHT: That would be great.

11 (Whereupon proceedings suspended at 1:56 p.m.)
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AUGUST 25, 2021

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Signature: _____ Date: _____

1 I, TONY BUTTERWORTH, have read the foregoing
2 deposition and hereby affix my signature that same is
3 true and correct, except as noted above.

4
5
6 _____
TONY BUTTERWORTH

7
8 THE STATE OF _____)
9 COUNTY OF _____)

10 Before me _____ on this day
11 personally appeared TONY BUTTERWORTH, known to me (or
12 proved to me under the oath or through
13 _____) (description of identity card or
14 other document) to be the person whose name is
15 subscribed to the foregoing instrument and acknowledged
16 to me that they executed the same for the purposes and
17 consideration therein expressed.

18 Given under my hand and seal of office this
19 _____ day of _____, 2021.

20
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22 _____
NOTARY PUBLIC IN AND FOR

23
24 THE STATE OF _____
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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
ATTENDS HEALTHCARE §
PRODUCTS, INC., §
Petitioner, §
VS. §
§ Patent 8,152,788
PAUL HARTMANN AG. §
§ Patent 8,784,398
Patent Owner. §
§ Patent 8,771,249
§
§ Patent 8,708,990
§
§

REPORTER'S CERTIFICATION

ORAL AND ZOOM

DEPOSITION OF TONY BUTTERWORTH

AUGUST 26, 2021

I, Nicole A. Hatler, Certified Shorthand
Reporter No. 11275 in and for the State of Texas, hereby
certify to the following:
That the witness, TONY BUTTERWORTH, was duly
sworn by the officer and that the transcript of the oral
deposition is a true record of the testimony given by
the witness;
That the deposition transcript was submitted
on _____ to the witness by and
through his attorney, TONY BUTTERWORTH, for examination,
signature and return to me by _____;

1 That the amount of time used by each party at
2 the deposition is as follows:

3 JEREMY ALBRIGHT: 3 hours, 44 minutes;

4 KATHLEEN DALEY: 0 hours, 00 minutes;

5
6 That pursuant to information given to the
7 Deposition officer at the time said testimony was taken,
8 the following includes counsel for all parties of
9 record:

10 JEREMY ALBRIGHT, Attorneys for the Petitioner;

11 KATHLEEN DALEY, Attorneys for Patent Owner;

12 I further certify that I am neither counsel
13 for, related to, nor employed by any of the parties or
14 attorneys in the action in which this proceeding was
15 taken, and further that I am not financially or
16 otherwise interested in the outcome of the action.

17
18 Further certification requirements pursuant to
19 Rule 203 of TRCP will be certified to after they have
20 occurred.

1 Certified to by me this 13th day of September,
2 2021.

3
4 
5

Nicole A. Hatler, Texas CSR 11275

6 Expiration Date: 11/30/22

NHatler@Ymail.com

1 Mr. Tony Butterworth, expertfiberman@gmail.com

2 September 13, 2021

3 RE: Iprs2020-01477, -01478, -01479, And -01480 v.

4 DEPOSITION OF: Tony Butterworth (# 4771612)

5 The above-referenced witness transcript is
6 available for read and sign.

7 Within the applicable timeframe, the witness
8 should read the testimony to verify its accuracy. If
9 there are any changes, the witness should note those
10 on the attached Errata Sheet.

11 The witness should sign and notarize the
12 attached Errata pages and return to Veritext at
13 errata-tx@veritext.com.

14 According to applicable rules or agreements, if
15 the witness fails to do so within the time allotted,
16 a certified copy of the transcript may be used as if
17 signed.

18 Yours,

19 Veritext Legal Solutions
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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
ATTENDS HEALTHCARE §
3 PRODUCTS, INC., §
§
4 Petitioner, §
§
5 VS. § Patent 8,152,788
§
6 PAUL HARTMANN AG, § Patent 8,784,398
§
7 Patent Owner. § Patent 8,771,249
§
8 § Patent 8,708,990
§
9 §
§
10 §
§
11 §
12
13

14 ORAL AND ZOOM DEPOSITION OF

15 TONY BUTTERWORTH

16 Vol. 2

17 (Pages 115 to 187)

18 AUGUST 26, 2021

19 *****

20 The Oral and Zoom Deposition of TONY
21 BUTTERWORTH, produced as a witness at the instance of
22 the petitioner, and duly sworn, was taken in the
23 above-styled and numbered cause on AUGUST 26th, 2021,
24 from 9:06 a.m. to 1:00 p.m., before Nicole A. Hatler,
25

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1 CSR No. 11275 in and for the State of Texas, reported by
2 machine shorthand, in their respective locations via
3 Zoom, pursuant to the Texas Rules of Civil Procedure,
4 the Current Emergency Order Regarding the COVID-19 State
5 of Disaster, and the provisions stated on the record or
6 attached hereto.

7
8 ---oOo---

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WITNESS:

TONY BUTTERWORTH

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Reporter's Certificate.....

(No exhibits were marked.)

1 THE REPORTER: Do both counsel stipulate
2 that I can still swear in this witness remotely?

3 MR. ALBRIGHT: Yes.

4 MS. DALEY: Yes.

5 THE REPORTER: And I'll remind the witness
6 that you are still under the same oath you took
7 yesterday.

8 THE WITNESS: I understand.

9 TONY BUTTERWORTH,
10 sworn as a witness
11 testified as follows:

12 Q. EXAMINATION BY MR. ALBRIGHT: Good morning,
13 Mr. Butterworth.

14 A. Good morning.

15 Q. I'd like to start today by asking you a few
16 questions about lamination.

17 And my first question is, would laminating
18 a non-woven to a film reduce the fastener retaining
19 forces achievable between the non-woven and a hook-type
20 fastener?

21 A. It depends how the lamination is done.
22 Normally a laminate is made by two surfaces coming
23 together, and in this case, you would have a film
24 contacting a non-woven, and that would have no affect on
25 the ability of a hook closure to engage a non-woven. If

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1 the lamination were pressed into the non-woven such that
2 the non-woven were surrounded by film on both sides,
3 then, of course, it would affect the closure retention
4 force.

5 In this particular instance, lamination is
6 done so that there is minimal effect on the closure
7 force, and in fact, it -- the lamination increases the
8 strength of the retaining force.

9 Q. So how does lamination increase the retaining
10 force of the non-woven with a fastener?

11 A. Because the presence of the film, which has
12 been laminated to the non-woven, essentially reinforces
13 the non-woven, and that is why you can get a retaining
14 force with a non-woven weighing as little as 20 grams
15 per square meter; and the reenforcement provided by the
16 elastic polymer that is laminated to the non-woven helps
17 load sharing and the attainment of better retention
18 forces.

19 Q. So when a non-woven is laminated to a film,
20 aren't there portions of the non-woven that are stuck to
21 the film?

22 A. Yes, there certainly are. And that's --
23 unless -- if that does not occur, then there is no
24 reinforcing effect?

25 Q. So at those portions of the non-woven that are

1 stuck to the film, how can the hooks engage the
2 non-woven?

3 A. Because, as I tried to describe earlier, the
4 lamination of the film can be controlled such that it
5 touches the surface of the non-woven but does not
6 penetrate into the non-woven, which would prevent the
7 hooks from penetrating from the other side and engaging
8 the fibers to create a retaining force.

9 Q. So if the film doesn't penetrate portions of
10 the non-woven, how strong is the connection between the
11 film and the non-woven?

12 A. Well, if it's not touching it, it would be
13 zero. But the fact is in a laminating process, you are
14 usually using a roller and a nip to press and flatten
15 the coating of polymer which is laminated to the
16 non-woven. And this ensures that there is contact
17 between one surface of the film and the surface of the
18 non-woven.

19 Q. And in the type of lamination you're
20 discussing, would the non-woven just be touching the
21 film?

22 A. For the type of product that we're talking
23 about here there would certainly be some penetration of
24 the cross section of the non-woven such that the fibers
25 would be secured into the -- excuse me -- portions of

1 the fibers would be entrained in or stuck into the
2 polymer. And so, that would give a good resistance to
3 delamination and would give a good retention force
4 because it would not interfere with the penetration of
5 the hooks into the other side of the non-woven.

6 Q. Okay. And so, for the fibers that become
7 entrained in the polymer, those fibers are no longer
8 going to be available for engagement with a hook-type
9 fastener, right?

10 A. What happens is that only portions of the
11 fibers are entrained in the polymer. Because in a
12 non-woven structure, the fiber -- the filaments are
13 placed in a sort of random pattern on the forming
14 surface, and there is a three dimensional migration of
15 parts of a fiber. A -- if you were to trace a fiber
16 lying in a non-woven, you would find that it had a very
17 tortious path, and it would migrate from one surface to
18 the other surface of the non-woven and back again. And
19 so, it would be random movement in both the thickness
20 direction and in the horizontal direction. So you might
21 find a filament with hitting the plastic that's applied
22 to one surface, and then would be free of that, and on
23 the other surface able to engage a hook and then it
24 would be back down to the surface in some other distant
25 part.

1 So the whole nature of the lamination
2 process is to create a durable contact at the interface
3 but not interfere with the ability of the hooks to
4 penetrate.

5 And there is one other feature that makes
6 it important. Usually when you laminate it with heat
7 and before you incorporate it into a product, there is
8 shrinkage in the plastic film. That causes the fibers
9 attached to it, that are laminated to it, to buckle
10 upwards. And so, it makes for a more receptive surface
11 into which hooks can engage.

12 Q. So those portions of the non-woven that buckle
13 up, how are they more receptive for the hooks?

14 A. Because as -- if you have fibers lying flat on
15 a surface and you press a hook into them, you're relying
16 on that hook getting underneath the edge of a fiber to
17 create an attachment force. When the fibers buckle
18 upwards, you create loops and make the individual fibers
19 on the surface more accessible to the hooks in the
20 applied closure and so that they can engage with it.

21 Q. So before -- and I believe you're discussing a
22 temperature treatment; is that right?

23 A. Yes. Yes.

24 Q. So before you conduct that sort of temperature
25 treatment and you've laminated your non-woven to a film,

1 isn't the film preventing the hooks from getting
2 underneath the fibers?

3 A. No, it isn't. Because there are still
4 apertures that are available for the hooks to penetrate
5 the surface of the non-woven and become engaged. That
6 is increased, A, because the laminating process is, in
7 fact, a heat-generating process, and so you will
8 experience some of that shrinkage and blossoming of the
9 fibers on the other surface immediately off the
10 laminating process. And you can accentuate it, as you
11 mentioned, by subsequently giving it another heat
12 treatment allowing it to relax.

13 Q. So I'd like to point your attention to the
14 Beckert 788 patent, which is Exhibit 1001 in the 788 IPR
15 proceeding, and I believe we introduced it yesterday.

16 A. I have the Beckert 788 patent in front of me.

17 Q. And I'd like you to take a look at column
18 eight, lines 8 through 11.

19 A. I am looking at column 8 and line 11.

20 Q. Column 8, lines 8 through 11, please.

21 A. 8 through 11. Okay. Yes, I see that.

22 Q. And so, there it says many of the lamination
23 methods clearly reduce the over abdomen retaining
24 forces, right?

25 A. Yes.

1 Q. So what kind of lamination methods is the 788
2 patent discussing?

3 A. It's discussing -- I think they mention
4 several, but I believe that the lamination process they
5 would use would be the one that I described to you, and
6 this would involve placing a film in contact with the
7 non-woven, heating the film so that it softens the film,
8 and pressing the non-woven into the softened polymer.
9 And when it comes off the process, if it is allowed to
10 shrink, it will puff up. If it is wound on a roller and
11 later it is exposed to temperature, then it would regain
12 some of its plushiness.

13 Q. So a lamination method -- or laminating a
14 non-woven to a film does reduce over-laminating
15 retaining forces, right?

16 A. It can, yes.

17 Q. While we've got Beckert 788 open, I'd like to
18 ask you a few questions about column 13, lines 34 to 41.

19 A. Yes, I see that.

20 Q. Okay. And next, I'd like you to take a look at
21 your paragraph, so your declaration Exhibit 2004, 117.

22 THE REPORTER: I'm sorry, Counsel. Can we
23 go off the record for one moment?

24 MR. ALBRIGHT: Sure.

25 (A recess was held from 9:22 a.m. to 9:33 a.m.)

1 BY MR. ALBRIGHT:

2 Q. Mr. Butterworth, did you have a chance to
3 review the 788 patent column 13, lines 34 to 41?

4 A. No. I -- one moment. Yes, I've -- I've read
5 that.

6 Q. Okay. And also paragraph 17 of your
7 declaration?

8 A. Yes, I've seen that.

9 Q. Okay. And so, my question is, if two
10 non-wovens have similar types, fibers sizes and
11 embossing patterns, the one with the higher basis weight
12 will have higher fastener retaining forces than the one
13 with the lower basis weight, right?

14 A. It can, but not in all cases.

15 Q. So what are some examples of cases where the
16 non-woven with the higher basis weight would not have
17 higher retaining forces?

18 A. Well, I perhaps need to explain that in terms
19 of why we end up with a heavier basis weight at the side
20 parts, and that is pure and simple. Because the
21 non-woven that is the side piece, or side flap, needs to
22 have strength and tear resistance to enable it to
23 support the closures when the diaper is placed on a
24 person.

25 Q. So the side parts in a diaper need to be

1 strong.

2 Is that a fair statement?

3 A. Yes, they do. And, in fact, you can see some
4 evidence of that strength need. If you look at
5 figure -- figure 5 of Beckert, and in figure 5, it shows
6 you a piece -- a side piece 27 to which the closures are
7 attached, and a dark place figure 7. And in addition to
8 the side piece being a heavier weight non-woven, they
9 have to take particular -- pay particular attention to
10 the side where the pieces connected to the main chassis
11 such that the side piece will not tear off the
12 disposable diaper.

13 Q. So why would a side piece tear off of a
14 disposable diaper?

15 A. Because you are pulling at an angle and the
16 sharp 90-degree intersect of the side piece with the
17 fasteners attached can tear off very easily unless that
18 is reinforced and unless the side piece is made of a
19 heavier weight non-woven. The closure is only good --
20 as good as the attachment of the mini loop fabric to the
21 plastic film on the one hand and the non-woven which
22 carries the closures attached to the side of the diaper
23 on the other hand. So you find that the non-woven there
24 has to be heavier. There's no film to reinforce that
25 non-woven, so you have to go heavier weight to get the

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1 strength you need, and that happens, you'll find more
2 fibers.

3 Q. And so, would a heavier -- is it fair to say
4 that a heavier basis weight non-woven is going to be
5 stronger than a lighter basis weight non-woven?

6 A. Yes, it is, all other things being equal.

7 Q. All right. And the forces that might act to
8 carry wing, diaper's wing from the chassis, would those
9 same forces potentially tear the non-woven of the side
10 part, as well?

11 A. Yes, they could.

12 Q. But a heavier basis weight non-woven, all
13 things being equal, is going to be tear-resistant in a
14 lighter basis non-woven?

15 A. That's correct.

16 Q. And so, returning to your paragraph 117, you
17 mentioned -- well, scratch that.

18 If you had two non-wovens that had the same
19 type fiber size and embossing pattern, I believe you
20 testified, and correct me if I'm wrong, that one with
21 the higher basis weight would not always have higher
22 fastener retaining forces than the one with the lower
23 basis weight; is that fair?

24 A. That's fair. Yes.

25 Q. And I'm trying to understand examples of when

1 such a higher basis weight non-woven would not have
2 higher fastener retaining forces.

3 Can you provide any?

4 A. Strength depends upon how the fibers are bonded
5 together, and you can have a heavier weight non-woven
6 where the fibers are bonded such that the hook will not
7 penetrate and develop a sufficiently high retaining
8 force. It -- the structure of the non-woven, probably
9 above anything else, is what enables that non-woven to
10 interact with a hooked closure.

11 And so, the density of the non-woven would
12 have an effect, and you could have a higher basis weight
13 non-woven that has been consolidated more, which would
14 have good tensile properties but would not have good
15 hook closure retention properties.

16 Q. And by what mechanism would a non-woven be
17 consolidated?

18 A. It would be part of the process. Usually it's
19 in the process to make the non-woven. The density is
20 increased by passing it through a nip made of two
21 rollers, one or both being heated, and they will
22 consolidate a non-woven. If it's done very intensely,
23 then the non-woven will feel more like a paper than a
24 soft woven fabric.

25 Q. And that is something that can occur when

1 you're making the non-woven?

2 A. It's a property you can control in making the
3 non-woven, yes.

4 Q. So for the two non-wovens we're discussing,
5 what if they were made in the same way in addition to
6 being of the same type, having the same fiber size, and
7 the same embossing pattern, would the higher basis
8 weight non-woven then produce higher fastener retaining
9 forces?

10 A. The higher basis weight non-woven would have
11 better retention properties and higher strength
12 properties.

13 Q. Let's look back at the Beckert pattern --
14 Beckert 788. I'm sorry. And I want to look at the
15 example that's provided starting at column 14, line 42,
16 and it continues down through column 15, lines 44.

17 A. I have it. I would need to read it, if you
18 will be patient, please.

19 Q. Sure.

20 A. I've read that, yes.

21 Q. And so, in this example, is the density of
22 material X provided?

23 A. No. It doesn't provide the density of
24 material X.

25 Q. Does it provide anything indicating the degree

1 of consolidation of material X?

2 A. What material X comprises is a hot calendar
3 embossed pattern. So that indicates that there are
4 parts of the web which are increased in density and --
5 but there is no measure of density there.

6 Q. And the embossing pattern is a distinct
7 property from density, right?

8 A. Yes, it is.

9 Q. And so, for material Y, do we know what the
10 density of the non-woven is?

11 A. No. I don't believe it's there.

12 Q. Do we know what the density of the non-woven
13 oil laminate is?

14 A. No, we would not. We don't know that from what
15 they have published here.

16 Q. And so, the densities of material X and
17 material Y's non-woven could be different?

18 A. Yes, they could.

19 Q. Does the 788 patent discuss a non-woven's
20 density?

21 A. It may. I don't -- I haven't scanned it for
22 that, but a person of skill in the art would understand
23 what each of the structures would look like.

24 Q. And so, a person of ordinary skill in the art
25 could tailor the density of a non-woven to achieve a

1 retaining force that they desire --

2 A. Yeah.

3 Q. -- is that fair?

4 A. Yes, that is fair.

5 Q. And they could tailor the density in
6 conjunction with other non-woven parameters such as
7 type, fiber size, and embossing pattern to achieve the
8 retaining forces that they desire?

9 A. Yes, they could do that.

10 Q. Okay. I'd like to return to your declaration,
11 please, and specifically paragraph 106.

12 A. Yes, I see that.

13 Q. So I just want to make sure I pointed you to
14 the right paragraph.

15 And so, the design considerations you're
16 discussing here, do they include parameters like
17 density, fiber size, embossing pattern that we discussed
18 earlier?

19 A. No. Paragraph 106 talks about the finishing
20 treatments that would impact the ability to engage with
21 various closure systems and lists lamination, for
22 example, as being one influence. There are quite a few
23 things that go into making the right non-woven to do the
24 right job in the right place.

25 Q. Are the end properties you're discussing here

1 in 106, do they encompass a non-woven's ability to
2 engage a mechanical fastener?

3 A. This is what I say in 106, Fabric finishing
4 treatments, such as lamination, further impacts a
5 non-woven fabric's properties and abilities to engage
6 with various closure systems. I was trying to strike a
7 balance between alerting one to the fact that that can
8 happen, but not get too deeply in the weeds describing
9 non-woven.

10 Q. What are the end properties you mentioned at
11 the end of paragraph 106 that can be unpredictably
12 impacted?

13 A. I'm having difficulty with the question. Could
14 you rephrase it for me, please?

15 Q. Sure.

16 So the last sentence of paragraph 106, you
17 testify every design consideration impacts the end
18 fabric's properties and performance and the resulting
19 end properties can be unpredictably impacted, right?

20 A. Right.

21 Q. And I'm just wanting to know what the resulting
22 end properties you're discussing here are.

23 A. Let me give you an example. If we are talking
24 about the side part attached to the Beckert diaper which
25 holds the two closures, we have to make that non-woven

1 strong enough to at least match the strength
2 necessary -- excuse me.

3 We need to make that non-woven strong
4 enough such that it will not fail, in itself, and it
5 will not fail at the point where it joins the diaper
6 chassis.

7 And so, while one is working to get the
8 right strength, that strength needs to be achieved
9 without minimizing the ability of the non-woven to be
10 penetrated by the hooks.

11 Q. So there's a trade-off with the example side
12 part you're talking about between strength and the
13 ability to engage a hook-type fastener?

14 A. Well, what I said was, or implied, you have to
15 get the strength in the non-woven by means that do not
16 impact the ability of a hook closure to penetrate it.
17 And you do that by getting stronger into fiber bonds in
18 the non-woven without necessarily having to calendar it.

19 One way to make a non-woven strong is to
20 hot calendar it. As we know, hot calendaring does what
21 you indicated it with your question. It can reduce the
22 ability of a hook to engage. And so, you have to bond
23 the fibers in that side part, particularly the side part
24 in the front, so that you make it strong enough but you
25 don't destroy the ability of the closure to get a

1 necessary retention force.

2 Q. Okay. That makes perfect sense.

3 So is it fair to say that two of the
4 resulting end properties that you're discussing in
5 paragraph 106 are strength and fastener retention?

6 A. Yes.

7 Q. And you testify in paragraph 106 that those end
8 properties can be predictably impacted by design
9 considerations, right?

10 A. Somebody making the -- the non-woven too strong
11 so that the non-woven that is attached at the front
12 part -- front side parts of the diaper would not be --
13 would not have a surface into which the hooks could
14 penetrate simply because they made it too strong. So
15 you're -- as you point out, you're striking a balance
16 between strength and affinity for the hooks to achieve
17 the necessary retention force.

18 Q. So would a person of ordinary skill in the art
19 that designed that too strong wing you just mentioned be
20 surprised that its ability to engage a hook-type
21 fastener was reduced?

22 A. No. I think that that would be part of the
23 interchange between the people supplying the materials
24 to make the disposable diaper and achieving the right
25 balance in terms of how strong the side part should be

1 such that it will not break, tear, or otherwise fall or
2 be pulled off the chassis, and at the same time, retain
3 the necessary structure that will engage with a
4 hook-type fastener when fastened to the side parts.

5 Q. And so, a person of ordinary skill in the art
6 understands this trade-off between strength and ability
7 to engage a hook-type fastener that we've been talking
8 about?

9 A. I would expect that to be the case, yes.

10 Q. And so, what is an example of a design
11 consideration that could unpredictably impact a
12 non-woven's strength or ability to engage a fastener?

13 A. The shape of the -- will you ask the question
14 again, please?

15 Q. So what is an example of a design consideration
16 that could unpredictably impact a non-woven's strength
17 or ability to engage a fastener?

18 A. The type of binder that is used. If the binder
19 that joins the sides together is too glassy, that is, it
20 is a brittle binder, it would not be as acceptable as a
21 more elastic-type binder. And it would appear from the
22 development of the Beckert technology, that in designing
23 the products, they may have run into that difficulty
24 because they talk about how to make elastic-type
25 structures that would help engage with a hook loop -- a

1 hook fastener.

2 Q. And so, the binder that we're talking about,
3 when does that come into play in the process of
4 manufacturing a non-woven?

5 A. Usually when you go through the process, the
6 first part of the process is to lay out a pattern of
7 unbonded fibers, and then past that uniform layer of
8 fibers in a given weight into a process that would
9 either apply an adhesive or would apply heat to cause
10 the fibers to be connected to one another in a
11 non-woven. And so, that would -- that bonding takes
12 place very early in the process.

13 If it's spunbonding, it is -- essentially
14 is the direct formation of a non-woven sheet going from
15 melten -- molten polymer to fibers to the sheet to
16 bonding that sheet together by, in that case, usually
17 applying heat or you can use wet jetting.

18 Q. And so, would using a binder be an example of
19 chemical bonding?

20 A. Exactly.

21 Q. Okay. And did you mention that the 788 patent
22 discusses binders?

23 A. I may have. I don't remember. But these
24 materials, if they were not -- if binder had not been
25 used to assemble the non-woven, they could not have been

1 wound on to a roll and delivered to Hartmann's plant.
2 They have to have a binder just to keep their integrity.

3 Q. So do all spunbond non-woven have to have a
4 binder?

5 A. They don't necessarily have to have a binder
6 added. Two things can occur. Either you apply heat
7 such that the surface of the individual fibers melt and
8 become tacky and stick to one another, or you can use an
9 embossing pattern, which uses heat and pressure to tie
10 the fibers together at different locations. And that's
11 an alternative way of bonding the structure together
12 where the binder is in the actual fibers themselves just
13 by virtue of the fact you melt it either by just making
14 it sticky or by impressing a pattern of embossing points
15 on the spunbond.

16 Q. Okay. And so, just sticking with your
17 paragraph 106, are there any other design considerations
18 that can unpredictably impact a non-woven's strength or
19 ability to engage a hook-type fastener?

20 A. One issue can, of course, be stiffness. You
21 are trying to make a product that is comfortable and
22 does not cause any irritation, and one has to develop
23 the necessary features in those side pieces such that
24 they do not become stiff or harsh or like a piece of
25 rough paper. You want to have a soft textile finish.

1 So you -- you find a variety of parameters
2 that box you in as to what you need to have in a
3 particular side piece, and in this particular instance,
4 that means that you've got to have a heavier weight
5 material to meet all the requirements of that side
6 piece.

7 Q. And so, I'd like to return to the 788 patent --
8 Beckert 788.

9 A. I have it.

10 Q. And I'd like you to take a look at column six,
11 lines 17 through 36.

12 A. Yes, I have read that.

13 Q. So the 788 patent explains that all non-wovens
14 are suitable that contain at least one initial component
15 based on a thermoplastic polymer, right?

16 A. Yes.

17 Q. Would any non-woven that falls within that
18 class of non-wovens have behaved unpredictably with
19 respect to fastener retaining forces?

20 A. Yes. There would be examples of where it could
21 behave unpredictably. For example, heat and pressure
22 may cause the color of the polymer to change. The heat
23 and pressure of the temperature may be too high to
24 effect good bonding. If the molecular weight
25 distribution in the polymer is changed, the embossing

1 might cause a brittle-type bond which would not yield
2 the strength characteristics that you're looking for.

3 There are a host of surprises that can crop
4 up that a person of skill in the art would try to avoid
5 by making a selection up front as to which thermoplastic
6 polymer should be involved and in what quantities and
7 whether that thermoplastic polymer should be allowed to
8 just get sticky when it's heated and embossed, or
9 whether it should be what we call a bi-component fiber,
10 which is mentioned there, which means you spin a single
11 fiber with two sides, one side is a melting point
12 polymer and the other side is the strength polymer, and
13 those fibers are particularly useful because they have a
14 wider window of operating temperatures.

15 And so, yes, I could see a variety of
16 surprises that could crop up. And any time I have taken
17 a non-woven in a product to market, I have run into some
18 challenges that require you to tweak the formulation as
19 you move forward.

20 Q. And so, in order to make some of these
21 non-wovens provide a desired retaining force, a person
22 of ordinary skill in the art might have to experiment?

23 A. Yes.

24 Q. Okay. And would that experimentation be
25 significant for at least some of these non-wovens

1 described here in the Beckert patent?

2 A. As I -- as I look at the Beckert patent, I
3 would start off by using the teachings of the Beckert
4 pattern because I think that, as a professional, they
5 give me all the things I need to do to duplicate what
6 they are intending to make. And I think that what they
7 have written down here is pretty much a very close
8 recipe to what I would end up using. In fact, it may,
9 without any adjustment, be perfect for what I would do.

10 Q. And so, when you say what the Beckert patent
11 has written down here, what part of the Beckert 788 are
12 you referring to?

13 A. What I'm saying is that the Beckert patent
14 tells me how to make the thermoplastic film, how to
15 laminate it to a non-woven spunbond, what that
16 spunbond -- what that spunbonded fabric should be
17 composed of, how the emboss patterns should be applied
18 to it, and what emboss patterns to use such that in
19 making this diaper, I'd have the right non-wovens to put
20 over the chassis at the front part and to put on the
21 attached pieces at the side, particularly at the front
22 and also at the back. So I have -- to me, it's -- it
23 would be a no-brainer.

24 Q. So it sounded like you were referring to the
25 Beckert patent's example that we discussed earlier

1 today; is that right?

2 A. I am referring particularly to their -- well,
3 the -- the -- I'm particularly referring to column 14
4 where the materials are listed that they can use, and
5 that's the end result that they get from the teachings
6 in the patent.

7 Q. But if you were to deviate from this example,
8 say instead of using a spunbond non-woven, use another
9 type of non-woven described at column six, line 17 to
10 36, you may run into some unpredictability?

11 A. Yes, you could, and that's experimentation 101.
12 If you're using staple fibers, for example, carbon
13 fibers, yes, you would have to run some experiments.
14 But the direction of those experiments is clearly
15 delineated in Beckert, and I would -- I would judge this
16 to be a normal development. There's nothing that's a
17 show stopper in the Beckert patents.

18 Q. So was it within a person of ordinary skill in
19 the art's skills to make any of these non-wovens that
20 Beckert describes at columns 6, lines 17 to 36, work or
21 provide a desired fastener retaining force?

22 A. If we're talking about October 2006 --

23 Q. Uh-huh.

24 A. -- the answer is certainly yes.

25 Q. So switching gear, is it fair to say that a

1 person of ordinary skill in the art would have desired
2 to produce a lower cost diaper as opposed to a higher
3 cost diaper?

4 A. A person of skill in the art is -- is usually
5 driven by marketing, and they are -- they're the ones
6 that know what products need to be distributed and what
7 areas. So product development meets the request of
8 marketing.

9 If they said they wanted to compete on the
10 basis of low cost, then the person of skill in the art
11 would focus on that. If they wanted to have a superior
12 diaper but had customer-required benefits that they
13 could advertise, then the person of ordinary skill in
14 the art would go for that.

15 Q. Well, even for a superior diaper, would it be
16 advantageous to be able to produce that superior diaper
17 at a lower cost?

18 A. That is certainly a direction that you need to
19 go in.

20 Q. And so, in order to produce a lower cost
21 diaper, would a POSITA have invested in equipment to
22 allow for that production?

23 A. Once the product is designed, manufacturing are
24 the people who invest in that. A person of skill in the
25 art would make a product and provide opportunities for

1 cost savings. For example, they may have a particular
2 manufacturer of a non-woven they want to use. They
3 would also put together a list that said, If we don't
4 use this good non-woven, yes, we can buy a less
5 expensive non-woven, and here are the limitations of
6 that less expensive non-woven will provide.

7 You try to wring out as much money in the
8 cost column as you possibly can, but certain things you
9 have no choice over. You don't want these side tabs to
10 tear off, so that gives you certain properties that you
11 must have. You don't want the product to absorb less
12 than a certain amount of urine, and that means that the
13 weight of the absorbant core has to be clearly denoted.
14 Because the pulp, which is the principle absorbant, and
15 super absorbants only absorb a certain amount of
16 material, and you have to meet that target if you want
17 to avoid leakage. So there are certain relationships
18 that are very fixed and few that you can afford to spend
19 less money on.

20 Q. So if a diaper manufacturer can reduce the cost
21 of the diapers they manufactured by some amount, but it
22 would require an investment in manufacturing equipment,
23 is that something that they would have done?

24 MS. DALEY: Objection to form.

25 THE WITNESS: The way that that operates is

1 that you try to identify cost savings, according to
2 making a particular change. A second consideration is,
3 is this a noticeable change that the consumer would be
4 upset about it or not. And thirdly, the investment in
5 machine parts to do it would be figured on how long
6 would it take us to pay for that extra machinery. So
7 there would be several factors going into that, but yes,
8 that could be considered.

9 Q. BY MS. ALBRIGHT: So if a manufacturer was
10 going to sell a sufficient amount of diapers to offset
11 the cost of the machine that would allow reduction in
12 the cost of the diapers themselves, they would make that
13 investment?

14 A. Only if they accepted the change that might be
15 perceptible to the users, and I don't mean just the
16 patient, but the caregivers that put the product on the
17 patient. Because at the end of the day, the saleability
18 and accept/reject criteria are based upon, Does this
19 protect the patient? Does -- does -- is the leakage
20 contained? Are the prices of the product coming into
21 the hospital okay? There will be other factors that
22 would make a determination as to whether that investment
23 should be made.

24 Q. Could a diaper manufacturer could have invested
25 in research and development to try to reduce the cost?

1 A. That is usually a part of the remit for
2 research and development. You're absolutely right.
3 They would be doing that.

4 Q. So Mr. Butterworth, have you been involved with
5 the design of diapers?

6 A. Yes.

7 Q. Did you -- have you, personally, designed any
8 diapers?

9 A. Yes.

10 Q. Did any of those diapers have a separate wing
11 and chassis construction?

12 A. No.

13 Q. So they were hourglass diapers?

14 A. Correction, yes. Some had separate wings, and
15 yes, they were hourglass diapers.

16 Q. Okay. So you've been involved in the design of
17 both hourglass and separate wing diapers?

18 A. Yes.

19 Q. Were the separate wing diapers actually
20 manufactured?

21 A. Yes.

22 Q. Were you involved in the manufacturing process
23 of the diapers -- separate wing diapers?

24 A. Not -- I am not a manufacturing person, but my
25 team, led by me, specified the machinery and the

1 materials and approved the purchase of the machinery.

2 Q. Are you aware of any manufacturing downtown
3 associated with the separate wing diapers brought about
4 by weak bonding of the wings to the chassis?

5 A. Not as I sit here, no.

6 Q. Are you aware of any manufacturing downtime
7 associated with the separate wings diapers that we were
8 discussing brought about due to the wings tearing?

9 A. Not as I sit here.

10 Q. Is the separate wing diaper we're discussing,
11 is that pre-2006?

12 A. Yes.

13 Q. Did that diaper have a non-woven outer cover on
14 its backsheet?

15 A. No.

16 Q. So it had a film backsheet?

17 A. Yes.

18 Q. So for other diapers that you've been involved
19 in the design of, did any of those have an outer cover
20 that was a non-woven for the backsheet?

21 A. Some did.

22 Q. And of those, were any of them separate wing
23 diapers?

24 A. Insofar as some of them were the T-shaped
25 diaper, they had wings.

1 Q. Okay. So you've been involved in the design of
2 T-shaped diapers with --

3 THE REPORTER: I'm sorry. Repeat that.

4 MR. ALBRIGHT: Yeah. Let me just --

5 BY MR. ALBRIGHT:

6 Q. So Mr. Butterworth, you've been involved in the
7 design of T-shaped diapers that had non-woven outer
8 covers on their backsheets?

9 A. No.

10 Q. No. But you have been involved in the design
11 of separate wing diapers that had non-woven outer covers
12 on their backsheets?

13 A. I'm -- hang on one second. I'm just trying to
14 take my mind back to that time.

15 Q. Sure.

16 A. My recollection of the machine at that time was
17 that the wings that were -- the product -- the wings
18 were attached -- were -- were actually part of the
19 structure. We didn't attach wings, but the wings could
20 be attached on that particular machine. We didn't use
21 that type of measurement -- excuse me -- that type of
22 attachment. This was back in 1992, about.

23 Q. Okay. And so, have you been involved in the
24 design of a diaper that had both non-woven wings and a
25 non-woven outer cover on its backsheet?

1 A. No.

2 Q. Okay. And so, I -- I -- we've been going about
3 an hour. We are getting close to lunch, but if you'd
4 like to take a break.

5 MS. DALEY: We can --

6 THE WITNESS: For me, we can take a short
7 break of ten minutes and then we can resume, but then
8 again, I'm deferring to others what would they like to
9 do.

10 MR. ALBRIGHT: Like I said yesterday,
11 you've got the hard job here, so whatever you say sounds
12 great to me.

13 THE WITNESS: Okay. Let's take a
14 ten-minute now and then we can decide when we want to
15 break for lunch.

16 MR. ALBRIGHT: Sounds good.

17 THE WITNESS: Thank you, Mr. Albright.

18 MR. ALBRIGHT: Thank you.

19 (A recess was held from 10:28 a.m. to 10:44 a.m.)

20 BY MR. ALBRIGHT:

21 Q. Okay. Mr. Butterworth, I'd like to return to
22 our good friend Karami 772, and that has been introduced
23 already as Exhibit 1003 in the 788 patent IPR
24 proceeding.

25 MS. DALEY: I'm sorry. Can you tell me

1 what you referred to? I missed that.

2 MR. ALBRIGHT: Sure. Sure. It's Karami
3 772.

4 MS. DALEY: Got it. Thank you.

5 BY MR. ALBRIGHT:

6 Q. And so, just let me know when you have it in
7 front of you, Mr. Butterworth.

8 A. I have it. I'm ready.

9 Q. So is it your opinion that Karami 772 only
10 teaches water jet treating and/or aperturing the wings
11 of his diapers?

12 A. I believe that that is the inventive concept
13 that he's putting forward.

14 Q. And in your opinion, does he ever teach water
15 jet treating or aperturing the backsheet that overlies
16 the main part of his diaper?

17 A. No.

18 Q. I'd like to direct your attention again to
19 paragraph 53.

20 A. I have it. I'll just read it.

21 Q. Sure.

22 A. Yes, I have read it.

23 Q. And my first question is, was stay-away zone a
24 term of art at the time of the invention?

25 MS. DALEY: Objection. Form.

1 BY MR. ALBRIGHT:

2 A. I don't remember it being a term that appeared
3 in the literature or that it had any consequence back in
4 2006.

5 Q. So prior to your review of patent 772 and
6 Damaghi, had you heard the term stay-away zone before?

7 A. Not as I sit here.

8 Q. And so, stay-away zone didn't have a well
9 understood meaning to a person of ordinary skill of the
10 art at the time of the invention?

11 MS. DALEY: Objection. Form.

12 BY MR. ALBRIGHT:

13 A. I -- I can only say that it would be -- if --
14 if somebody brought that up to me then as now, I would
15 assume that meant the place where you didn't expect a
16 closure to attach if it were brought up in the context
17 of disposable diapers.

18 Q. And so, in Karami 772's paragraph 53, he
19 provides two options for creating his stay-away zone,
20 right?

21 A. That's correct, yes.

22 Q. And is it the first option he describes is
23 exposing a film through an opening in the backsheet,
24 right?

25 A. Yes.

1 Q. And would a hook-type fastener be able to
2 engage a film that was exposed through an opening in the
3 backsheet?

4 A. It would depend on the non-woven. I'd have to
5 see it and -- but if I take it within the context of the
6 patent that is -- excuse me -- the application
7 publication, if it were a stay-away zone, I would give
8 it a common and ordinary meaning that that wasn't a
9 place where a hook should go.

10 Q. So when considered in context of Karami 772,
11 you would not -- a POSITA would not expect a hook-type
12 fastener to be able to engage this film he describes
13 that is exposed through an opening in the backsheet?

14 A. I believe that to be the case. Yes.

15 Q. How would that opening in the backsheet have
16 been created?

17 A. I don't know. And I think, as we talked
18 before, we've been unable to find 130 in figure 8, and
19 that makes it difficult.

20 Q. Well, let's look at Karami's 722 figure 8.

21 A. I -- I have that, yes.

22 Q. Could it be that the opening in the backsheet
23 would be where stay-away zone 160 is labeled?

24 A. I suppose it could be, but I have no reason to
25 believe that that would be the case. It -- it could be.

1 But lacking any location by Karami, I can't -- I do not
2 know. It could be.

3 Q. And when you say you lack location -- or Karami
4 doesn't provide location information, you're referring
5 to the absence of a reference roman numeral 130 on
6 figure 8?

7 A. Correct. And we don't know the extent of that
8 opening.

9 Q. Well, figure 8 includes element 160, right?

10 A. It does.

11 Q. And in paragraph 53, Karami 772 explains that
12 the stay-away zone 160 can be formed by a film exposed
13 through an opening in the backsheet 130, right?

14 A. Yes.

15 Q. And so, wouldn't a POSITA, looking at figure 8
16 seeing reference roman numeral 160, understand that to
17 be the stay-away zone?

18 A. I think that a person of skill in the art would
19 understand that somewhere on the front there is a
20 stay-away zone. It has been shown with a sort of
21 hourglass-type shaping and identified as such.

22 Q. So why does Karami expose a film in the opening
23 of the backsheet?

24 MS. DALEY: Objection. Foundation.

25 THE WITNESS: I believe that he is exposing

1 a film so that the film surface is present and the film
2 surface will not take the hook closure.

3 Q. BY MR. ALBRIGHT: And Karami 772 achieves that
4 by making an opening in the backsheet, right?

5 A. That's what paragraph 53 says.

6 Q. And so, if the portion on the backsheet that's
7 removed to create the opening would not engage fasteners
8 sufficiently to secure a diaper on the wearer, why would
9 you remove that portion to expose a film through the
10 backsheet?

11 A. Because Karami doesn't say how that works.

12 Q. Karami doesn't say how what works?

13 A. Well, he doesn't tell me where the body
14 contacting surface is against the person. He doesn't
15 tell me -- he -- if you put an opening in the backsheet,
16 you're going to cause the product to leak when it gets
17 wet, and I don't see any enabling technology that tells
18 me exactly how Karami put a plastic film through an
19 opening in the front part that would both seal the
20 opening so that urine wouldn't leak, and at the same
21 time, prevent a closure actually attaching to it.

22 Q. Well, there would be a film in the opening
23 created in the backsheet, right?

24 A. It -- it says that a particular material would
25 be exposed through an opening. And I say, again, the

1 difficulty is that I'm not guided to which lines, and
2 I'm not guided to a part 130 to enable me to make an
3 intelligent assessment there.

4 Q. But on figure 8, he shows at least a possible
5 location for stay-away zone 160 on his diaper, right?

6 A. Yes, he does.

7 Q. And he says you can create an opening in the
8 backsheet and expose a film, right?

9 A. That's correct.

10 Q. Would urine leak through the film?

11 A. If the -- no. It would not be expected to leak
12 through the film. It would leak if there were no
13 connection between that film and the backsheet.

14 Q. But wouldn't the POSITA expect an inter-backing
15 film to be attached to the backsheet to which it's
16 exposed?

17 A. Unfortunately we don't know. Because the
18 drawing figure 8 doesn't reveal to you just exactly how
19 that is done. I mean, something as important as a dual
20 function piece of material that's going to, first of
21 all, make it impossible for the closure to seal in that
22 area and the need to prevent leakage, and at the same
23 time, have a diaper that goes on comfortably, one is
24 somewhat in the dark. And a person of skill in the art
25 would decide not to be using a stay-away zone because

1 that, as such, indicates you've got a place where you
2 cannot use the surface to adhere anything to. So it's a
3 cautionary tale there, I think.

4 Q. But a POSITA implementing Karami 772's
5 teachings wouldn't create a diaper that would leak,
6 right?

7 A. I would hope not.

8 Q. And so, if you wanted to implement this film
9 exposed through an opening in the backsheet, as depicted
10 in figure 8 as one possible example, wouldn't they have
11 laminated the film to the backsheet or otherwise
12 attached it to?

13 MS. DALEY: Objection to form.

14 THE WITNESS: Figure 8 doesn't show an
15 opening with a film, so we are left to guess.

16 Q. BY MR. ALBRIGHT: Well, a person of ordinary
17 skill in the art, when they read a reference, they bring
18 their knowledge and experience to bear, correct?

19 A. In -- with that comment, a person of skill in
20 the art would be looking at a much simpler way of
21 achieving a stay-away zone, and in fact, Karami had
22 already indicated that there are other ways of creating
23 a stay-away zone.

24 To put a non-woven with a film on it and to
25 cut a hole in the front of the diaper and to place

1 that -- that film so it's sticking through the hole as a
2 stay-away zone would be a very complex and unnecessary
3 step in making the product, and I believe that a person
4 of skill in the art would not follow that route simply
5 because of the complexity and no guidance from Karami to
6 tell you more details about how it would be attached,
7 whether it be heat sealed.

8 This non-woven that they're talking about
9 is a fairly complex non-woven, which would have some
10 thickness and would be expensive in itself to put there.
11 So I'm at a loss to understand, as a person of skill in
12 the art, why I would be expected to put that combination
13 of materials through a hole cut in the front of a diaper
14 when I could go and simply consolidate all the fibers in
15 that region with a hot press and still avoid having to
16 cut holes in the outside of the diaper.

17 Q. Well, if that person of ordinary skill in the
18 art was going to instead consolidate the fibers of the
19 backsheets non-woven in the stay-away zone, why would
20 they have done that?

21 MS. DALEY: Objection. Foundation.

22 THE WITNESS: Because they wanted to make a
23 stay-away zone.

24 Q. BY MR. ALBRIGHT: Was there a need for the
25 stay-away zone?

1 A. Apparently on the diaper in figure 8,
2 Mr. Karami is suggesting that there is a need for a
3 stay-away zone.

4 Q. Is it because the fastener would otherwise
5 attach to the portion of the diaper that you make the
6 stay-away zone?

7 A. That's what a stay-away zone is for, to prevent
8 the attachment of closures to that area.

9 Q. Because if you could attach closures to that
10 area, it might create, for example, the diaper
11 miss-sizing issues we discussed earlier?

12 MS. DALEY: Objection to form.

13 Yes. I believe that that was the case.

14 Q. BY MR. ALBRIGHT: I'd like to change gears, and
15 I have some questions relating to fiber size.

16 And my first question is, is what were
17 typical fiber sizes for spunbond non-wovens?

18 MS. DALEY: Objection to form.

19 THE WITNESS: My recollection would the
20 filament sizes in spunbonds would be typically of the
21 order of 1 denier up to 3 deniers, and that is the
22 finest measure, a linear density measure.

23 It's also close to the measure of detex.
24 Detex and denier are close, just a different way of
25 measuring the linear density or fineness of the

1 individual filaments.

2 Q. BY MR. ALBRIGHT: Was that 1 to 3 denier
3 dictated by the way in which spunbonds were made?

4 A. It was a combination of features. You wanted
5 to make a sheet of filaments that, when bonded, was
6 flexible and soft and as textile like as you could make
7 it. And so, that would indicate a need for fineness.

8 At the same time, you wanted to make the
9 non-woven sufficiently strong, which would indicate a
10 desire for slightly courser fiber. So you have this
11 interluctible [phonetic] relationship. If you made it
12 strong, it wasn't going to be soft. If you made it
13 soft, it wasn't going to be strong. Strength and
14 softness work against each other.

15 And so, typically you would find that the
16 most usual types of spunbonds that found application in
17 skin contacting products would be in the range of 1
18 denier, about .9 decitex, up to a maximum of about 3
19 denier, and these were the typical ranges that a
20 manufacture of spunbonds would use.

21 Q. Okay. And so, actually, back to Karami 772 for
22 a few questions.

23 A. I have Karami 772 with me.

24 Q. Thank you. I have managed to close my version.
25 One second.

1 Okay. So it's your opinion that Karami
2 772's inventive concept is treating a non-woven with
3 water jetting and/or aperturing, right?

4 A. I would add to that.

5 With the intent of making a surface that --
6 to which you could attach a hook.

7 Q. And so, let's look at Karami 772's example one,
8 and that's going to be paragraph 41, including the
9 table.

10 A. Okay. Let me have a moment to read this.

11 Q. Sure.

12 A. I have read 41.

13 Q. Okay. And one of the non-wovens that he tested
14 was a 33.9 GSM spunbond non-woven, right?

15 A. Bear with me a moment.

16 Q. Sure.

17 A. Yes. That's correct.

18 Q. And he takes that 33.9 GSM spunbond non-woven,
19 and he apertures it and he water jet treats it, in some
20 instances, and he tests those treated versions, as well,
21 right?

22 A. Yes.

23 Q. So would a POSITA understand it could be
24 consistent with Karami 772's teaching to use a treated
25 33.9 GSM non-woven for the wings in Karami 772's diaper?

1 A. From everything that Karami says in the
2 narrative, yes, that would be a teaching of the patent.
3 The patent teaches that the wings, when water jet
4 treated, will engage fasteners.

5 Q. And using a 33.9 GSM wing that's treated fits
6 that teaching?

7 A. Yes.

8 Q. Earlier we talked about laminating a non-woven
9 to a film, right?

10 A. Yes.

11 Q. And so, when you laminate a non-woven to a
12 film, what percentage of the non-woven is attached to
13 the film after lamination?

14 A. Everywhere where the fibers or filaments touch
15 the film during the process will be an attachment point,
16 and I -- I would have to estimate. I would say maybe 15
17 to 13 -- 15 to 30 percent of the fibers would, in fact,
18 be, at some point in their length, in contact with that
19 film.

20 But as we pointed out before, the paths of
21 the individual filaments in the non-woven laminated to a
22 thermoplastic film would have regions where they touch
23 the film and are held in adhesively and regions where
24 they're free to move and not attached.

25 Q. How would the non-woven have been brought into

1 contact with the film during lamination?

2 A. It depends on the process. But if you can
3 imagine a nip between two rolls through which material
4 can pass, a non-woven will be held down into a film, and
5 they would go into a heated nip usually, and that heated
6 nip could be giving an emboss point bonding to it, or it
7 could be an overall pressure, and that would cause the
8 film to soften sufficiently such that the fibers or
9 pieces of the fibers could be pushed into adhesive
10 contact with a melted polymer and then the laminate
11 drawn off at the other side of the machine.

12 Q. During lamination, do the non-woven's fibers
13 melt?

14 A. I'm sorry. There was a noise that I couldn't
15 hear what you said.

16 Q. Yes. I apologize for that.

17 A. Please repeat the question.

18 Q. When a non-woven is laminated to a film, do the
19 non-woven's fibers melt?

20 A. You determine that, but the answer is no. They
21 can, but usually one arranges for the melting point of
22 the film polymer to be lower than the melting point of
23 the filaments in the spunbond.

24 Q. And when you were discussing the nips that
25 bring about contact between the non-woven and the film

1 during lamination, I believe you said you could have one
2 that provided an embossing pattern; is that right?

3 A. Yes.

4 Q. Was that the typical way to laminate a film to
5 a non-woven?

6 A. I'm not sure if you're talking --

7 MS. DALEY: Objection. Form.

8 THE WITNESS: -- about typical, but that is
9 a feature that you can request when you're combining a
10 thermoplastic film with a non-woven.

11 Q. BY MR. ALBRIGHT: And I believe the other
12 option you characterized as nips that provide overall
13 pressure; is that correct?

14 A. That's correct.

15 Q. And so, in that arrangement, how do you keep
16 some of the fibers out -- of the non-woven out of the
17 film?

18 A. If you can imagine a non-woven in cross
19 section, you have layers of fiber, and when you compress
20 it, you have layers of fiber still, and you can control
21 how far the pressure causes the thermoplastic polymer to
22 penetrate into the non-woven.

23 And so, you can set your pressure very
24 high, and in fact, you will end up with a non-woven
25 sitting in the middle of the cross section of a

1 thermoplastic film.

2 If you back off the pressure of the nip,
3 you will find that, progressively, fewer and fewer fiber
4 lengths or small segments of fiber are, in fact,
5 embedded in the thermoplastic film.

6 So you could go from a solid plastic
7 reinforced non-woven where it looks like a film, to a
8 level where the non-woven is barely held on to that
9 thermoplastic film and anything in between.

10 Q. And that arrangement -- the overall pressure
11 arrangement I believe we referred to it as --

12 A. Excuse me.

13 Q. So in the overall pressure nips that we've been
14 discussing, the entire bottom surface of the non-woven
15 would be engaged with the film, right?

16 MS. DALEY: Objection to form.

17 THE WITNESS: Yes.

18 Q. BY MR. ALBRIGHT: And so, for a film non-woven
19 produced that way, would a temperature treatment cause
20 the non-woven to gather?

21 A. Coming off the calendar, yes, it could.
22 Because that film is hot, the rolls are hot, and by
23 simply relaxing or minimizing the tension on the exit
24 side of the nip, yes, it could shrink.

25 Q. And that shrinkage could cause the non-woven to

1 gather despite being attached to the film across its
2 entire surface?

3 A. That could be.

4 Q. In that instance, would the film gather with
5 the non-woven?

6 A. Oh, yes. The film is what is causing the
7 non-woven to shrink. What happens is that -- excuse me.

8 The non-woven -- the spunbond, when you
9 heat it, you will relax some of the stresses in it, and
10 the film itself can also retract. And if you choose
11 your spunbond with a high heat set and your film with a
12 low heat set, the film will shrink.

13 However, it's better to run a separate
14 process after the lamination in which you pass the
15 laminate through a heated tunnel of air and allow it to
16 shrink more than it would under the tension of a
17 laminating process.

18 Q. With the non-woven's bottom surface completely
19 engaged with the film to which it is laminated, when the
20 film shrinks, will the film stay attached to the
21 non-woven?

22 A. Yes. And you do that by choosing your
23 temperature for what is called relaxation. The process
24 sets in some length in that plastic film. As you raise
25 the temperature to that temperature that it experienced

1 before, the plastic film will shrink to its original
2 dimensions, and in doing so, it causes undulations and
3 distortion of the non-woven to which it is attached.

4 Q. And in this example also undulations and
5 distortions of the film, right?

6 A. No, not necessarily. Because the forces are in
7 the films causing it to want to shrink so it is under
8 tension, and there may be some slight undulation, but
9 the main undulations is the fibers. And the film,
10 because it's under tension, usually remains pretty flat.

11 Q. But the film that remains attached to the
12 non-woven, everywhere that the film was attached to the
13 non-woven during lamination, right?

14 A. Could you rephrase your question?

15 Q. Sure. Yeah. That wasn't a very good question.

16 So in this example we've been discussing,
17 when the film shrinks, the non-woven remains completely
18 attached to the film, right?

19 A. That's correct.

20 Q. If a person of ordinary skill in the art was
21 choosing a film non-woven laminate or engagement with
22 hook-type fasteners, would they use the embossing-type
23 nips to perform the lamination or the total
24 pressure-type nips?

25 MS. DALEY: Objection to form.

1 THE WITNESS: They could use either.

2 Q. BY MR. ALBRIGHT: And so, when using the
3 embossing-type nips, you're going to get an embossing
4 pattern on the film non-woven; is that not fair?

5 A. In that particular case, you would be attaching
6 the non-woven to the thermoplastic film by the heat and
7 pressure of the embossed pattern. And so, that would
8 de-mark what was attached to the film.

9 Q. And would that embossing pattern have an
10 embossing area?

11 A. Usually that is the case, yes.

12 Q. Is it fair to say that, as the embossing area
13 increases, the strength of the non-woven is going to
14 increase, as well?

15 A. It can -- it can increase. It depends on the
16 nature of the patent and whether or not the heat
17 embossing does any damage to the component filaments in
18 the non-woven.

19 Q. If the embossing area were too high on a film
20 non-woven laminate, could it frustrate the non-woven's
21 ability to engage hook-type fasteners?

22 A. Yes, it could.

23 Q. And how would it do this?

24 A. If the embossing -- the embossed area is too
25 high, it would bond the surface fibers together in a

1 larger surface area making it impossible for the hooks
2 to penetrate the depth of the non-woven and to become
3 attached to fiber segments that were adjacent to the
4 hooks. The more embossing, the fewer the holes or
5 apertures into which those hooks can penetrate.

6 Q. Are you familiar with the term "cloth-like
7 backsheet?"

8 A. I'm sorry. I couldn't hear that.

9 Q. Sure. Are you familiar with the term
10 "cloth-like backsheet?"

11 A. Yes.

12 Q. And so, for a film non-woven cloth-like
13 backsheet, how would a person of ordinary skill in the
14 art form the film non-woven?

15 A. As we have discussed, no different.

16 MS. DALEY: And Jeremy, if you don't mind,
17 I just want to check on Mr. Butterworth and where you
18 stand for lunch and whether -- needing a lunch soon?

19 THE WITNESS: Any time is suitable to me.

20 MR. ALBRIGHT: I think --

21 THE WITNESS: Do you have -- Mr. Albright,
22 do you have a convenient break point? We need to work
23 to that.

24 MR. ALBRIGHT: I think we're at a
25 convenient break point right now.

1 THE WITNESS: Okay.

2 MR. ALBRIGHT: Why don't we reconvene in
3 three-quarters of an hour, if that suits everybody and
4 gives enough time.

5 MS. DALEY: Fine with me.

6 MR. ALBRIGHT: Yeah. Works great.

7 MS. DALEY: Off the record.

8 (A recess was held from 11:29 a.m. to 12:16 p.m.)

9 MR. ALBRIGHT: Let's go back on the record.

10 THE WITNESS: Mr. Albright, this morning
11 you asked me a question about -- related to experience,
12 and I just wanted to make sure that I had it clearly
13 down on the record.

14 My experiences include about nine years
15 with the development and launch of a wing-fold diaper
16 which required my involvement in everything from the
17 materials, the non-woven, the shape, and whether or not
18 we had add-ons or separate features. This was a diaper
19 that had -- there were no separately attached wings on
20 it, but it was what you call a wing-fold diaper.

21 A later period of experience was on
22 hourglass diapers in which we considered both different
23 types of fasteners and cloth backings but launched --
24 launched again without those added to it. So we had
25 done the work, but we didn't launch.

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1 I did some -- I have some experience
2 working with T-diapers, and more particularly,
3 understanding what made them not work so that we could
4 launch a better diaper. And then I had five years of
5 technical experience working specifically on diaper
6 wings and disposable diapers.

7 Q. BY MR. ALBRIGHT: All right. Thank you.

8 A. Thank you.

9 Q. All right. So I'd like to kick off our last
10 hour by directing your attention to Benning, which is
11 Exhibit 1002 in the 788 patent IPR proceeding.

12 A. I have the Benning patent in front of me. Let
13 me just pull it up on the computer, too.

14 Q. Sure.

15 A. Yes, I have them both present.

16 Q. So my first question is, would a higher basis
17 weight non-woven have been less flexible than a lower
18 basis weight non-woven?

19 A. Generally speaking, yes.

20 Q. But would it have been possible for a higher
21 basis weight non-woven to be more flexible than a lower
22 basis weight non-woven?

23 A. If the lower basis weight non-woven had been
24 heavily calendared, the lower basis weight non-woven
25 would have been stiffer than the heavier non-woven.

1 Q. Would laminating a non-woven to a film create a
2 structure that was less flexible than the non-woven
3 alone?

4 A. It would be marginally different.

5 Q. And so, I'd like to direct your attention to
6 paragraph 33 in Benning.

7 A. Yes, I see that.

8 Q. In there, Benning says, The material sections
9 attached to the main body portion can be configured in
10 accordance with another aspect of the invention in such
11 a way that the sections are less rigid than the main
12 body portion or the chassis forming materials of the
13 main part, right?

14 A. Yes.

15 Q. Do Benning's material sections have to be less
16 rigid than the main body portion or the chassis forming
17 materials of the main part?

18 A. Yes, they do.

19 Q. And that's true even though Benning says they
20 can be configured in accordance with another aspect of
21 the invention in that way?

22 A. A person of skill in the art, looking at the
23 Benning product, would realize that the closures or the
24 fabrics that extend from the chassis, even if they're
25 not closures, will be brought closer in contact with the

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1 user's skin, and you want to minimize any discomfort
2 that that particular add-on piece might call -- cause.

3 Q. Okay. And I'd like to then direct your
4 attention to Benning at paragraph 32.

5 A. Yes, I've read that.

6 Q. So here, Benning says the material sections can
7 have a surface weight of 10 to 150 GSM, right?

8 A. Yes, I see that.

9 Q. And so, per Benning, 150 GSM materials section
10 would work in his invention, right?

11 A. I would assume so. That's what he said.
12 However, I say again, it seems to me that such a broad
13 range would be telling me that it really doesn't matter
14 what weight you use, which I don't think is necessarily
15 true.

16 Q. Okay. And then moving back to paragraph 33,
17 Benning is explaining as one option that the material
18 sections are less rigid than a laminate of the main part
19 consisting of the backsheet and top sheet, right?

20 A. The backsheet and the top sheet would have
21 other materials inside, such as the absorbant core,
22 maybe a distribution layer in addiction to the top sheet
23 and backsheet.

24 Q. Would those be the chassis forming materials
25 that Benning is talking about?

1 A. Yes.

2 Q. And so, would those materials be more rigid
3 than a section of non-woven material?

4 A. Yes.

5 Q. Even a non-woven material with 150 GSM basis
6 weight?

7 A. Yes.

8 Q. Okay. And just a few more questions.

9 If you would, I'd like you to look at
10 Karami 626. That was introduced yesterday. It should
11 be 1004 in the IPR proceeding against the 788 patent.

12 A. I have the 626 patent open.

13 Q. Okay. And in order to hold a diaper on a
14 wearer, the diaper's fasteners have to engage the diaper
15 with adequate retaining forces, right?

16 A. I believe that's true. Yes.

17 Q. And there can be a range of adequate retaining
18 forces to hold a diaper on a given wearer?

19 A. Yes. I would say that that's true.

20 Q. So if a given retaining force was enough to
21 hold a diaper on a wearer, a higher retaining force
22 would also be enough to hold a diaper on a wearer,
23 right?

24 A. Well, that's -- so long as we understand that
25 each diaper design puts its own unusual or usual

1 stresses on any closure. And so, with the design of the
2 diaper changing, you would expect to see a difference in
3 the need for closure retention forces.

4 Q. Well, for a given diaper and a given wearer
5 with a given closure, there's going to be a fastener
6 retaining force that needs to be present to hold that
7 diaper on a wearer, right?

8 A. Yes.

9 Q. And that would be an adequate fastener
10 retaining force?

11 A. Any force that would give which would be secure
12 and prevent the diaper coming unfastened at the
13 closures, there would be a value average and probably a
14 range that suits that diaper.

15 Q. And the range would include values, retaining
16 forces that are higher, and retaining forces that are
17 lower, all of which are adequate, right?

18 A. Yes.

19 Q. And so, I'd like to go to paragraph 69 of
20 Karami.

21 A. What paragraph of that?

22 Q. 69.

23 A. Of 626?

24 Q. Yes, sir.

25 A. 626 ends at 56 the patent -- or the

1 application. I'm -- maybe I'm looking at the wrong
2 patent.

3 Q. Oh, I think you're looking at Karami 772.

4 A. No. I'm looking at -- what was the paragraph
5 number?

6 Q. 69.

7 A. Okay. I'm looking at 626 page 17 of 626 and
8 the last paragraph is 56.

9 Q. So what's the exhibit number on that one?

10 A. Exhibit number at the front is 1004.

11 MS. DALEY: If I may, Jeremy. I think he
12 was looking at the claim 56 --

13 MR. ALBRIGHT: Oh.

14 MS. DALEY: -- as opposed to the
15 paragraph --

16 MR. ALBRIGHT: Sure.

17 MS. DALEY: -- but --

18 MR. ALBRIGHT: Thank you.

19 MS. DALEY: Sure.

20 Q. BY MR. ALBRIGHT: So Mr. Butterworth, we think
21 you may be looking at the claims as opposed to the
22 actual paragraphs.

23 A. Okay. Which paragraph do you need me to look
24 at in 626?

25 Q. Paragraph 69.

1 A. Okay. Here is 626, the last paragraph is 56.

2 MS. DALEY: It's on page 14 of 17, the
3 paragraph --

4 THE WITNESS: Oh, I'm sorry. I'm looking
5 at claims. Sorry. Sorry. Sorry.

6 Q. BY MR. ALBRIGHT: No worries.

7 A. I got it. Now I see it. I have read that
8 paragraph.

9 Q. And so, is it fair to say that here Karami 626
10 is explaining that there is a psychological role played
11 by fastener retaining forces?

12 MS. DALEY: Objection to form.

13 THE WITNESS: Let me read it again, please.

14 Q. BY MR. ALBRIGHT: Sure.

15 A. Okay. So could you please repeat the question
16 for me?

17 Q. Sure. So is it fair to say that in paragraph
18 69, Karami 626 is explaining that fastener retaining
19 forces play a psychological role for a wearer?

20 MS. DALEY: Objection to form.

21 THE WITNESS: That is what this patent
22 paragraph says. While peel strength is, in reality, not
23 of high importance, as a practical matter, it plays an
24 important role psychologically in providing reassurance
25 against accidental opening. So the answer is yes.

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1 Q. BY MR. ALBRIGHT: And so, within that range of
2 adequate retaining forces we were just discussing, would
3 a higher adequate retaining force provide additional
4 reassurance to a wearer against accidental opening of a
5 fastened assembly?

6 A. Well, first of all, I don't believe that the
7 wearer would necessarily be able to rank the peel
8 strength of the fastener and be able -- I don't think
9 they'd be able to say, or measure, for that matter, over
10 the range proposed that they could really tell the
11 difference. They would certainly know that it is like a
12 Velcro fastener. That brings a level of understanding.

13 It's not an adhesive fastener. It's a
14 Velcro-type fastener. And so long as it's that type of
15 fastener, it makes that kind of noise when you're
16 pulling it on and off, it's probably unlikely that
17 they'll be able to make that connection which you asked
18 me about. So I don't think the answer is -- the answer
19 is no.

20 MR. ALBRIGHT: All right. And with that
21 there are no further questions from us, Petitioner.

22 MS. DALEY: Can we take a -- perhaps a
23 ten-minute break to determine if we're going to ask any
24 questions ourselves?

25 MR. ALBRIGHT: Of course.

1 THE WITNESS: Thank you, Mr. Albright. I
2 appreciate your tenacity.

3 MR. ALBRIGHT: Thank you, Mr. Butterworth.
4 I appreciate your patience.

5 THE WITNESS: By all means, it was a
6 pleasure.

7 MS. DALEY: So we can return in 10 minutes.

8 THE WITNESS: Let's make it 15.

9 MS. DALEY: Sure. 15 minutes.

10 MR. ALBRIGHT: All right.

11 (A recess was held from 12:37 p.m. to 12:50 p.m.)

12 Q. EXAMINATION BY MS. DALEY: Thank you,
13 Mr. Butterworth. Can you hear me all right?

14 A. Yes, I can.

15 Q. I just have a couple questions for you.

16 Earlier today, you were asked about
17 laminating a film to a non-woven. Do you recall that?

18 A. Yes.

19 Q. And you were asked about ways that a film could
20 be laminated to a non-woven; is that right?

21 A. Yes.

22 Q. What are some of the ways a film can be
23 laminated to -- let me ask it -- start over.

24 What are some of the techniques that can be
25 used to laminate a film to a non-woven?

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1 A. You can use an adhesive added either to the
2 film or the non-woven; you can melt or partly soften
3 the -- the film so that it will adhere to the fibers in
4 the non-woven; you can emboss-point bond the two
5 together; you could extrude the polymer directly onto
6 the non-woven; you could put a hot melt pattern on the
7 film and attach a non-woven to it; you could use
8 meltable fibers in the non-woven to attach to the film;
9 you could use a film which was softened and be attached
10 to the non-woven when it was laminated.

11 There probably are other methods, but those
12 are the first -- those are the ones that come to mind.

13 Q. Thank you.

14 You mentioned using an adhesive. How would
15 you use an adhesive to laminate a film to a non-woven?

16 A. If the adhesive were a liquid, I would pour it
17 onto the film and place the non-woven into it. I could
18 coat the adhesive onto the film and bring the non-woven
19 to it. I could, if pushed, apply adhesive to the
20 non-woven and combine it with the film that way, but I
21 think I'm running out of ways now to do that.

22 Q. Mr. Butterworth, I want to ask you -- turning
23 to a different topic.

24 Do you recall yesterday you were asked
25 about why one of ordinary skill in the art might want to

1 use different material for a wing in a diaper than for
2 the chassis?

3 A. Yes.

4 Q. Are there reasons one of ordinary skill in the
5 art would not want to use different material for a wing
6 in a diaper than for a chassis in a diaper?

7 A. Could you repeat the question, please?

8 Q. Are there reasons one of ordinary skill in the
9 art would not want to use different material for a wing
10 in a diaper than for a chassis?

11 A. I --

12 Q. Let me ask you a different question then.

13 A. Okay.

14 Q. Are there reasons one of ordinary skill in the
15 art would not want to use separate wings from a chassis
16 in a diaper?

17 A. The primary reason would be simplicity.

18 Q. I'd like to take a look at your declaration.
19 You had discussed some of these yesterday. Paragraphs
20 147 to 150.

21 A. I have it. Let me just quickly read through
22 it.

23 I've read that. Do you have a question?

24 Q. I do.

25 And in particular, correct me if I'm wrong,

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1 but in paragraphs 149 and 150, you testified that there
2 are issues with using separate wings from the chassis in
3 a diaper; is that fair?

4 A. That's correct, yes.

5 Q. And what are some of those issues that there
6 can be with using separate wings from a chassis?

7 A. When you're using separate wings that you've
8 got to attach to a chassis, you complicate the process
9 because you have an extra step in manipulating a small
10 floppy piece of non-woven and applying it to the side of
11 a chassis moving at high speed.

12 It is better if you can make a continuous
13 backsheet, if the design allows that, so that you place
14 the backsheet under the entire chassis and simply manage
15 the flaps of the backsheet through the process. Once
16 you add a component that is distinct from the other
17 components, you have -- you've got to have a
18 specification for it, you've got to have a source for
19 it, you've got to have a supply container or roll for
20 it. It's probably going to be on both sides of the
21 machine, so anything you do is going to be double. You
22 need a gadget that is on the side of the machine, each
23 side, to handle and apply that wing or side piece to the
24 chassis as it flies by. That means you've got to have
25 that in the program for the entire machine such that the

1 spacing between components and the arrival time and
2 departure time of the various components making up the
3 disposable diaper are matched.

4 It -- it is a major effort to add any
5 single piece, and in this case, replacing wings that
6 could be formed on the initial sheet of plastic
7 backsheet with separately added wings to the chassis can
8 bring a lot of confusion and extra involvement and cost
9 to the process.

10 Q. Can using wings that are separate from the
11 chassis increase the manufacturing cost of the diaper?

12 A. Most certainly. The cost would be there in the
13 materials purchased and the waste material and getting
14 it to specification.

15 MS. DALEY: I don't have any other
16 questions.

17 MR. ALBRIGHT: And no recross from
18 Petitioner.

19 MS. DALEY: I think that means you're
20 released, Mr. Butterworth.

21 THE WITNESS: Well, I'd like to thank both
22 of you for your, as I said, tenacity and endurance, and
23 I'd like to thank both of you for conducting a very good
24 deposition. Outstanding. Thank you very much indeed.

25 MR. ALBRIGHT: Thank you.

1 THE WITNESS: I will leave at that point.
2 And also wish Nicole, good luck on your surgery
3 tomorrow. I hope everything works out okay.

4 THE REPORTER: We had a rough yesterday.
5 Does anybody need a rough today?

6 MR. ALBRIGHT: I would like one.

7 MS. DALEY: Yes. Sure. Yes, please.

8 (Whereupon proceedings concluded at 1:00 p.m.)
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AUGUST 25, 2021

[illegible]

Signature: _____ Date: _____

1 I, TONY BUTTERWORTH, have read the foregoing
2 deposition and hereby affix my signature that same is
3 true and correct, except as noted above.

4
5
6 _____
TONY BUTTERWORTH

7
8 THE STATE OF _____)
9 COUNTY OF _____)

10 Before me _____ on this day
11 personally appeared TONY BUTTERWORTH, known to me (or
12 proved to me under the oath or through
13 _____) (description of identity card or
14 other document) to be the person whose name is
15 subscribed to the foregoing instrument and acknowledged
16 to me that they executed the same for the purposes and
17 consideration therein expressed.

18 Given under my hand and seal of office this
19 _____ day of _____, 2021.

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NOTARY PUBLIC IN AND FOR

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24 THE STATE OF _____
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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
ATTENDS HEALTHCARE §
PRODUCTS, INC., §
Petitioner, §
VS. §
§ Patent 8,152,788
PAUL HARTMANN AG. §
§ Patent 8,784,398
Patent Owner. §
§ Patent 8,771,249
§
§ Patent 8,708,990
§
§

REPORTER'S CERTIFICATION

ORAL AND ZOOM

DEPOSITION OF TONY BUTTERWORTH

AUGUST 26, 2021

I, Nicole A. Hatler, Certified Shorthand
Reporter No. 11275 in and for the State of Texas, hereby
certify to the following:
That the witness, TONY BUTTERWORTH, was duly
sworn by the officer and that the transcript of the oral
deposition is a true record of the testimony given by
the witness;
That the deposition transcript was submitted
on _____ to the witness by and
through his attorney, TONY BUTTERWORTH, for examination,
signature and return to me by _____;

1 That the amount of time used by each party at
2 the deposition is as follows:

3 JEREMY ALBRIGHT: 2 hours, 17 minutes;

4 KATHLEEN DALEY: 0 hours, 10 minutes;

5
6 That pursuant to information given to the
7 Deposition officer at the time said testimony was taken,
8 the following includes counsel for all parties of
9 record:

10 JEREMY ALBRIGHT, Attorneys for the Petitioner;

11 KATHLEEN DALEY, Attorneys for Patent Owner;

12 I further certify that I am neither counsel
13 for, related to, nor employed by any of the parties or
14 attorneys in the action in which this proceeding was
15 taken, and further that I am not financially or
16 otherwise interested in the outcome of the action.

17
18 Further certification requirements pursuant to
19 Rule 203 of TRCP will be certified to after they have
20 occurred.

1 Certified to by me this 31th day of September,
2 2021.

3
4 
5

Nicole A. Hatler, Texas CSR 11275

6 Expiration Date: 11/30/22

NHatler@Ymail.com

1 expertfiberman@gmail.com

2 September 13, 2021

3 RE: Iprs2020-01477, -01478, -01479, And -01480

4 DEPOSITION OF: Tony Butterworth, Vol. 2 (# 4771640)

5 The above-referenced witness transcript is
6 available for read and sign.

7 Within the applicable timeframe, the witness
8 should read the testimony to verify its accuracy. If
9 there are any changes, the witness should note those
10 on the attached Errata Sheet.

11 The witness should sign and notarize the
12 attached Errata pages and return to Veritext at
13 errata-tx@veritext.com.

14 According to applicable rules or agreements, if
15 the witness fails to do so within the time allotted,
16 a certified copy of the transcript may be used as if
17 signed.

18 Yours,

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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