UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PROVISUR TECHNOLOGIES, INC., Petitioner, vs. WEBER FOOD TECHNOLOGY GMBH, Patent Owner.	)	Case Nos. IPR2024-00258 and IPR2024-00269
	)	U.S. Patent Nos. 10,647,013 B2 and 11, 331,823 B2

VIDEOCONFERENCE DEPOSITION OF MICHAEL JOBIN

TAKEN ON BEHALF OF THE PATENT OWNER

AUGUST 27, 2024

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I N D E X

WITNESS: PAGE

MICHAEL JOBIN

EXAMINATION BY MS. CANINO 5

(No exhibits were marked.)

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PROVISUR TECHNOLOGIES, INC., Petitioner,	)	Case Nos. IPR2024-00258 and IPR2024-00269
vs.	)	U.S. Patent Nos. 10,647,013 B2 and 11, 331,823 B2
WEBER FOOD TECHNOLOGY GMBH, Patent Owner.	)	

VIDEOCONFERENCE DEPOSITION OF MICHAEL JOBIN, produced, sworn, and examined on August 27, 2024, all parties appearing remotely, before Lauren N. Lawrence, RPR, CCR-MO, CCR-KS, in a certain cause now pending in the United States Patent and Trademark Office before the Patent Trial and Appeal Board, between PROVISUR TECHNOLOGIES, INC., Petitioner, vs. WEBER FOOD TECHNOLOGY GMBH, Patent Owner; on behalf of the Patent Owner.

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IT IS HEREBY STIPULATED AND AGREED by and between counsel for the Petitioner and counsel for the Patent Owner that this deposition may be taken in shorthand by Lauren N. Lawrence, RPR, CCR-MO, CCR-KS, and afterwards transcribed into typewriting; and the signature of the witness is expressly reserved.

* * * * *

(Deposition commenced at 9:27 a.m.)

MICHAEL JOBIN,

having been first duly sworn and examined on behalf of the Patent Owner, testified as follows:

EXAMINATION

BY MS. CANINO:

Q. Good morning, Mr. Jobin.

A. Morning.

Q. Can you please state your full name for the record?

A. My name is Michael Joseph Jobin, J-o-b-i-n.

Q. And you've been deposed before; correct?

A. Yes.

Q. About how many times would you say you've been deposed?

A. I'd say about a dozen times.

Q. Okay. I'm going to go over just some basic ground rules that I'm sure you know by now, but

especially with the nature of a remote deposition, it's going to be important that we don't talk over each other.

So that being said, I will do my best to let you answer to completion; if I don't, please let me know. I can assure you it's not intentional.

And, similarly, please allow me time to finish my question to completion. And, hopefully, that will help the court reporter be able to capture everything.

A. Understood.

Q. Is there any reason, medical or otherwise, that you might not be able to answer my questions fully and truthfully today?

A. No.

Q. And I understand that you have clean copies of the record with you today?

A. I have one copy of each declaration, no annotations.

Q. And is it your preference that I use the screen-share feature at all, or do you plan to be able to review those documents with the copies that you have?

A. I think, generally, referring to the paper copies is easiest for me.

If there's a particular aspect of them that you want to put on screen to point to, I'm happy to review that on screen as well.

Q. Sure. That works.

And, Mr. Jobin, you understand that you are here today to discuss two separate IPR proceedings?

A. Yes.

Q. One for covering the '013 patent and one covering the '823 patent?

A. Correct.

Q. I will do my best to specify where there is a distinction between your declarations or the petitions.

And if you can do the same, that would be great, but I understand -- that would be great, but I understand there is some overlap.

A. Right. Understood.

Generally, when answering, I'll refer to either the '013 declaration or the '823 declaration to keep it clear.

Q. Great. Thank you.

Can you start by giving me a little bit about your background?

A. Certainly.

My background overall, in my career, I've

been a product development consultant for over 30 years. That involves a wide range of mechanical design and industrial design and product development activities, ranging from consumer and medical devices to industrial and mechanical devices, a wide range of components and mechanisms and other features, which are in the same range of complexity as what we're reviewing here today.

I've listed a variety of examples in my declarations as examples of my background and feel comfortable discussing the material.

Q. And can you describe any experience you have in the food processing industry specifically?

A. What I've -- what I've provided in my declarations are examples which show the types of experience I have.

In food processing, it ranges from products that are more consumer-oriented, like kitchen appliances, a wide variety, and then also experience in manufacturing high-volume consumables; for example, for single-serve coffee machines.

So a wide range of experience and exposure to equipment and methods and techniques for packaging food products on high-speed processing lines.

Q. And do you have any experience in web

handling or interleaving?

A. The types of mechanisms that are involved, I certainly have experience with motor control, pressure sensors, sheet metal fabrication, structures that have high-speed motion and precision actuators, pneumatics, and rack and pinions and gears, and all of those types of mechanical features.

As for specifically an interleaver in this application, I cannot have that specific product in my portfolio, but a wide range of other comparable products that I can point to.

Q. Can you give some of those examples of comparable products you're referring to?

A. Well, I think that -- certainly, the exposure and the design activities around high-volume consumables and the equipment used to manufacture those.

So we're talking about films and high-speed printing and the application of those to thermoformed parts; filling, forming, and sealing operations.

We're talking about packaging of liquids. We're talking about packaging of powders. We're talking about packaging of other food products. Some experience in those types of realms.

The -- the design in the more recent time

frame of precision instrumentation with sheet metal fabrication, with pneumatics and pressure control and all of those other types of things that are comparable to what we're talking about here is perhaps most relevant in the time frame of the invention, in the 2017 frame, very active and have patents around those types of concepts.

Q. Do any of the patents you have involve interleaving specifically?

A. None of my patents are involving interleaving specifically.

Q. Okay. And do you have any experience specifically in vacuum systems?

A. Vacuum systems are specifically used in the products that my company, 908 Devices, develops.

We develop mass spectroscopy instruments, which operate at a vacuum. So the design and development of a custom vacuum scroll pump.

The design and development of a custom pressure sensor for the system. And the design and development of orifice plates with precision orifices for generating a -- a pressure differential from atmospheric to the chamber inside the instrument.

So lots of recent experience in those types of concepts.

Q. If you can go ahead and pull out Exhibit 1003 for the '013 patent. It should be your declaration.

A. Okay. I have Exhibit 1003 for the '013 patent. This is my declaration.

Q. Great.

And you rely on M ller as a primary reference in your Ground 1 for the '013 patent; correct?

MR. THOMAS: Objection. Form.

A. Ground 1 is an obviousness combination involving M ller and Waffner, but M ller is included in that, yes.

Q. (By Ms. Canino) And you also rely on M ller in the '823 patent?

A. In the '823 declaration, I rely on M ller in Ground 2 and in Ground 1.

Q. And is it the same M ller reference for all three of the grounds from the '013 patent and the '823 patent? Correct?

A. That's -- that's right.

Q. Can you please turn to paragraph 150 of your declaration for the '013 patent?

A. All right. I am at paragraph 150, which is in Section IV, Ground 1, under the heading "Loop

Store."

Q. And what I'd like to do is just walk through some of the key components in M ller that you discuss here, starting with buffer 12.

Can you explain to me the function of buffer 12 in M ller?

A. Buffer 12 is the -- is what I am pointing to as embodying the loop store.

The loop is a -- a loose portion of the web, which is located just prior to the ejection mechanism. And this is intended to allow rapid, intermittent dispensing of the paper or the film without placing it under undue stress.

So it's got a capacity, which is adequate, to buffer the differences in the continuous sheet input and the discontinuous sheet output without putting stress on the web.

Q. And how does it achieve that?

A. Well, this -- this approach is well documented in the prior art.

I give several examples in my background of the art section in both of my reports or in my declarations.

And the primary advantage of having this loop, as described by others who have developed these

concepts in the field, is that it -- the loop is -- it's a buffer. It's a -- it's an area of the web which is free to move quickly in response to needs downstream, in this case for high-speed, interrupted movement.

So it's moving out and then stopping and then out and then stopping several times per second, whereas the input coming off the roll is moving smoothly and continuously.

And so the length of the loop can rise and fall as the -- as it's being ejected. And the idea is that this gives you a little time to react to any dis- -- any changes in the input speed or changes in the output speed that would otherwise result in damage to the web.

Q. And M ller also teaches the buffer 8; correct?

A. M ller teaches a buffer that is located further upstream, closer to the material store.

It is a -- for a different purpose.

Q. And what is the purpose of buffer 8?

A. Well, that's a -- what's called a "high-capacity buffer."

And buffer 8 in this particular example is -- it's a different embodiment. It has multiple

rollers and what's called a "dancer," which is rollers that move out or in to -- to provide a lot of material. And this can help to buffer the movement of the -- of the roll.

If the movement of the roll is interrupted, you have some capacity to -- to prevent disruption of the process.

Q. And when you say "it's a different embodiment," a different embodiment than what?

A. Than the loop store.

The loop store does not -- as shown does not ride around a roller at the bottom of the loop. It's free. So it moves up and down more quickly and without constraint.

It's typically constrained along the sides or at the top by rollers. But it's either free-hanging or, in some examples, riding along a -- a wall or something to guide it.

Q. And so is it your understanding that M ller teaches buffer 12 in a separate embodiment than its teachings for buffer 8?

A. Well, M ller certainly discloses what I understand to be a loop store.

It's a -- it's -- it's illustrated in a way that -- that's quite similar to what is illustrated

in -- in the '013 or the '823 references.

It's discussed as having a -- a buffer for a very similar type of intermittent output. It's used in a similar instrument or device, and it's serving the same purpose, which is to -- to -- to serve as a buffer for the intermittent output compared to the continuous input.

Q. Is it your understanding that M ller teaches buffer 12 in a separate embodiment than buffer 8?

MR. THOMAS: Objection. Form.

A. It's my understanding that one -- and -- and -- and as one of ordinary skill in the art, I view that as disclosing different types of buffers.

It's disclosing a particular embodiment, which has these two buffers shown, but the function of each of them is separate. They're separated by a -- a roller. And so the -- the tension in one buffer is not affecting the tension in the other buffer.

Q. (By Ms. Canino) And you were focused on buffer 12 in your declaration; correct?

A. When I -- when I'm discussing the M ller reference, and I'm -- I'm identifying the buffer 12 as the loop store, both here and elsewhere in my declarations.

Q. Do you rely on M ller's buffer 8 anywhere in your combinations?

MR. THOMAS: Objection to form.

A. When you say do I "rely" on it, do you mean do I rely on it as evidence of a particular limitation or element?

Q. (By Ms. Canino) Do you rely on buffer 8 as teaching any of the components necessary for the claims of the '013 or the '823 patent?

A. I don't recall relying on buffer 8 for -- for the limitations.

It may be that there's somewhere in my -- in my report where I -- where I mention it. And that is to differentiate it from buffer 12.

I do note that it has a higher capacity than buffer 12. So while it's mentioned, I don't feel that I'm relying on that buffer as -- as evidence in this prior art reference for meeting that element.

Q. If you can turn next to paragraph 175.

A. Paragraph 175 is in the section "Device for Determining the Size of the Loop."

And we're still on the section where the individual elements are being described under -- under Ground 1.

Q. So here you opine that "M ller teaches a

device for determining a size of the loop"; is that correct?

A. That's what I said in paragraph 176 [sic], yes.

Q. I'd like to walk through this process in a little bit more detail. So turning to paragraph 176.

You state that "In M ller, 'the length of the loop is preferably monitored, in particular by a contact sensor."

Do you see that?

A. Yes. And that's citing from M ller.

Q. So there is some type of sensor measuring the length of the material in buffer 12 of M ller?

A. Yes.

Q. And what is the point of that sensor?

A. Well, as it states in paragraph 176, which is citing M ller, "buffer 12 'preferably buffers only as much interleaver as is needed for the ejection of an interleaver.'"

So it's monitoring the length of that to ensure that enough loop is in the loop store to buffer that intermittent interleaver ejection.

Q. And how is that sensor monitoring the length of the loop to ensure the appropriate length?

A. M ller doesn't get into specifics about the

form of the contacting sensor that's used.

That's left to a person of ordinary skill to determine, but many such means were present in -- at the time of -- of the M ller disclosure that one of ordinary skill would be aware of.

Q. What are some examples of those types of sensors you're referring to?

A. Well, if I go back and -- and these are referenced in my -- in my report or my declarations, as I recall.

But I recall things like a photocell. I see other evidence of vacuum sensors. You could use a -- a contact switch. You could use a capacitive sensor, depending on the nature of the film material that was being transported.

So there's a variety of ways that one could detect the presence or nonpresence of the loop.

Q. And what considerations would a POSITA turn to when choosing which sensor to use in M ller's system?

A. Well, I think that one of ordinary skill would take into consideration the needs of a specific device.

In this case, the -- you know, the context is in the context of an interleaver device, a

high-speed film, intermittent motion, and a moderate-sized loop, and a relatively small interleaver piece that's ejected, if the context of sliced meats is considered.

So it really just comes down to, you know, whether or not that sensor can reliably detect the position of the loop in order to allow you to control the loop adequately for the application.

Q. And where is M ller's contacting sensor located?

A. It would be helpful to have M ller in front of me, but I do have -- I do have the illustration on page 83 of my '013 declaration.

This specific element is not shown, as I recall, in this illustration. And I'd have to look at M ller further to see if a contacting sensor is -- is shown.

But I am relying on the combination of M ller with other art to implement the sensing.

Q. The same focus, just on M ller for the time being.

If M ller is disclosing a contacting sensor, would that require that the sensor comes into contact with the material?

A. Well, M ller describes this under the --

under the -- well, he calls it a "contacting sensor" as -- in the context of the device for determining the size of the loop.

And the word "contacting sensor" is not a -- a -- a term that I've construed or that -- that has been construed in this case, but, logically, a contacting sensor is in contact where they're touching the web in order to detect its presence.

So some sort of contact is -- would be required, in my view.

Q. And if we're looking at buffer 12, does the loop make contact with any components there?

A. M ller is specific about there being a contact surface.

This is illustrated in paragraph 149 of my '013 declaration. If we go to Figure 1 of M ller, there's something called a "contact surface." And it's a sheet metal support wall, which is pivotable, and it pivots up and down to help to support the loop, depending on the size of the loop that is being employed.

So I've highlighted that in pink here to -- to show that contact surface.

Q. Are there any other components that touch the paper in buffer 12?

A. Buffer 12 is -- is traveling -- there's a -- there's a nip roller just upstream, which is pushing and guiding the paper into the loop store.

The paper is free in air, in this case, until it comes into contact with the contact surface, and then it exits around the top of the curved portion of the contact surface in this embodiment.

Q. And so looking specifically to the loop portion itself, is it making contact with any components other than strip guide 13?

A. What we're talking about here is M ller in isolation. And when I'm evaluating obviousness, I'm looking at M ller in combination with other references.

Here, there's a contact surface, which in combination would be modified with a sensor, for example. And that's -- that's how one would arrive at a contacting sensor in this case.

Q. You'd agree that M ller teaches a contacting sensor separate from any combination or obviousness theory; right?

A. What I would say is that M ller uses the word "contact sensor" as quoted in paragraph 176 of my '013 declaration.

It states "the length of the loop is

preferably monitored, in particular by a contact sensor."

And I cite to paragraph 48 of M ller.

Q. And so is it your opinion that M ller would have to be modified to add a sensor to strip guide 13?

A. What I'm stating is that the -- the disclosure -- the specification of M ller includes a contact sensor. While it is not illustrated, it is part of the specification in written form.

Q. So is it your opinion that M ller would have to be modified to add a sensor to strip guide 13?

A. What I've stated is that M ller discloses it. It leaves the specifics of how it is implemented to a person of ordinary skill, but it does disclose it in the written specification.

Q. And would a POSITA understand a contacting sensor to be in the strip guide -- in strip guide 13 of M ller in order to measure the loop length?

A. I think it would depend on the contact sensor.

Certainly, a -- a -- a sensor could be mounted elsewhere for the loop to contact in -- in its various positions.

Mounting a sensor like that on that strip guide surface would certainly be something that would

be reasonable to conclude. That's another way one could do it.

But it doesn't -- it doesn't specify exactly how one would go about doing it; it just states that it is done.

Q. Where else could a sensor be added to measure the length of a loop in buffer 12?

A. Well, it depends on the application and what -- what state of the loop you're trying to measure.

If you're interested in the maximum extent of the loop, a -- a lever switch of some type or some other form of contacting sensor could be placed at the -- at the bottom of the -- of where the loop hangs so that the lever would be tripped when the loop comes down to it.

It would have to be very lightweight, but that's -- that's -- a microswitch of some type could do that.

It could also be some type of a -- of a -- you know, depending on the material that's being used, it could be some type of capacitive surface that would detect the presence of the film as it -- as it touches.

And, again, it would just be located

wherever it made sense and where -- and what state of the loop you were trying to measure.

Q. And so if you were trying to measure the length of the loop at multiple places on that contact surface, where would a POSITA put a sensor or multiple sensors?

A. Well, it's -- it's a bit of a hypothetical question because it's not saying exactly what loop states you're trying to -- to detect in M ller.

It's, again, leaving those -- those implementation details to a POSA.

But what I would do as a -- as a designer is observe that the loop in a pre-hanging state typically forms a catenary or some type of a U-shape.

And that if you wanted to have contact with that, you would have to have your sensors located along where the loop position was predicted to be when it was that particular length.

So you would arrive at that, first, by calculating where the loop is and observing it in prototype form and then adjusting the position of those sensors as needed.

Q. And you go on to say that "buffer 12 'preferably buffers only as much interleaver as is needed for the ejection of an interleaver.'"

Do you see that?

A. Are you -- in what paragraph?

Q. Still on 176.

A. In 176, I -- I quote that the "buffer 12 'preferably buffers only as much interleaver as is needed for the ejection of an interleaver," and that cites to paragraph 48 of M ller.

Q. "The ejection of an interleaver," meaning one section of the interleaver paper; is that right?

A. I -- I don't know that I would limit it to one. I think it's a dynamic system. And in a high-speed system, you might need a bit more buffer to cover high-speed ejection.

It all depends on the speeds that are needed.

Q. And why would it be beneficial to buffer only as much as needed for ejection?

A. Well, the idea here is -- is -- the -- and -- and if you look at the history of other references that talk about these types of buffers, is that they're designed to improve the reliability of the web-handling system and to remove the risks of imparting too much stress in the web.

It's really -- it's just really specific to the application. If you're ejecting multiple times

per second, you need a certain amount of material that doesn't have a lot of tension in it so that the rollers can spit it out quick enough.

That's all it is. So it really just depends on -- on the application as to how much buffer you would need to rely -- to reliably perform.

Q. And still looking at paragraph 176, you explain "A POSA would understand that M ller's 'control system' accepts an input signal from the sensor and sends control signals to the drives to determine the length of paper in the loop in order to maintain the loop at this size."

Do you see that?

A. I do.

Q. And so the sensor helps determine if the loop at buffer 12 is an appropriate size?

A. Well, what a -- what -- what a POSA would understand in -- from M ller's disclosure is that the contacting system roll -- the contacting sensor and the roll system are what are needed to monitor the length of the loop with the contact sensor.

So it -- you know, what I understand from that disclosure is that the contact sensor -- in order to control the length of the loop, you need to change the speed of the -- of the -- of the -- of the web

being transported into the loop.

And you can control that by a variety of means. But, ultimately, if the loop is getting too short, you need to speed up the web that's coming in to make it longer again. And that's really what you're trying to detect.

And if it gets too long, of course, then you run the risk of the loop bottoming out in the -- in the device and getting entangled.

So you're really trying to keep it within a safe range that's determined experimentally.

Q. And so M ller's sensor helps do that?

A. Well, that's what it's -- that's what it's disclosing.

And -- and, again, I don't go into a lot of detail because, by the time of the M ller disclosure, these techniques were well understood by persons of ordinary skill in the art. They had been done for decades.

Q. I'll have you turn back a couple of paragraphs to paragraph 158.

A. Okay. We're still in Ground 1. And we're still in the section that describes individual elements.

Paragraph 158 is under the title "Contact

Surface."

Q. And looking at the next paragraph, 159, you state "M ller's contact surface is a 'strip guide.'"

A. I see that.

Q. Are you referring to strip guide 13 here?

A. Yes.

Q. And where is strip guide 13 located in M ller's loop?

A. The strip guide is illustrated in this Figure 1 above paragraph 159 and at the exit portion of the loop.

So this is just before the loop enters the -- the interleaver sheet dispenser, the intermittent driver.

It's supporting the loop as it -- as it is coming up from its bottom extent and going out.

Q. And this strip guide is movable; right?

A. M ller talks about a rotating contact surface, correct.

Q. And can you explain to me how that would work?

A. Well, what they described in M ller, as I recall, is that it pivots about the top radius, and it rotates up to a -- to -- to different angles, depending on the -- on the loop that is being

supported.

Q. How would the angles change with movable strip guide 13?

A. They're showing it in two different states. It's not particularly well visible in this illustration. I can find another example that would describe it better.

If we go back to the -- page 76 of the '013 declaration, Figure 1 is shown in a little bit -- well, it's shown fully instead of in detail.

And what you can see there is that the contact surface, which I've highlighted in pink, is shown in two different states.

You've got the blue material store, which is shown in the operating state; and you've got the white one, which is two locations over to the right, which is shown in a loading state.

And here the strip guide is rotated up. It's not quite horizontal. It -- it looks like the strip is going up a -- up a ramp, and that's to facilitate loading a new strip -- is my understanding of how that works.

Q. How does that facilitate loading a new strip?

A. I think that what M ller was -- part --

part of M ller's disclosure was making it easy to load new -- new material, new web material to the interleaver device.

So they have the -- the cartridge, which contains the -- the material on a cart that gets rolled up to the device, and then it gets locked into place in a precision location.

And then there's some form of assistance to the operator to facilitate the loading of the material before the -- before the -- the slicing machine is activated.

Q. And is this process the same as threading?

A. Threading would be a term that you could use to -- again, you're threading the -- the -- the paper or the strip material, the web, through the various rollers and -- and -- and then locking it into position so that when you start it up, it will run.

Q. And what are some of the benefits of being able to move the contact surface?

A. What I recall from M ller and M ller's disclosure was that they -- they have this contact surface of being able to rotate up to facilitate the loading or threading process, but that it rotates down to support the buffer, the loop store, during operation.

So it's -- basically, it's moving down out of the way to provide somewhere for the loop to -- to hang. And that's what I see in Figure 1 particularly.

Q. I'd like to discuss some components of Waffner, which I understand to be the secondary reference for your combination in Ground 1 for the '013 patent. If you can turn to paragraph 168.

MR. THOMAS: Objection. Form.

A. All right. Paragraph 168 is in Ground 1, and it is under the heading of "Loop."

Q. (By Ms. Canino) And here you mention that "M ller's loop is a 'loop'" -- I think is the phrasing that you use.

A. The first sentence of 168 states that "M ller's loop is a 'loop.'"

So I'm identifying that M ller is using the same word as -- as the '013 reference in this case.

Q. And you're referring to M ller's buffer 12 here?

A. Well, yeah, the -- what I understand to be the loop in M ller is buffer 12.

Q. Okay. And moving into paragraph 170, you state "Waffner's loop is 'loop' 35."

A. Right. That's what I state in the first sentence of paragraph 170.

Q. And so it's your opinion that both M ller and Waffner teach a loop?

A. Yes.

Q. And to better facilitate discussion, it might be useful to turn back one page to page 87, where you have an annotated figure of Waffner.

A. I see it.

Q. And so is this big blue U-shaped portion of the material what you're referring to as Waffner's loop?

A. Figure 3 at the left shows it most clearly.

There is a -- a material that's hanging down and going over two rollers.

So, yes, the portion that's hanging down and forming a U-shape is what I consider to be the loop.

Q. And what is the purpose of Waffner's loop?

A. Waffner describes similar web-handling issues as -- as we have seen in other references.

The loop in Waffner is modified to include an air-permeable portion, which helps to attach the loop and to stabilize it so that it can be used at different angles. So it's not just a straight line. It can be made to turn a bit as it's going through the loop.

But, overall, the loop is using the same -- is providing the same benefits that it does in other applications; that is, that it allows for accounting for differences in speed or intermittent motion that would be seen on one side of the loop compared to the other side.

It's -- it's used for that same purpose to help to introduce an area of low tension that will have the effect of improving the reliability of the web handling overall.

Q. And still looking at Figure 3 on page 87, you annotate "vacuum chamber," indicated in purple?

A. I do.

Q. What is the purpose of the vacuum chamber with respect to Waffner's loop?

A. Waffner describes a vacuum -- a series of apertures on a rotating belt which are in contact with a vacuum chamber.

So it's -- it's evacuating that vacuum chamber with a fan or some other vacuum-producing means and sucking air through those holes such that when the web material of the loop is -- is -- is turning back up, it basically sticks to the belt. It sucks it to the belt. And it helps to prevent unwanted motion of the loop as it's -- as it's -- in

this case, as it's turning a corner, but it also allows you to change the orientation of the loop so that gravity is not required to get it to function.

Q. And how does the vacuum chamber work with that rotating belt and those apertures?

A. Well, there's -- there's a -- basically, the suction holds the belt against the vacuum chamber and then pulls the paper against the -- or the web material against the belt.

So air is flowing in through those. It provides its own negative pressure, which causes the materials in that area to be sucked against the vacuum chamber wall.

And -- and that's how it -- that's how it achieves that -- the function.

Q. And so how is the belt able to rotate while being sucked against the vacuum chamber?

A. The vacuum chamber has a smooth surface with some -- with -- with -- it doesn't get into all the detail, but the front face of it is open, and the belt is sucked against the frame of that vacuum chamber.

So there's enough airflow that the belt is -- the belt's flexible enough that it -- that it sucks to the vacuum chamber creating airflow through

the holes in the belt.

So you have to have enough airflow to produce a net suction. And then that suction is present in the holes, which causes the web material to be attracted to it.

Q. And how is the belt itself rotating while being sucked against the vacuum chamber?

A. It's not shown in this figure, but my understanding would be that at least one of those rollers would be driven with a motor or with the belt itself from another motor. And it would rotate in the direction that you wanted to facilitate the movement of the web material.

Q. And in Figure 3, you also annotate a contact surface?

A. Figure 3 and Figure 4, the belt itself is the contact surface that the web is -- is touching.

The belt has -- the belt in -- in -- well, in collaboration with the vacuum chamber is forming something that the -- that the belt -- that the web is -- is contacting.

Q. And the opening and air-permeable region that you have annotated, is that referring to the apertures you discussed?

A. An opening or air-permeable region would

refer to the apertures with the holes in the belt. And that's what I'm pointing to in Figure 4 and in Figure 3 to the left of it.

Q. If we turn back to paragraph 154 --

A. Yeah.

Q. -- and here you're describing Waffner's vacuum chamber; is that correct?

A. Correct.

Q. I'd like to go through each of these components, starting with the conventional blower.

What would be an example of a conventional blower, as discussed here in Waffner?

A. Waffner doesn't illustrate that here, but one of ordinary skill in the art would understand a conventional blower to be some type of fan, typically -- typically a centrifugal fan, which would have some form of involute shape.

So the fan could be either an axial fan, or it could be a -- a -- a rotary -- like, a cylindrical vane fan. And the rotation of that -- of those blades causes air to be pushed and pulled through the device. So -- it -- it -- it creates a vacuum or a suction.

As it's blowing air out the end of the blower, it's sucking air in the inlet of the blower.

And so in order to create a vacuum in a

situation like this, you would attach a blower to the vacuum chamber through some type of tube, typically.

Q. Would that be vacuum line 44?

A. "A" -- looking here, it says "A source of vacuum, diagrammatically shown at 42 in Figure 1, is preferably of the conventional blower type...connected, through a vacuum line 44."

So vacuum line 44, though it's hard to read in the figure above, I understand to be the pink tube that's exiting the vacuum chamber. It's called "Suction Device."

Q. And where is Waffner's vacuum chamber 50 located on the loop?

A. Well, the figure that is shown is -- is one embodiment, certainly.

It's shown in a particular location at what I understand to be the exit of the loop, the vertical portion, just as it goes towards the next stage.

So in the illustration shown in Figure 3 above, the web is moving from right to left. And the -- in this particular embodiment is -- the vacuum chamber is located on the -- on the vertical wall of that -- of that loop, near the exit of the loop.

Q. I think the next listed component in paragraph 154 is "portion 95 of the belt 28"?

A. I see that.

Q. And what is the -- this portion of the belt?

A. Just looking at the figure, I'm not seeing it illustrated here. It's a little bit light.

The -- the text describes "vacuum chamber 50 disposed adjacent to a portion 95 of the belt and the pulleys 32 and 34."

So it's talking about where the vacuum chamber is located. It's located between the rollers or the pulleys, 32 and 34. And it's located on the portion of the belt between the pulleys that is in contact with the web, as illustrated -- is my understanding of the portion of 95 of belt 28.

Q. And what is the function of pulleys 32 and 34?

A. Pulleys 32 and 34 guide the belt and the -- and, also, in the case of the top pulley, the web, they are located in a position that is near where the loop is predicted to be so that when the vacuum chamber is activated, the -- the web is attracted to the belt.

So I think that's as complicated as it has to be. It's just that they're supporting the belt, allowing the belt to rotate in the right position.

Q. And I know we talked a little bit about this, but what is the purpose of belt 28?

A. Well, this is described at length in Waffner.

But my understanding is that belt is -- is -- and, frankly, I guess, the novelty of -- of Waffner in this particular embodiment -- one of the novel aspects is that instead of it being a sliding surface over which the -- or a surface over which the web slides and has vacuum chamber apertures, they're going the next step and moving the belt at a particular speed to -- to provide, in my view, more friction that could be provided by rotating a pulley alone at that location.

So it's a -- it's a -- it's a lower-stress way of -- of guiding a web than a nip roller would be in that application.

Q. What would be a downside to adding more friction on the contact surface?

A. Well, I think you would look at that in opposition to the upside.

By having the ability to change the amount of vacuum and change the rotation speed of that belt, you can account for different friction coefficients that might be present on the web material.

A downside to having a -- a rotating belt with -- with apertures and -- and a vacuum chamber, I mean, none come to mind right away, but it's -- it's -- it's a little bit more complicated than a stationary wall, for example.

Q. What additional components are necessary for a rotating belt as opposed to a stationary one?

A. Well, a stationary wall with perforated holes in a vacuum chamber is pretty easy to envision.

It's -- it's just a flat plate with holes in it and a -- a little box on the back that forms the vacuum chamber.

What they've done here is they've gone to the next step. And -- and instead of having a stationary wall, they have a rotating belt, which has holes in it.

It's -- it's a -- it's a modification which is -- which is being implemented for their particular application, but one of ordinary skill certainly looks at it and understands each of these components and -- and understands how it works.

Q. And what are some of the additional components that are added to Waffner from a more traditional stationary wall contact surface?

A. Well, it's -- I think it's pretty evident

that you've got the roller at the bottom, which the belt travels around.

You've got the roller at the top, which is often present in this type of -- of loop store anyway, you know.

And not illustrated would be whatever supports are necessary for those pulleys and whatever motors or belts or other features would be necessary to drive them. And then the belt itself, of course.

Q. Would a rotating belt take up more space than a stationary wall?

A. I suppose it depends on the -- on the application, but I can see a stationary wall could be a thin sheet metal part, which could be probably a little thinner than the rotating belt that's shown in -- in Waffner, but it's not a significant factor.

It's still pretty small.

Q. Belt 28 has apertures 30; right?

A. I'm just looking for the number.

Apertures. Yeah, I think that 30 is pointing to -- well, I'm not seeing it cited here, so I'd have to check that number. But the belt does have apertures in it.

Q. Would the belt otherwise be air permeable without those apertures?

A. It depends on the belt material, I suppose.

Q. What's the function of the apertures on contact belt 28?

A. Waffner describes the -- in paragraph 161, Waffner, I cite "the 'belt 28 includes a plurality of evenly spaced uniform diameter apertures 30 disposed along its longitudinal center-line.'"

It says further that "'the degree of vacuum in chamber 50 will depend upon the number of apertures 40 and the belt 28 which are covered by the downwardly descending portion of the loop of the web 10."

So you size the holes according to the amount of airflow that you're trying to achieve. And then, depending on how many of those holes are covered, you can determine the position of the loop.

Q. How so?

A. Well, the amount of air that's able to -- to enter the vacuum chamber depends on the number of apertures that are open.

So if all of them are closed, then it's going to pull more vacuum. So you're having a more negative value below the ambient pressure.

If more of them are open, it's going to be closer to ambient pressure. So you can -- you can -- depending on the number of holes is the number of

steps that you have in that chart.

Q. What happens when only, let's say, the top aperture is covered?

A. Well, you can determine this experimentally.

But based on my experience, if you have a partial occlusion in your aperture, the -- depending on the flow rate, the -- but generally what will happen is that you'll have a slight change in pressure from ambient.

So it'll -- it'll be something that you would notice. But that would correspond in this application to a higher position of the loop.

So it's -- it's -- it's like the first step in a number of measurements that you could take.

Q. So if just the top aperture was covered, what would happen to the flow rate?

A. I can't give you a number because it depends on the apertures. It depends on the flow rate.

But the flow rate overall would be reduced slightly.

Q. And what happens when all of the apertures are covered?

A. The flow rate overall would be reduced

significantly. There's still going to be some leakage around the edges because we don't have a perfect seal, but we have a -- a -- experimentally, we have a range of pressures for flow rates that we're measuring, and we can use that range -- and Waffner describes this in great detail -- how they -- they -- they monitor that pressure differential and adjust the speed of the infeed to account for that and to correct for that position.

Q. And would you be able to tell whether the loop was covering all of the apertures just barely or covered all of the apertures and carried on another foot below the last aperture?

A. Well, it's something that you determine experimentally.

But what you -- what you would do, from a control perspective and as an engineer, is that you would note that if all apertures are covered, and you're -- and you're measuring a value that's at the bottom of the range, you need to speed up the inflow more until you've monitored the situation, which you see it coming up again.

So you're -- you're -- you know, these factors are tuned according to the dynamics of a particular system so that if you ever get to that

maximum state, you correct aggressively enough that you're getting up into the middle of the range.

The idea is to be in the middle of where you're able to measure so that you don't get beyond that; but if you do, you have to -- either control loop has to respond more aggressively to correct it.

MS. CANINO: Why don't we take a quick five-minute break?

MR. THOMAS: Sure.

(Recess.)

Q. (By Ms. Canino) I'd like to talk a little bit more about your proposed combination between M ller and Waffner for Ground 1 of the '013 patent.

If you can turn to paragraph 213 in your declaration, you discuss "adding a vacuum chamber and contact surface to M ller's strip guide..."

Do you see that?

A. So here we are in the "Motivation to Combine" section for Ground 1 of the '013 patent.

And paragraph 213 talks about motivations to combine Waffner's techniques, specifically related to the vacuum chamber, with M ller's device.

Q. And you state "adding a vacuum chamber and contact surface to M ller's strip guide..."

Do you see that?

A. In the first sentence of paragraph 213, yes.

Q. Is your proposed combination retaining strip guide 13 from M ller or no?

A. I think what I've observed here is that the strip guide itself is a good location to add the vacuum chamber and contact surface as described in -- in Waffner.

I mean, the key findings -- or the key teachings that I see in Waffner that -- that jump out were the use of that support surface and the apertures and the vacuum chamber to attract the paper to it and -- and -- and the measurement techniques that they describe in Waffner.

So, really, while I'm not necessarily required to create a physical embodiment, this would be one way -- an obvious way that one of ordinary skill would combine these disclosures.

Q. And I'm not asking you to create a physical embodiment. I'm just asking for clarification on your proposed combination.

Does -- are you saying a POSITA would have added a vacuum chamber system from Waffner's teachings to M ller's strip guide 13?

A. That's a -- I think that's a fair

characterization of what I -- I stated in paragraph 13 -- is that one of ordinary skill would recognize that adding a vacuum chamber and contact surface to M ller's strip guide would allow the system to use those components for benefits beyond sensing the loop, so yes.

Q. So would the proposed combination include adding all of the components of Waffner's vacuum chamber that we previously discussed?

MR. THOMAS: Objection. Form.

A. I -- I don't -- I don't state anywhere here that I'm proposing all of Waffner's teachings could be integrated with M ller's.

What I'm understanding is that one of ordinary skill would -- would learn from both of these disclosures, and that understanding would render the claims obvious as described elsewhere in my disclosure -- in my --

(Overlapping, indiscernible dialogue.)

Q. (By Ms. Canino) Sorry. I'm sorry. I cut you off.

A. That's okay.

I was just saying that -- that in my declaration, I described elsewhere how the combination of the teachings of Waffner and M ller would inform a

POSA, and -- and a POSA would arrive at a determination that that were -- that those -- that those particular claims were obvious.

In this case, what I'm -- what I'm getting at is the motivation to combine certain teachings of Waffner.

It's -- to a POSA, adding a vacuum chamber to the strip guide is an easier -- is a -- is a simple modification of that strip guide. It's drilling a couple of holes in it and mounting the vacuum chamber to the back. That's what I'm observing here.

Q. Okay. And what components of a vacuum chamber would need to be added to M ller's strip guide 13?

A. Well, you've got -- as I recall, you've got the box itself. So that's a little chamber that is sealing the area behind the apertures.

So you've had holes in a contact plate. You've got a box. And then you've got some type of sensor in there to detect either flow rate or pressure changes.

That's about it.

Q. And so what type of sensors could have been mounted on strip guide 13?

MR. THOMAS: Objection. Form.

A. Well, one of ordinary skill in the art at that time would -- would be able to pick from a wide variety of -- of pressure sensors that are small, lightweight, and good at measuring pressures in this, you know -- in this particular area of a vacuum.

So we're talking about ambient pressure down to about minus 1 atmosphere. So that range is very commonly available with small, lightweight components.

A person of ordinary skill would easily be able to sense the pressure changes or the flow rate changes in that vacuum chamber.

It's not something that even has to be disclosed in any detail because it's so commonly available and known at that time.

Q. (By Ms. Canino) And looking at M ller without the addition of the vacuum chamber, what types of sensors would be known to be mountable to strip guide 13?

A. Well, you're asking a different question here. You're talking about without the vacuum chamber.

What web I'm stating is that the sensor that you're developing here is integral with the strip guide. It has apertures. It has an antechamber. And

it has a sensor that changes -- that senses the changes in flow rate or pressure inside there.

All of those are required together, as I understand, to measure the -- the flow of changes.

So you have to have that aperture plate. That's part of the sensor here.

Q. I am asking a different question.

M ller without a vacuum chamber. So M ller just on its own without a vacuum chamber.

What types of sensors would a POSITA understand to be mountable to strip guide 13?

MR. THOMAS: Objection. Form.

A. It's not -- it's not something that I've considered or -- or opined upon that I can recall in my declarations.

I mean, there are bulkhead-mountable pressure sensors. There are bulkhead-mountable or -- or surface-mountable contact sensors of various types, either capacitive or photocells or conductivity sensors.

It just depends on -- on what property you're trying to measure at that location.

But any number of sensors can be mounted to a plate.

Q. (By Ms. Canino) Going back to what you had

said previously.

You had mentioned the aperture plate. And that would need to be added to strip guide 13 as well?

A. Well, the teachings of Waffner as applied to M ller, a person of ordinary skill would take those teachings and understand that apertures or holes could be put into that support plate.

It's -- it's the same location. It performs the same function. It's -- it's -- the only thing that's not being taken from Waffner's teachings is the -- is the sliding belt. It's a -- it's the -- Waffner in a stationary configuration.

Q. How many apertures would be added to M ller's strip guide?

A. Well, the teachings of Waffner don't specify any particular number.

I mean, they illustrate a -- an embodiment, which implies a certain number. It really comes down to the resolution that you're looking to achieve, how many discrete measurement points do you need to give you enough information to ascertain the position of the belt relia- -- or the position of the web reliably.

It's up to the -- up to the designer's choice to decide how many is necessary. It's fairly

trivial experimental derivation.

Q. In your proposed combination here, does strip guide 13 retain its ability to move?

A. I -- I haven't -- I haven't stated one way or another. It certainly could. It depends on what you're trying to achieve and what -- what the -- you know, what you're -- basically what you're -- what you needed to do in order to achieve its functions.

Here, the addition of a small vacuum chamber to the back of that plate would not prevent it from rotating, in my view.

Q. And so would the vacuum chamber move with the strip guide?

A. I haven't considered that particular case; but, yes, I think that it's logical that it would since it's attached to the back of it.

Q. Does your proposed combination retain all of the other components of buffer 12?

A. I haven't instructed a -- a specific embodiment, but the buffer 12 and the components in that area of M ller -- I'm really talking about adding some of the teachings of Waffner to that component. So I'm not talking about taking away from M ller.

I mean, you could choose to -- to make that -- that plate fixed or not. I don't think it --

I think it just depends on the application.

I don't think that has any impact on its -- on -- on evaluating my opinions regarding obviousness, but it seems like that's something that the addition of the vacuum chamber doesn't prevent or require significant modifications to -- to M ller.

Q. Would a conventional blower-type like the one disclosed in Waffner need to be added in order to make the vacuum chamber operational?

A. You need some type of a mode of force to produce a vacuum in the vacuum chamber. So it could be a blower, or it could be a Venturi nozzle. It could be a pump.

But, yes, some -- some type of -- of blower would be required. And that would be attached to the vacuum chamber by a -- by a hose or a tube.

Q. And where would that conventional blower be located?

A. I mean, it -- it depends on the -- on the implementation. You would locate it in a spot where it was rational to locate it.

I don't think that I've gone into that level of detail in my analysis.

Q. Where would a rational location be for a blower in this type of setting?

A. Again, because it's remote in -- in one -- in one embodiment, if it's attached by a tube or a hose, it just needs to be located somewhere nearby where the hose could account for any motion of that plate -- would be how I would analyze it.

It could be attached directly to the back plate as well, I suppose if it was small enough, but it -- it depends on the application.

I mean, a fan and the electrical connections required and the venting of the -- of the air, you know, it -- if you look at how -- how this is done in other embodiments, one can -- one of ordinary skill has plenty of examples to guide them.

Q. If you turn to paragraph 217, you mentioned that the combination would simplify threading and eliminate the need for hand-threading.

Do you see that?

A. Yes, I see that.

Q. How does adding a vacuum chamber eliminate the need for hand-threading?

A. Well, M ller already goes a long way towards simplifying and enhancing the threading operation.

And what Waffner's techniques describe is -- especially if you're implementing their

embodiment with a rotating vacuum belt, is that that alone can facilitate threading because as the paper or web is coming in, it can be suctioned to that surface and moved along in the direction that is intended.

So what I'm doing is observing what Waffner talks about in terms of the web handling and what M ller has already disclosed in terms of enhancing the threading or the loading procedure.

A combination of those disclosures would -- would give a person of ordinary skill in the art additional techniques or tools to simplify the loading process -- is what I'm trying to state here.

Q. Does Waffner's system require any hand-threading at all?

A. I'd have to review Waffner again with that particular question in mind.

I don't recall it specifically talking about eliminating hand-threading, but certainly, it -- its techniques, in combination with M ller, each is me [phonetic], that it simplifies threading.

I -- I'd have to look at -- I'd have to look at Waffner in more detail to be able to answer that.

Q. How would the cleaning process change with the introduction of a vacuum chamber to strip

guide 13?

A. Do you have a specific cleaning process in mind? I'm not sure I understand the question.

Q. I'm just curious, generally, comparing strip guide 13 without a vacuum chamber to strip guide 13 with a vacuum chamber, what the differences in cleaning procedures would be for those two.

A. Well, we're talking about -- talking about these types of web-handling equipment in the context of -- of a slicing machine. That's different from looking at them in isolation, of course.

I don't think there's a significant difference.

The only thing you'd need to be careful about is -- is -- is getting water into -- or a cleaning solution into the vacuum holes.

I think that would -- some type of -- of -- of procedure to avoid that would be helpful, but that's all that -- all that comes to mind at this point.

Q. Would incorporating a vacuum chamber into strip guide 13 increase or decrease tension in loop 12?

MR. THOMAS: Objection. Form. Foundation.

A. Generally speaking, a loop is a low-tension

portion of the web by design, but if you add, essentially, a vacuum brake to one portion of it, you're increasing friction because you've got an air-pressure differential acting on the web, forcing it against the surface that it's sliding along.

In the case of Waffner, where that surface is moving, it wouldn't have any particular effect on the tension.

In the case of an application where it's sliding on the -- on the strip guide, I would think that it would increase the tension in that area a bit, which could be beneficial, depending on the application.

Q. (By Ms. Canino) And in the same paragraph, paragraph 217, where you discuss threading, you mention "Converting M ller's strip guide to the vacuum chamber and contacting belt used in Waffner would simplify threading."

Do you see that?

A. I see that in the middle of paragraph 217, yes.

Q. What do you mean by "converting"?

A. Well, we have a particular embodiment in Waffner, which is two rollers and a belt and an unspecified frame or support.

So "converting the strip guide" would imply some substitution of those types of components in that area of the mechanism.

So you already have a particular size, so it would just be a similar size that would be located in a similar spot.

I haven't designed it, and I can't point to anything in particular, but it's a -- we're talking about a relatively simple conveyer belt type of mechanism with two cylinders and a belt and some sort -- some sort of drive belt, presumably, to -- to rotate it.

So that's -- that's something that -- that one of ordinary skill in the art could accomplish very easily.

Q. In your proposed combination, are you suggesting implementing the teachings of Waffner, including the rollers and belt, of belt 28 into M ller's strip guide?

MR. THOMAS: Objection. Form. Foundation.

A. Well, here in this section, I'm enumerating different factors which would influence or motivate the combination of these references -- these prior art references.

So one of ordinary skill in the art could

have a variety of different motivations, as I've enumerated here.

It -- it goes towards showing the compatibility, in my view, of these -- of these particular references, how different techniques that are taught can be applied by one of ordinary skill.

So, in this particular case, I'm talking about the design goal of simplifying loading. And this -- this is something that a POSA could do in light of the teachings of Waffner and M ller in this case.

Q. (By Ms. Canino) Does the combination you have analyzed incorporate Waffner's con- -- contact- -- contacting belt or not?

MR. THOMAS: Objection. Form and foundation.

A. Well, it's -- it's not -- it's not clear to me that it matters either way.

I think that the combination renders the claims obvious, as I've described elsewhere in this declaration, in either case.

What I'm showing here is that there's a multiple number of reasons why one would be motivated to combine these references.

How one ultimately does so, I think,

depends a little on the application and the preferences of the person of ordinary skill doing it at the time.

Q. (By Ms. Canino) We're going to move into your declaration for the '823 patent now, if you want to set your declaration for the '013 aside and pull up Exhibit Number 1003 for the '823 patent.

A. Okay. I've got Exhibit 1003, which is the same number as the other declaration, but this one is to -- is -- is directed at the '823 patent.

Q. And starting with Ground 1 for the '823 patent, you rely on M ller as your primary reference again?

A. Ground 1 is -- is describing a combination of M ller and GEA438. And if we analyze the various elements, a great number of those elements are present in M ller, and so I would characterize that as "M ller in view of GEA438."

Q. If you can turn to paragraph 153, I want to talk a little bit about GEA438's vacuum chamber that you relied on.

A. Paragraph 153?

Q. Yes.

A. All right. So we're in Ground 1 in the section that is describing the -- the various

elements. And paragraph 153 is under the heading "Vacuum Chamber."

Q. You discuss that GEA438's vacuum chamber is delay unit 1; is that correct?

A. Yes. I state that at the beginning of paragraph 153.

Q. And it looks like there's a number of components as a part of GEA438's delay unit 1; is that correct?

A. Yes. I go on to list several components that comprise delay unit 1.

Q. I'd like to go through each of these components, starting with the suction plate.

A. Sure.

Q. And, actually, I'd like to back up just a little bit.

And can you explain to me what is the function of GEA438's vacuum chamber?

A. Well, GEA438 describes a vacuum brake, which is a means of -- of controlling the tension in the web as it exits the loop store and before it enters the cutting region.

So it goes into some detail, but it's essentially describing a means by which you can reliably and very accurately control the amount of

braking in that web -- that's b-r-a-k-i-n-g -- to retard and prevent the web from traveling and wrinkling as it is stopped and started abruptly in the discontinuous manner that is necessary for interleave delivery.

Q. And so just to clarify, when you state "vacuum chamber" or "vacuum brake," for each of those components, you are relying on GEA438's delay unit?

A. I identify delay unit 1 as a vacuum chamber as I understand that term from my review of the '823 specification.

Q. If you turn to page 61 of your declaration --

A. Page 61, go ahead.

Q. -- it looks like you're also relying on GEA438's delay unit 1 for the vacuum brake claim element?

A. Yes. I -- I list it in this table as a disclosure of -- of several different claim elements, including the vacuum brake and the vacuum chamber.

Q. I just want to make sure we have our terminology consistent moving forward.

If we turn back to paragraph 153 and get back to those components, starting with the suction plate, can you explain to me what the role of the

suction plate is?

A. So in paragraph 154, I cite GEA438, paragraph 32 of GEA.

And, basically, what it talks about is that the suction plate is a -- is a plate that has openings in it, and you have a fan that is, in this case, nearby that is pulling air through those openings. And that basically -- that negative pressure attracts the web to that surface of that plate as it's going by.

That's what it describes in paragraph 32 of GEA438.

Q. And what about the suction openings? What are those used for?

A. Well, in order to -- in order for the vacuum to be able to -- to touch the web, you have to have the -- the web has to -- the air has to have somewhere to go.

If you had an entirely sealed vacuum chamber, it wouldn't have any impact on -- on the web.

Here, we've got a perforated plate, suction plate 6 with openings 7, and the airflow that's generated by that blower or fan influences the -- the web that is in the vicinity to attach to the plate as it goes by.

Q. Do you have a copy of GEA438 in front of you?

A. I can pull one up.

Q. That would be great.

A. GEA438 could also be referenced as Bader, B-a-d-e-r. That's Exhibit 1005.

Q. Yes. And thank you for calling out the exhibit number.

A. Okay. I've got GEA438, Exhibit 1005, open in front of me.

Q. And can you please turn to Figure 1?

A. Got it.

Q. And here it looks like suction plate is labeled with the number 6?

A. 6, yes.

Q. Is it your understanding that the small circles drawn on suction plate 6 would represent the suction holes?

A. Although they don't call it out in this particular figure, suction holes or suction openings 7 I understand to be the holes that are illustrated in that plate.

Q. And it looks like the separating material is labeled "2"?

(Reporter clarification.)

MS. CANINO: Two the number, yes.

A. It's pointing to the -- to the loop. I'd have to look to see what it terms Item 2 to be. One moment.

It's calling 2 "separating material." So that would be akin to the web or the -- the interleaver material. It's just a different word for it.

Q. (By Ms. Canino) And it looks like suction plate and the suction holes sit on top of the separating material.

Do you see that?

MR. THOMAS: Objection. Form and foundation.

A. I don't see that.

I read GEA. And it's very specific about the function of the -- of the suction plate and the openings sucking the paper to that surface, as -- and it's not particularly well drawn, that's why I've highlighted it in Figure 1 on page 74 of my declaration.

But there's multiple cites throughout GAE438 that inform a person of ordinary skill in the art as to how that vacuum brake functions.

Q. (By Ms. Canino) What is the function of

fluid line 8?

A. What we have here is a chamber, essentially. It's a vacuum box.

9 is a -- is a fan. And that fan is attached to a chamber or reservoir that is in -- in sort of a vacuum chamber, essentially, is what 8 really is.

It's called a -- a "line." It's a -- I guess you could call it a linear form that's attached to the fan. Perhaps it's poorly translated to the English word.

But my understanding of 8 is that we're looking at a sheet metal enclosure that -- that is attached to the fan. So it's a vacuum chamber.

Q. But you were relying on GEA438's delay unit 1 as the vacuum chamber claim element; correct?

A. Well, you can see that the one in Figure 1 has a curved arrow. It's pointing to that assembly as a whole.

And as quoted in paragraph 153, the "Delay unit 1 comprises suction plate 6, suction openings 7, fluid line 8 and negative-pressure-generating unit 9."

So all of those numbers, including suction openings 7, which are not called out in this figure, are -- are comprising delay unit 1.

So I understand all of that to be the vacuum chamber or the unit that produces the -- the braking force.

Q. And what is the function of the negative-pressure-generating unit?

A. Well, they're using a term "negative-pressure-generating unit" to be more specific than the term "fan" or "blower."

They're telling you that the component that's identified as -- by callout number 9 is generating negative pressure or vacuum inside that box.

So it just is additional clarification to help you understand what it's doing.

It's not blowing air into the box or pressurizing it, but rather, it's pulling air out of the box or creating a vacuum.

Q. And where is GEA438's vacuum chamber located?

A. Well, it's -- the vacuum chamber is embodied in this delay unit assembly.

That -- "vacuum chamber" is a term that is used in the '823 specification. And I understand that term and identify this assembly as a vacuum chamber that we're pointing to now in GEA438.

Q. And where is that delay unit 1 located in GEA438's system?

MR. THOMAS: Objection. Foundation.

A. I think I've been pretty clear, and I don't know any other way to say it other than how I've described it in words in paragraph 153.

In my opinion, the vacuum chamber, which is a term coming from and the specification of '823, I understand delay unit 1 to be a vacuum chamber.

Q. (By Ms. Canino) And where is that located relative to, let's say, the roll in GEA438?

A. When you say "the roll," you're -- you're talking about 11? The --

Q. Yes.

A. -- the -- the roll of separating material?

GEA438 describes an intermittent dispensing application for interleaver material or separating material, and it describes the desire for this vacuum brake, a delay unit just upstream of that dispensing or intermittent dispensing mechanism.

So, as shown, it's downstream from the supply roll and just before the intermittent dispensing mechanism.

It's fo- -- this particular patent is focused on this delay unit as the novel feature.

Q. We have just discussed the roll, also called "tape roll." I think it's Element 11 in Figure 1.

Do you see that?

A. I see that.

Q. How is paper driven off the roll in GEA438?

MR. THOMAS: Objection. Foundation.

A. Well, the bulk of the disclosure in GEA438 is focused on the -- on the so-called delay unit or vacuum chamber and the -- the means for using that.

The roll is described elsewhere. I'd have to pull up GEA to point to a specific paragraph, but it's -- you know, it -- you know, this is the -- the -- GEA is the same company as the inventor in M ller, and so they're -- they're addressing the same types of issues.

This particular illustration is a bit diagrammatical. It doesn't show all of the details necessary to implement because a lot of that is well characterized and well understood by a POSA at the time of the -- of the invention for '823.

Q. (By Ms. Canino) And so how would the POSA understand material to be removed from the roll in GEA438?

A. Well, I think that I would point to

Figure 2 and the descriptions for Figure 2 therein in the disclosure for GEA438. And so I'm just going to those paragraphs now.

So there's an unrolling device. And it doesn't go into detail as to how it's driven.

One would understand that there are a couple of different ways it could be driven. It could be axle-driven. It could be friction-driven. It could be driven in cooperation with the roller identified as Item Number 4 in Figure 2, the deflection roller.

So you've got, you know, different embodiments that are possible here, but the -- in my view and understanding, the focus of the disclosure is on the -- is on the delay unit.

Q. Where would a POSA understand the drive, any of the examples that you gave, to be located in GEA438 system to remove material from the web?

MR. THOMAS: Objection. Form. Foundation and a -- and scope.

A. Well, I'm looking back here at the table on page 61 in my '823 declaration.

And I'm not relying on GEA438 for disclosure of a removal device. That's -- that's something that I've identified in M ller.

Q. (By Ms. Canino) I understand that.
I'm just asking about GEA438 for now, independent of the formal combination. And I'm just curious how a POSA would understand the material to be driven off the web -- off --
MR. THOMAS: Can you point to somewhere? Can you point to somewhere in Mr. Jobin's testimony that makes this line of questions relevant, Counsel?
And I guess I'm -- I'm objecting to form and scope and foundation.
Q. (By Ms. Canino) Mr. Jobin, you rely on GEA438 in your combination in Ground 1; correct?
A. GEA438 in combination with M ller, correct.
Q. And so you were using GEA438 as one of two references in your proposed grounds for the '823 patent?
A. I have identified two prior art references in this ground: M ller and GEA438. Correct.
Q. So in relying on GEA438, I'm assuming you've read GEA438?
A. I've read GEA438. And I've summarized my understanding of the elements of 438 that one of ordinary skill in the art would identify in the context of all of the elements that I've described in that table as discussed previously.

If we go to paragraph 138 of my '823 declaration, it discusses the removal device in some detail, but I'm only discussing it as it refers to M ller because I don't identify it in -- I haven't identified it in GEA423.

Q. Does GEA438's operation depend on material being removed from the roll?

MR. THOMAS: Objection. Form.

A. GEA438 generally refers to an unrolling device. It doesn't go into detail, as I recall, as to exactly how that functions. That's left to one of ordinary skill in the art to determine, to implement how they see fit.

So I think that the disclosure is focused on other areas. There's just not a lot to go on other than these figures. And I think earlier in one of my answers, I described some of the potential ways that a removal device -- or a -- or the unrolling device as described in 438 could operate, but it doesn't -- it's not clear exactly how it does.

That -- that's not the -- the focus of this specification.

Q. (By Ms. Canino) Does the operability of delay unit 1 depend on material being removed from the roll?

MR. THOMAS: Objection. Form. Scope. Foundation.

A. The operability of the braking unit is shown in the context of a particular application.

It's titled "Delay Unit Unrolling Device Cutting Machine and Method for Providing Separating Material."

So it is -- it is cutting the web in an interleaver application, and it's located generally very close to the slicer, as illustrated in Figures 1 and 2.

And the unrolling device is shown. They don't go into a lot of detail about how it operates, but the provision of a continuous supply of tape or interleaver material is, of course, important to the function of the delay unit.

Q. (By Ms. Canino) Earlier you had mentioned the deflection rollers 4 as being one of the potential ways of driving material off the loop?

MR. THOMAS: Object to form and foundation and scope.

A. I identified 4 as a -- as a possible means.

I identified the axle of drive as -- as -- as another potential means for providing material.

Whether that constitutes a removal device,

I have not identified that because I don't have enough information in this disclosure to arrive at that conclusion.

Q. (By Ms. Canino) And I'm not asking if it's a removal device. I'm actually just curious what the function of rollers 4 in function 438 are?

MR. THOMAS: Objection to scope.

A. I -- I have not -- I have not opined on the function of that particular element. I'd have to review this again and -- with that particular element in mind.

But it's -- it's -- it's shown in the context of the -- of the web. It's present at the -- I guess you could call it as part of a loop or a loop store. And it provides a certain amount of compliance, which -- which is inherent or necessary in this particular embodiment, but it doesn't go into a lot of detail about it.

Q. (By Ms. Canino) If we turn to Figures 1 and 2 of GEA438, they should be on the same page...

A. Yes.

Q. And looking at Figure 2, it looks like "Incorporates Deflection Rollers 4."

A. I see 4 pointing in Figure 2 to two different deflection roll ers.

Q. Without those deflection rollers, what would the path of the separating material look like?

A. There's no way to know without more information.

Q. What additional information would you need?

A. Well, the path of the web depends upon components that are in its path.

So whether they're rollers, whether they're surfaces, or whether -- and it also depends on the relative speeds at different stations and the tension in the web.

I mean, all of these are variables that -- that you can't discuss without more information.

Q. Are the deflection rollers part of your proposed combination with M ller?

A. I have not identified them as such.

What I'm focused on and what I pull, what disclosure I, as one of ordinary skill in the art, would -- would serve in reviewing GEA438 is the relevance of the delay unit 1 in combination with M ller.

Q. Would the delay unit 1 operate any differently whether or not deflection rollers are used in GEA438?

MR. THOMAS: Objection. Form.

A. I have not evaluated the function of the delay unit in the context of the presence or lack of presence of these rollers.

All I will cite is that they're not illustrated in Figure 1. At least one of them is completely missing. It's a loose loop.

So I think that it's dangerous to take too much from these figures because I think that they're diagrammatical in some sense, and not all of the details are present to enable one to answer that question accurately.

(Reporter clarification.)

THE WITNESS: "Loose loop."

Q. (By Ms. Canino) Can you turn to pages 80 to 81 of your declaration?

A. Okay. I'm at pages 80 to 81, which is under the section for Ground 1. And it is in the section that's describing specific elements that are present in this combination.

Q. And looking at the element device for determining a size of a loop, under heading 20, do you see that?

A. Yes.

Q. And here you're relying exclusively on M ller's teachings for determining a loop size?

A. Here I'm relying on M ller for this element, correct.

Q. And you are not relying upon GEA438 for this element?

A. I go back to my table. And this element is not cited in my table, nor is it cited here as something that I'm relying on for this particular element.

Q. And you'd agree that GEA438 does not contain disclosures about determining the size of a loop?

MR. THOMAS: Objection. Scope. Form.

A. I don't recall a finding on GEA438 having that function or that element.

Q. (By Ms. Canino) And looking at the next element, "Position Determination."

You are relying exclusively on M ller here as well?

A. Right. I'm citing to M ller paragraph 48, and I rely upon that in identifying this element.

Q. And you are not relying on GEA438?

A. I'm -- I'm citing only here to paragraph 48 of M ller but not to GEA.

Q. And you'd agree with me that GEA438 does not contain any disclosures about position

determination?

MR. THOMAS: Objection. Scope and form.

A. I've not opined that it does.

I identify that feature in M ller. And it's, therefore, present in the combination of M ller and GEA.

Q. (By Ms. Canino) Does GEA438 disclose any contacting sensors?

MR. THOMAS: Objection. Form.

A. Well, to the extent that a contacting sensor is a device for determining the size of the loop, I have not identified a feature in GEA that performs this function or that -- that discloses this element.

Q. (By Ms. Canino) And GEA438 does not measure pressure; correct?

MR. THOMAS: Objection. Form. Foundation.

A. That is not correct, in my view.

One of ordinary skill would understand that you need to be able to set a pressure or a vacuum level according to the particular needs of the device. And different settings may be necessary.

I think one of ordinary skill would understand that if you're -- if you have a vacuum plate, it's very useful and necessary to know what the

pressure is inside there.

I don't think that I recall it being disclosed explicitly. But one of ordinary skill would understand that that pressure measurement is implied, certainly.

Q. (By Ms. Canino) But GEA438 does not use any pressure sensing to determine the size of the loop?

A. I -- I think I already answered that -- that GEA is not measuring or determining the size of the loop using -- using a -- a contacting sensor or a pressure sensor.

I've identified that element. In this combination, I identified that element to M ller alone.

Q. What happens in GEA438 when there's a sudden stop in consumption?

MR. THOMAS: Objection. Form.

A. Well, GEA438 is designed to enable the web in the interleaver mechanism to start and stop very rapidly.

And so the idea is that you set the negative pressure to allow reliable, intermittent stop/start of the interleaver and slicing of the sheet.

So they talk about -- for example, in my paragraph 176 of the '823 declaration, I'm citing to GEA paragraph 12.

And there, we're talking about setting the negative pressure by way of modifying of the spe- -- the fan speed in order to -- to -- basically to optimize or control the -- the function.

So, you know, this -- this -- this up-and-down setting of a fan is something that one can do -- that one would do. And I'm just explaining about what's being disclosed in GEA; that necessarily, by the context of this device, means that the braking unit is able to facilitate the rapid stop/start of the web material. That's what it's designed to do -- is to improve the reliable delivery of the -- of the sheet to the -- to the cutting.

Q. (By Ms. Canino) And so what happens if there's a sudden stop of production in GEA438?

MR. THOMAS: Objection. Form.

A. Well, GEA -- GEA438 goes into more detail in this particular section that I've cited in paragraph 176.

It says, down in the middle, "fan is preferably controlled by way of a closed-loop control circuit in which the rotating speed of the fan wheel

is incorporated as a manipulated variable and the unrolling or transporting speed is incorporated as a regulating and feedback variable."

If there -- so with that understanding in mind, one of ordinary skill would understand that if there were a sudden stop in production, it would be detected, and it would -- it would be -- and then because we have this vacuum present, it keeps the sheet from -- from moving along in -- and creating a mess.

So it -- it -- it's being sensed -- if -- if the central control unit shuts down the system, then the vacuum brake functions to prevent the sheet from continuing to feed by momentum, for example.

So that's how I think that particular element of GEA would behave in that scenario.

Q. (By Ms. Canino) And what would happen to the roll preceding the delay unit?

MR. THOMAS: Objection. Form.

A. Well, they're talking about --

(Overlapping, indiscernible dialogue.)

Q. (By Ms. Canino) Sorry.

A. What -- what they're talking about in GEA here, in this paragraph that I've cited, is that the -- the -- there's a control which can be used as

a -- in which one can -- can infer the speed of the -- of the web.

It says "When an actual speed falls short of the nominal range, the rotating speed of the fan is reduced until the actual speed lies within the nominal range again."

So it's talking about -- about control over the vacuum level and the speed in that region.

It doesn't talk about specifically sending that back to the drive or the unrolling system. But it's -- it does say further up in that paragraph that "The unrolling and transporting speed is automatically maintained in a predetermined nominal range."

So if your speeds go outside that range, the control -- depending on how you program the control -- software control, you could tell those unrolling devices to stop feeding. And that would be a logical thing for one to do.

It doesn't go that far, but it's talking about controlling the whole system based on monitoring the fan speed.

Q. Are there any other types of braking present in 438 aside from the delay unit?

MR. THOMAS: Objection. Form and scope.

A. What I -- what I recall is that the braking

that's discussed in GEA438 is centered upon this Module 1. And I don't recall there being other braking discussed.

MS. CANINO: Do you guys want to take another quick break?

MR. THOMAS: Yeah. I think that works for me.

THE WITNESS: Yeah.

MS. CANINO: Do you want to meet back at 11:55?

MR. THOMAS: Sure. Let's -- do you want a lunch?

THE WITNESS: That's fine.

MR. THOMAS: Perfect.

(Recess.)

Q. (By Ms. Canino) Mr. Jobin, I'd like to discuss your combination of M ller with GEA438 in a little bit more detail.

If you can, turn to paragraph 190.

A. All right. Paragraph 190 is in the "Motivation to Combine" section under Ground 1.

I am ready.

Q. And here you, again, discuss adding a vacuum chamber and contact surface to M ller's strip guide?

A. Yes.

Q. So is your proposed combination retaining this strip guide 13 from M ller?

A. Well, what I state here is that "A POSA would recognize that adding a vacuum chamber and contact surface to M ller's strip guide would allow the system to use those same components for some other" -- or "for other benefits."

So, yes, the strip guide remains in M ller in this particular combination, but additional functionality is provided.

Q. And of that additional functionality, do you mean delay unit 1?

MR. THOMAS: Objection. Form.

A. Here we're talking about -- what I'm talking about here in subsection b is that "A POSA would be motivated to combine GEA438's techniques with M ller's apparatus to realize additional advantages of a vacuum chamber."

And in -- in paragraph 191, I -- I discuss some of the possible benefits of a vacuum chamber, and that includes that the vacuum chamber has the tension-control element for web material leaving the loop and that it produces "complexity, decrease costs, and simplify maintenance by using one component (a

vacuum chamber, air-permeable contact surface, and sensor) for several functions."

So integrating those functions together is viewed as a benefit.

Q. (By Ms. Canino) Does the combination you've analyzed incorporate GEA438's suction plate?

A. Well, I'm identifying the combination as including GEA438's vacuum chamber.

So that comprises the suction plate and the holes and the vacuum-generating unit and the vacuum chamber itself. All of those are parts of the vacuum chamber.

Q. And this will be added to strip guide 13?

A. In this particular combination, I am stating that a POSA would recognize that adding a vacuum chamber and contact surface to the strip guide would allow the system to use the same components for other benefits.

So, yes, we're -- we're modifying M ller's strip guide to include the -- the vacuum chamber components as described in GEA438.

Q. And can you turn to paragraph 194?

A. I see paragraph 194.

Q. Here you state that "Converting M ller's strip guide to the vacuum chamber used in GEA438 would

simplify threading"?

A. Yes.

I mean, what I'm merely stating is that in a threading mode, you could use the vacuum to hold the material without needing to clamp or otherwise restrain it.

So while you're threading it, you could lay that material down on the strip guide, for example, and it wouldn't go anywhere.

So it's just a -- it envisions additional benefits to the -- to the user in the threading or loading of the strip material.

Q. But in your -- analy- -- in the combination that you've analyzed, you are not suggesting removing strip guide 13 and replacing it with delay unit 1; correct?

A. I don't think I termed it that way. I thought about -- about combining the teachings of M ller and GEA438 in this particular area to enhance the functionality of M ller with the vacuum chamber benefits.

So I don't think I'm necessarily replacing the strip guide with that. I'm integrating them based on the teachings of both disclosures.

Q. And so would you need to add suction

openings to strip guide 13?

A. I think that's a -- a reasonable thing you need to do, yes, because -- because the strip guide is in contact with the web to -- to get the vacuum plate functionality. And those holes would be formed in that plate. That makes sense.

Q. And in the combination that you've analyzed, does strip guide 13 retain its ability to move?

A. Well, we're talking about the -- the benefits described by M ller's disclosure, rotating that strip guide during the threading process to help facilitate threading.

So I think that -- that it's possible that it makes sense to keep that. It just depends on what the -- what the ultimate application requires.

Q. Would all of the other components of M ller's buffer 12 be retained in the combination that you've analyzed?

A. Could you repeat that question? I think I missed it.

Q. Yes.

Would all of the other components of M ller's buffer 12 be retained in the combination that you've analyzed?

MR. THOMAS: Objection. Foundation.

A. I -- I don't know that I've gone to that level of detail in evaluating this combination.

The teachings of both of these are being discussed here under the "Motivations to Combine" section.

This additional functionality that the techniques that GEA438 teaches would be attractive, potentially, to a person of ordinary skill in the art.

One would understand that loading of the material would be simplified by combining these teachings.

That's all that I'm getting at in this particular section. The details of how -- how that would be implemented are -- are not discussed in here.

Q. (By Ms. Canino) How does adding the teachings of delay unit 1 from GEA438 eliminate the need for hand-threading, as you've stated in paragraph 194?

A. Well, what I mentioned in -- in my previous answer was that having a vacuum brake function during threading would have a conceivable benefit of allowing the strip material to be held in place while you were doing other things.

Remember, we're -- we're looking at loading

multiple units, multiple webs, and so threading them and then having it temporarily hold in that position while you do the others is something that comes to mind.

And then you can go back and insert that sheet into -- into the -- the -- the interleaver mechanism, for example.

There's -- there's -- there's different benefits that -- that -- that you could infer. That's something that comes to mind and what I was thinking of when I was talking about simplifying loading of new material.

Q. Would hand-threading still be needed throughout the system?

A. Well, the teachings of M ller imply that a certain amount of automated loading is feasible.

I don't know how true that is or isn't. I haven't evaluated or tested that system.

But looking at things that they discuss in M ller, those wouldn't necessarily be diminished by -- they -- they would be either enhanced or neutral in combination with features of GEA438.

You wouldn't have to apply the vacuum during the treading process; you would just have what essentially would be the strip guide with a couple

holes it, but it would be essentially the same function.

Q. Can a new roll be loaded in GEA438 without any hand-threading?

A. I have not evaluated whether that's the case. I don't remember the disclosure of GEA438 mentioning that capability.

Q. How would the cleaning process change with the introduction of a delay unit into M ller's strip guide?

A. Both of these disclosures are silent as to cleaning issues and any impact that they would have.

It's not something I've considered in the context of GEA438 in this declaration.

I think that ultimately would -- you'd -- you'd just want to make sure to choose materials that are compatible with your cleaning process and modify your cleaning process, as necessary, to protect the sensors.

Q. Would incorporating GEA438's teachings increase or decrease the tension in M ller's buffer 12?

MR. THOMAS: Objection. Foundation.

A. GEA is teaching the addition of a vacuum brake functionality, which adds a very precise,

controllable amount of tension to the web at specific -- at a specific location. It's helpful.

So I would say that it increases it slightly, but it's very adjustable.

Q. (By Ms. Canino) I'd like to move on to the second ground you proposed in the '823 declaration, where you rely on DePoi as your secondary reference.

A. Okay. Do you have a particular page or paragraph?

Q. I do.

And DePoi is Exhibit 1006 for the '823 patent, but I'll direct you to paragraph 302 of your declaration.

MR. THOMAS: Counsel, are you introducing Exhibit 1006 in this deposition or sticking with the report?

MS. CANINO: No. Sticking with the report. Just clarifying the exhibit that I'll be referring to is DePoi -- is Exhibit 106 [sic] as used in the '823 petition.

(Reporter clarification.)

MS. CANINO: D-e-P-o-i.

Q. (By Ms. Canino) Mr. Jobin, let me know when you're at paragraph 302.

A. Paragraph 302 is under Ground 2 in the

section in which the individual elements are described under the heading "Vacuum Chamber."

Q. You explain that DePoi's vacuum chamber is Vacuum Box 26; is that right?

A. In paragraph 303, I cite "DePoi's vacuum chamber is 'vacuum box' 26."

Q. And if you turn to the next page, there are a number of components, it looks like, associated with DePoi's vacuum box that I'd like to go through.

Do you see the top of page 140?

A. I -- I see that. In this context, it would be quite helpful for me to have a copy of DePoi in front of me.

Q. Right. Do you need me to email that your way, or do you have one handy?

A. I should have a copy present in my folder on this computer.

Okay to grab that?

Q. Yes. Please do. Thank you.

A. Yep.

Okay. Okay. Got it. I've got DePoi in front of me now.

Q. Starting with "fans 36" --

A. Yes.

Q. -- what is the function of these fans?

A. If you look at Figure 2 of DePoi, you'll see three fans 36 arrayed along the bottom of a -- of the box, a sheet metal box. And this box forms the -- a guide for the loop store of the web to descend into.

So these fans create a pressure differential across the web, which sucks the web into the box and forms the loop store.

Q. And it looks like "loop" is labeled number 32. And it might not be in Figure 2.

A. Figure 3 shows loop 32. And, yes, 32 is the loop. Yeah.

Q. And what's the point of loop 32 in DePoi?

A. Well, it says that the loop store -- loop 32 -- in paragraph 299, I cite DePoi. In paragraph 26 of DePoi.

It states "The vacuum box 26 is located between the drives 24 and 30 to provide tension in the web 18 between the drives 24 and 30. So during steady state cutter operation, the upstream first drive moves with relatively constant velocity feeding the web into the vacuum box creating a loop 32, as shown in Figure 3."

And so this loop can lengthen and shorten inside the box based on differences in the speed of the two drives, 24 and 30.

And it prevents a condition in which a difference in speed would cause too much tension in the web causing a break in the web or other problems with delivery. So it's a buffer.

Q. How does it achieve that buffer between the inlet and the outlet?

A. Well, the -- the function of the loop store is well characterized in the prior art. And I show several examples in my declarations where it's been used over the decades for this purpose.

In this context, you can increase the size of the loop by speeding up the -- the -- the drive 24 to add material faster than it is being removed by drive 30.

So it's all about the relative speeds of the in- -- inflow and outflow.

And the reason it's important is because, in this application, DePoi is talking about a paper-cutting device, and so it's discontinuous in its output speed. It's stopping and starting very rapidly.

So you need to adjust the speed of the inflow so that you're never putting the web into a tension condition where it could break.

Q. And where is the vacuum chamber located

relative to the loop?

MR. THOMAS: Objection. Form.

A. If you go further down in my -- in my declaration, you'll see that I talk about the vacuum chamber in DePoi, starting in paragraph 302.

There's a vacuum box 26, which is a box which bounds the region in which the loop store is forming.

So it's sort of controlling -- so the loop store isn't flopping around, it's controlling the vertical orientation of the loop in a more controlled manner. And so that's what -- that's what the vacuum box comprises.

Q. (By Ms. Canino) And where is vacuum box 26 located?

A. Well, if you look at, for example, Figure 3, you'll see that the vacuum box is the enclosure of the sidewall.

And -- and if you look, for example -- just looking at another figure -- that's also shown on the front page, which is a replica of Figure 3.

26 is also called out in Figure 4, but my understanding is that it comprises other elements.

"The vacuum box 26" -- according to my declaration paragraph 303 -- "comprises a frame 34

containing several fans 36 and its base."

And the length -- "The loop 32 can lengthen and shorten inside vacuum box 26 due to the motion differential between the two drives 24 and 30."

So the vacuum box is not just the enclosure, but it's the assembly of the frame 34, the fans at the bottom, and that provides a box into which the loop can descend.

Q. And so do both sides of the loop go inside of that vacuum box?

A. Well, the loop is formed inside the box. And as one can see in Figure 3, for example, of DePoi, the -- the web material enters and goes down the side -- the inner sidewall of the vacuum box and makes a loop and goes up the other sidewall of the box and exits at the other side.

So that vacuum box 26 is, again, sort of defining the left and right extent of the loop.

Q. It looks like feeder 6 [sic] is also included in your description of the vacuum chamber on the top of page 140?

A. I see feeder 16.

Q. Sorry. 16. Thank you.

A. "Feeder 16 includes an entrance support surface or deck into the vacuum box 26 for the web 18

to slide along."

So feeder 16 is sort of a curved -- if I'm reading it correctly -- let me just look again.

No. It's not -- it's not called out in the figures, but based on my understanding, feeder 16 includes an entrance support surface for deck 38.

So deck 38 in Figure 3 -- no Figure -- Figure 3 is pointing to that curved surface at the top of the box.

So that -- the web feeds around that radius and down into the box is what that's saying.

Q. So --

A. So both 38 and 40 -- 40 is the exit curve, and 38 is the input.

Q. Do you consider decks 38 and 40 to be contact surfaces?

A. Well, "contact surface" and "air-permeable contact surface" are terms that are used in the '823 specification.

And one of ordinary skill in the context of that specification would understand what is being disclosed there.

I view and have identified deck section 40 in that region as a contact surface because it's in the vicinity of the vacuum slots 50 that form the

brake -- the vacuum brake.

Q. If you turn to page 137 of your declaration, it looks like you do not rely at all on M ller for any portion of the contact surface claim element; is that right?

MR. THOMAS: Objection. Form.

A. Well, here, in the '823 specification and in the context of the claims, they're talking about this -- this vacuum brake feature and hereto, identified in DePoi, the contact surface or the air-permissible contact surface, because that's described in the spec in DePoi explicitly.

So I have not identified that here in this combination of M ller. I'm -- I'm focusing on the element as described in DePoi.

Q. (By Ms. Canino) Turning back to paragraph 304, you state DePoi disclosed a second vacuum chamber as well?

A. Yes. Manifold 44 is a smaller chamber, which is associated with the vacuum brake slots, which are 50.

So it is a -- is -- you have the primary vacuum box, which affects the formation of the loop, and then you have this secondary vacuum chamber, or manifold 44, which applies the suction to the web near

the exit of the box.

Q. And what is the function of vacuum slot 50?

A. In my declaration in paragraph 310, "DePoi's opening is 'vacuum slots' 50. 'The slots 50'" -- this is quoting DePoi -- "'form a vacuum inlet. The manifold 44 is attached to the outside of the frame at the slots 50.'"

Those slots allow the vacuum to affect and -- to affect the -- the -- the web. As it's -- as it's moving past, it sucks the web to the sidewall and provides a vacuum braking, b-r-a-k-i-n-g, functionality.

Q. And what is brake 28?

A. You're referring to paragraph 317 of my declaration '823?

Q. I was looking at it in the context of paragraph 304, but wherever you want to point to works.

A. It says here -- and I'm quoting DePoi, and this is -- this is the foundation of my understanding.

It says "The brake 28 is located proximate to the exit from the vacuum box 26."

And if you look at Figure 3, you have an arrow that says "28," and then there's an arrow pointing directly towards 50, where the slots are

located.

That region, 50, and that curved surface towards 40, that region surrounding the manifold 44, that little vacuum chamber behind the wall there, is what I understand to be the vacuum brake of this assembly.

They have the slots 50. They've got the vacuum pulling air through those slots and the web traveling over those.

And DePoi goes into great detail, which I've summarized, paragraphs 316 through -- well, quite a ways, actually, but starting at 316 and going through 322 of my declaration, talking about how DePoi discloses and references the function of the vacuum brake.

Q. And what is vacuum source 48?

A. Vacuum source 48 is -- it could be different things.

Here, it's called a -- in paragraph 317, I'm citing to paragraph 34 of DePoi. It's called "vacuum generator 48."

In my understanding, one of ordinary skill would understand a vacuum generator to be a Venturi, where you've got pressurized air flowing through a nozzle and an inlet on the side of that nozzle where

air is sucked in. And that forms a vacuum, which is pulling air through the manifold 44.

So a vacuum generator is what I would understand that to be in combination with a valve to turn it on and off as necessary.

Q. If you can, turn to page 137 of your declaration.

A. All right. I'm on page 137.

Q. And looking towards the bottom of the chart on page 137, do you see the claim element "Device for determining a size of the loop"?

A. Yes.

Q. And here, it looks like you're relying on M ller again?

A. I think I've previously cited that element to M ller. It's got explicit disclosure, which discusses the control system and contacting sensor.

Q. And DePoi does not include disclosures for a device for determining the size of a loop?

MR. THOMAS: Objection. Form.

A. DePoi doesn't go into detail on that aspect of the vacuum brake's functionality.

It's focused more on the control of the vacuum brake, turning it on and off, as needed, to affect function.

I don't recall and haven't cited here in this table that DePoi is disclosing a device for determining the size of the loop.

But one of ordinary skill looking at it would assume that they must have some control because the loop is -- is bounded in this box, so you'd have problems if the inlet speed wasn't regulated.

So I -- while I don't see explicit disclosure, I certainly see it in M ller and, therefore, in the combination.

Q. (By Ms. Canino) But you're not relying on any teachings from DePoi for a device for determining the size of a loop?

A. To my recollection, I haven't cited it. I certainly haven't cited it here and -- but certainly could rely on M ller for that element.

Q. And looking at "Position determination," it looks like you rely exclusively on M ller here as well?

A. Well, again, M ller has explicit disclosure, which enables me to clearly identify that element, that type of functionality in DePoi.

While one of ordinary skill could potentially understand it to be there, I've relied on M ller in this case because this is -- the disclosure

is more specific.

Q. So you're not relying on any teachings from DePoi for position determination?

A. Well, once again, the -- the inquiry in the obviousness context is that I'm looking at the combination of these references.

I've identified the element in M ller as an example where it's present in combination, but I don't recall specifically calling out the element in DePoi.

But looking at the combination, certainly, it's present.

Q. Does the combination you've analyzed rely on any teachings from DePoi for position determination?

A. I think that's another way of asking the same question.

What I have stated is that position determination is an element that I have identified explicitly in M ller, and I have not called it out here in this table in DePoi.

My recollection is that M ller has the more explicit disclosure, which would inform one of ordinary skill about this element.

And, certainly, in combination, one would understand it to be present.

Q. You can turn to paragraph 335 of your declaration.

A. All right. I see paragraph 335 under an "Additional motivation to combine related to additional advantages of a vacuum chamber combined with M ller."

Q. And here you again state "A POSA would recognize that adding a vacuum chamber and contact surface to M ller's strip guide..."

Do you see that?

A. I do.

Q. Is your proposed combination with DePoi relying on adding a vacuum chamber to M ller's strip guide?

A. Well, a combined disclosure of M ller and DePoi would inform one of ordinary skill that a vacuum chamber in that context provides the additional benefits of the brake, as previously described.

While I haven't considered the detailed configuration of those two, it's evident to a person of ordinary skill that one could add that feature to the strip guide without much difficulty.

Mechanically, it's quite simple to do.

Q. Does the combination you've analyzed retain M ller's strip guide 13?

A. It certainly could. And it really depends on the ultimate application in what one of ordinary skill would do in the context of the disclosure present in these two references.

I feel that it's very straightforward to combine the functions that are disclosed here and add the vacuum chamber functionality to the strip guide, but I wouldn't go so far as to say that it's a requirement or that it has to be present.

I think that you could follow the teachings of DePoi and integrate it into M ller without the strip guide.

It's just up to the -- up to the -- to the application and the requirements and what a POSA would do with that.

Q. What does the analysis that you've provided do?

MR. THOMAS: Objection. Form.

A. Well, what I state in 335 implies that the strip guide is still present.

It said "A POSA would recognize that adding a vacuum chamber and contact surface to M ller's strip guide would allow the system to use those same components for other benefits."

So the functionality of the strip guide

enhances the performance of -- of DePoi, and the -- the functionality that's described in DePoi enhances the -- the performance of M ller.

We're talking about, here, motivations to combine and what a POSA would see in light of these two references to what one would understand here.

Combining the vacuum chamber with a strip guide is certainly feasible, given what I understand the mechanical requirements to be.

Q. (By Ms. Canino) And does the combination that you've analyzed in your declaration retain M ller's strip guide 13 or not?

MR. THOMAS: Objection. Form.

A. What I have just stated is that both -- that the strip guide is present in combination.

I don't know that it's a requirement, but it's certainly compatible.

The -- the -- what I'm -- what I'm observing here in "Motivations to Combine" is that these references are compatible in the sense that one can combine and take the teachings of DePoi and apply them to M ller without great difficulty.

It's straightforward from the point of view of a person of ordinary skill.

Q. (By Ms. Canino) And so in the analysis

that you have provided, the proposed combination would add the components of DePoi's vacuum chamber to M ller's strip guide?

MR. THOMAS: Objection. Form. Foundation. Misstates.

A. I'm not sure how to answer any differently. It's the same question worded slightly differently, as far as I understand it.

I -- I am -- I am going on and talking about the benefits of the strip guide that's taught by M ller and how that functionality is retained, even with the addition of the vacuum chamber.

They are compatible in that sense because you can integrate the teachings of these two without great difficulty. It's very simple to -- to envision how one would approach it.

I have not specified a particular embodiment, but what I'm doing is taking the teachings of both references and looking at it through the lens of a person of ordinary skill and evaluating obviousness in that context.

Q. (By Ms. Canino) When you state that "adding a vacuum chamber and contact surface to M ller's strip guide would allow the system to use those same components for other benefits," does that

include the entirety of vacuum box 26 from DePoi?

MR. THOMAS: Objection. Form and foundation.

A. I have not proposed a specific combined embodiment, nor am I required to do so under the obviousness analysis.

What I'm doing is taking the teachings of both of these references and applying them and understanding them, and then making a determination as to whether the particular claims are obvious.

Here, I'm evaluating whether one of ordinary skill would be motivated to combine them and identifying reasons why one would be motivated to combine.

Q. (By Ms. Canino) And what specific teachings are you relying on from DePoi in the combination that you've analyzed?

A. Well, I go into great detail in this section, multiple pages which describe the various disclosure in DePoi and add the disclosure in M ller and how that influences one's motivation.

Is there a particular section of this article -- my declaration that you'd like to discuss?

Q. Are there particular sections of your declaration in the Motivation to Combine in which you

discuss the specific teachings of DePoi that you rely on?

A. DePoi and M ller necessarily are discussed throughout the Motivation to Combine section in great detail.

Q. If you look at paragraph 339, you again discuss "Converting M ller's strip guide to the vacuum chamber used in DePoi..."

Which vacuum chamber in DePoi are you referring to?

A. Well, we discussed earlier, at some length, in reference to the figures of DePoi, what I understood the vacuum chamber to comprise. We can go back to that testimony.

But DePoi is depicting a -- I think if I go back to the vacuum chamber section, there were two different features, which -- which are included.

So are you talking about -- are you talking about the larger vacuum box, or are you talking about the vacuum brake?

Q. Yes. I'm wondering which you are referring to in paragraph 339 of your declaration.

A. Well, I think that the disclosure in DePoi, which is different from the disclosure in M ller and, therefore, beneficial in combination here, is the

vacuum braking portion.

We're talking about the slots 50 and the -- the vacuum manifold 44. That feature that we're adding to M ller in combination is that -- is the vacuum braking function.

The overall vacuum box and the way that the -- that the loop is formed is -- is helpful in that regard, but the most important aspect is the -- is the vacuum braking functionality that DePoi discloses.

Q. So in paragraph 339 of your declaration, when you discuss "Converting M ller's strip guide to the vacuum chamber used in DePoi," which vacuum chamber of the two that you have relied on are you referring to in paragraph 339?

A. Right. And I just answered that. And I'll try to answer it again to be more clear, if that's helpful.

My understanding here is that the functionality that's being discussed in this section regarding simplification of loading new material is that M ller would benefit from the vacuum brake functionality of DePoi.

That functionality is conferred by the vacuum chamber associated with the Element 44 and 50

and 40, collectively 28 in Figure 3 of DePoi.

So we're talking about the vacuum brake functionality, not so much the loop -- or the loop store, if that makes sense.

That's -- here in this section is what I'm talking about. Other references elsewhere could -- could be broader, but here, I'm focused on that vacuum brake functionality that's enhancing loading material.

Q. And so if we turn back to paragraph 335 again, where you mention adding a vacuum chamber to M ller's strip guide, which vacuum chamber are you referring to in this paragraph?

A. I think that the last sentence of paragraph 34 helps to clarify that.

It says "And for further example, a POSA would understand that the vacuum chamber could be used as a tension-control element for web material leaving the loop."

So "leaving the loop" is at that -- that outside curve, that -- proximate to the exit that we talked about earlier. That's associated with the vacuum chamber that creates the vacuum braking functionality in DePoi.

So I previously identified that as the manifold 44, slots 50, and the surface 40.

That whole area is the disclosure that I'm relying on and -- and discussing in the context of motivations to combine here.

Q. And both of these paragraphs fall under the heading "A POSA would be motivated to combine DePoi's techniques with M ller's apparatus to realize additional advantages of a vacuum chamber."

Do you see that?

A. Yes.

Q. And which vacuum chamber are you referring to for this section?

A. Once again, this heading is over the paragraph that I just described.

We're talking about the vacuum chamber, which -- which confers the vacuum braking functions that are disclosed in great detail in DePoi where that -- that vacuum braking functionality is kind of the essence of DePoi, in a way. And those are the disclosures that I'm relying on.

It's not just this very specific feature; it's all of the techniques for how they're used and employed in managing the web.

Those teachings is what I'm applying in combination with M ller.

Q. How would the cleaning process change with

the introduction of DePoi's vacuum chamber components?

A. I think that we -- we discussed that previously.

Again, it's not something that I've covered in my report -- or in my declarations. It's something that would be dependent upon what the cleaning requirements are for the application.

I think that the main thing that you'd want to do is to protect any sensors and to make sure that any cleaning solutions were -- were blown out or -- or not present in the vacuum chamber before you start it up again.

Q. And would incorporating DePoi's teachings increase or decrease tension in M ller's loop 12?

MR. THOMAS: Objection. Foundation.

A. What DePoi is all about is very precise control over the tension in that loop and the ability to turn that on and off very precisely in the correct timing to facilitate reliable paper cutting.

So it's very much about a -- a very precise control over the tension of the web at the exit where it's most important for that particular application.

Q. (By Ms. Canino) So would that increase or decrease the tension in M ller's buffer 12?

MR. THOMAS: Objection. Foundation.

A. As I discussed previously with other vacuum brakes, I think that it would slightly increase, but it would be controlled, and it's very -- able to be turned off very quickly.

It's -- it gives the -- it gives the -- the device the opportunity to control the tension in the web more accurately -- or more precisely.

MS. CANINO: I'm going to take one more quick break. I should, hopefully, be able to wrap up and be out of here before lunch.

THE WITNESS: That sounds -- I mean, it depends on how long you need. I could -- I could definitely go for a lunch. We're almost 1:00 here.

MS. CANINO: I don't anticipate needing much more time at all after this break.

MR. THOMAS: Let's -- let's -- can we go off the record and just chat for a second on that?

MS. CANINO: Sure.

(Recess.)

MS. CANINO: No further questions from me, Mr. Jobin.

THE WITNESS: Okay.

MR. THOMAS: No questions from me either. Thank you for your time today.

THE WITNESS: Thank you, everyone.

(Reporter inquires about rough drafts.)
MS. CANINO: Yes, please.
MR. THOMAS: Yes, please. Thank you.
THE REPORTER: Okay. And then when do you guys need this one? A specific date is ideal. Then I make sure I hit exactly what you need.
MR. HART: Is -- is Thursday reasonable for you?
THE REPORTER: Is when?
MR. HART: Thursday of this week. Is a two-day turnaround reasonable, or is -- is Friday more reasonable, given the length of the depo?
THE REPORTER: Yeah. I think I can definitely shoot for Thursday if that's ideal for you guys. And, then, if you're okay with -- you know, if it needs a little extra time, is Friday okay, then, if I can't do Thursday?
MR. HART: Yep.
THE REPORTER: Okay.
MR. HART: Yep. That's perfect.
THE REPORTER: Then we will plan on that.
And then the same thing for you, Mr. Thomas?
MR. THOMAS: Yeah. Whenever it's ready. No preference for me.

THE REPORTER: Read and sign?

MR. THOMAS: We'll reserve, sure.

(Deposition concluded at 12:55 p.m.)

CERTIFICATE OF REPORTER

I, Lauren N. Lawrence, Registered Professional Reporter, Missouri Certified Court Reporter #1368, Kansas Certified Court Reporter #1690, do hereby certify that the witness whose testimony appears in the foregoing proceedings was duly sworn by me; that the testimony of said witness was taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this proceeding was taken, and further, that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.



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August 29, 2024

Mr. Henry Thomas
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300 North LaSalle Drive, 50th Floor
Chicago, Illinois 60654

In Re: PROVISUR TECHNOLOGIES, INC. vs. WEBER FOOD TECHNOLOGY GMBH

Dear Mr. Thomas:

Please find enclosed your copy of the deposition of MICHAEL JOBIN taken on August 27, 2024, in the above-referenced case. Also enclosed is the original signature page and errata sheet.

Please have the witness read your copy of the transcript, indicate any changes and/or corrections desired on the errata sheet, and sign the signature page before a notary public.

Please return the errata sheet and notarized signature page to the Production Department at Alaris Litigation Services, 1608 Locust Street, Kansas City, Missouri 64108 for filing prior to trial date.

Thank you for your attention to this matter.

Sincerely,

Lauren N. Lawrence, RPR, MO CCR, KS CCR
Missouri Notary Public
Enclosures
cc: Ms. Canino

STATE OF)
)
COUNTY OF)

I, MICHAEL JOBIN, do hereby certify:
That I have read the foregoing deposition;
That I have made such changes in form and/or substance to the within deposition as might be necessary to render the same true and correct;
That having made such changes thereon, I hereby subscribe my name to the deposition.
I declare under penalty of perjury that the foregoing is true and correct.

MICHAEL JOBIN

Executed this day of , 2024, at .

Notary Public:

My Commission Expires:

WITNESS ERRATA SHEET

Witness Name: MICHAEL JOBIN

Case Name: PROVISUR TECHNOLOGIES, INC. vs. WEBER FOOD TECHNOLOGY GMBH

Date Taken: AUGUST 27, 2024

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