

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARROWS UP, LLC,
Petitioner,

v.

OREN TECHNOLOGIES, LLC,
Patent Owner.

Case IPR2018-01230 (Patent 9,248,772 B2)
Case IPR2018-01231 (Patent 9,617,066 B2)¹

Record of Oral Hearing
Held: October 17, 2019

Before KEVIN W. CHERRY, MICHAEL L. WOODS, and
PAUL J. KORNICZKY, *Administrative Patent Judges*.

¹ We enter the same transcript in each proceeding. The parties are not authorized to use this style heading.

Case IPR2018-01230 (Patent 9,248,772 B2)

Case IPR2018-01231 (Patent 9,617,066 B2)

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The above-entitled matter came on for hearing on October 17, 2019, commencing at 12:58 p.m., at the U.S. Patent and Trademark Office, Madison Building, 600 Dulany Street, Alexandria, Virginia, 22314.

Case IPR2018-01230 (Patent 9,248,772 B2)

Case IPR2018-01231 (Patent 9,617,066 B2)

(Proceedings begin at 12:58 p.m.)

JUDGE CHERRY: Good afternoon, everyone. This is the hearing in IPRs 2018-1230 and -1231, I believe. Arrows Up v. Oren Technologies.

Will the parties please make their appearances.

MR. JEDLINSKI: Steve Jedlinski of Holland & Knight. With me today is Allison Lucier, also of Holland & Knight.

MR. MERKIN: Joel Merkin of Kirkland & Ellis on behalf of patent owner. And with me today is Kyle Kantarek, also of Kirkland & Ellis on behalf of patent owner.

JUDGE CHERRY: Great. Welcome to you both. Welcome to everybody.

This -- petitioner has the burden of proof. You'll have 45 minutes.

How much time do you want to reserve for rebuttal time?

MR. JEDLINSKI: I'd like to reserve 10 minutes.

JUDGE CHERRY: Sure. You go first.

I don't think there are any motions in this case.

And then patent owner will have an opportunity to respond, petitioner will get its rebuttal time, and then patent owner also has an opportunity to reserve surrebuttal time.

Whenever you're ready.

MR. JEDLINSKI: I have -- I have physical slides as well, if --

JUDGE CHERRY: Great. I'm the only one here, so -- but I'll take them. Thank you very much.

MR. JEDLINSKI: Good afternoon.

Today we're dealing with two patents; the U.S. Patent No. 9,248,772 and U.S. Patent No. 9,617,066, but referred to as the '772 or '066 patents.

The two patents are related to one another, as shown on Slide 2. The '066 patent is a continuation of the '772 patent. Each is entitled "Method of Delivering, Transporting and Storing Proppant for Delivery and Use at a Well Site".

As I'm sure as you're aware by now -- sorry about that -- as I'm sure you're aware by now, these patents deal with proppant, which is essentially sand, ceramic, or other particulates that are used in connection with fracking operations.

The patents each have the same three figures. Figures 1 and 2 illustrate an embodiment of the container, which are relevant to the claim construction argument today.

As noted -- as noted on Slide 3, the container of the Figure 1 has an end wall 22, which is recessed inwardly and has a generally convex shape. In addition, there is a vent, an inlet, and -- and some other elements shown in Figure 1.

Turning to Slide 4. Figure 3 is shown on this slide. This is -- illustrates a system of the "present invention of the patents". And as you can see, the system generally involves containers, trains, trucks, and loaders and unloaders.

Slide 5 is just a background about the -- the claims in the prior art and the different grounds that are at issue in these petitions.

The validity of the claims in the '772 and '066 patents have been challenged using four prior art references; Sheesley, Mintz, Uhryn, and

Hedrick. Our discussion today will be primarily focused on Sheesley and its teachings to a person of ordinary skill in the art.

I preface this now, but the crux of this dispute really revolves around whether one is limited to look at essentially the -- the figures of a patent in isolation or whether -- or whether or not the -- the reference must be viewed in its entirety from the viewpoint of a person of ordinary skill in the art, as petitioner asserts.

Not surprisingly, it's petitioner's belief that the reference should be considered together with the knowledge of a person of ordinary skill in the art, and we do so, in part, citing the Board's decision in the *Cisco v. Focal IP* case.

In the respective Institution decisions, the Board instituted trials on the grounds set forth on Slide 5.

Turning to Slide 6. Slide 6 is about -- includes a figure from U.S. Publication No. 2013-0206415 to Sheesley.

Sheesley is focused on a modification of a standard cargo container in order to carry fracking sand, and Figure 2 on Slide 6 illustrates some of the variety of applications that container can be used in to deliver proppant from a quarry or, importantly, a source (inaudible).

Sheesley illustrates how the container can generally be moved via a variety of transportation methods, including ship, barge, rail, truck, and in and out of storage.

Turning to Slide 7, we've included two figures of the container disclosed in Sheesley.

Figure 14 is an end view of the container showing the doors and a control panel, which are at issue today.

And then Figure 15 shows a partial sectional view of the container illustrating doors on the one end and then -- and then a back wall on the other end of the container.

Slides 8, 9, and 10. We've had background about the other prior art references. I think we're going to skip over those for now. I don't think those are really at issue, but I have them in there for background in case they were necessary.

So now, turning to Slide 11, this includes kind of a summary of the claim limitations that are at issue today.

In view of the similarity of the terms and the relatedness of the patents, some of these arguments cross between the patents and will be addressed accordingly.

Outside of these limitations, patent owner does not dispute that the prior art combinations meet or disclose the remaining limitations. We have laid out in our petitions how the prior art meets all of those remaining elements of the claims.

Additionally, patent owner has not disputed any of the motions or rationale to combine any of the references for those remaining limitations.

Now that the briefing is done and the evidence is in, and the patent owner has failed to call into question those findings of the Board included in its Institution decision, instead, the patent owner has focused solely its arguments on the purported shortcomings of Sheesley's disclosure of these limitations. As a result, my plan for the remaining 20 minutes or so is to focus on these five limitations.

On Slide 12, we simply included a full depiction of the content of Claim 1 of the '772 patent calling out a couple of the limitations that we'll be dealing with today; the vertically stacking and second different end surface.

The claims of the '772 patent are directed to a method generally for transporting proppant comprising of these steps; vertically stacking the containers in close proximity to a rail line, filling those containers, and then transferring those containers.

We do kind of a big overview as well on Slide 13 with respect to Claim 1 of the '066 patent. Again, we've highlighted a couple of the limitations that are at issue; the positioning limitation and then the second different end surface.

Claim 1 of the '066 patent, again, similarly is directed to a method of loading and transporting proppant, but it has steps of positioning empty containers on a road vehicle, filling those containers, and then transferring those containers to a rail site using a roll vehicle and unloader.

Turning to the first limitation that is at issue in these proceedings is second different end surface.

Claim 1 of the '066 and the '772 patent each include a limitation directed to a second different end surface.

In its preliminary responses, as shown on Slide 15, patent owner argued for a claim construction of this limitation, and the Board in its Institution decision agreed and set forth a definition of, "Two end surfaces that are structurally different, not mere duplication."

In doing so, the Board cited to the specifications of the '772 and '066 patents, in part, discussing the convex shape of the one end wall referenced in the wall 22 shown on Figure 1 on Slide 15.

In addition, the patent owner, in its responses, noted that the presence of a flow gate 28 and inlet 32 and vent 34, all also shown in Figure 1, supported their construction of a second different end wall in connection with this structurally different claim construction. This certainly is instructive to the disclosures in the prior art, and in particular, in Sheesley.

Petitioners advance, and the Board in its Institution decisions found, that there was a reasonable likelihood that Sheesley disclosed doors on one end of its modified container. This is clearly shown in the figures.

However, patent owner has doubled down on its initial failed arguments that Sheesley is entirely silent as to whether or not the doors are on the other end of the container.

First, as shown on Slide 16, Sheesley's disclosure tells a person of ordinary skill in the art that the doors are only on "one end thereof".

The specification states as much. In paragraph 6, when introducing the general purpose cargo container, it states, "Doors are fitted at one end."

Then in paragraph 50, when referring to Figure 9, the doors are noted, "On the one end thereof."

This is also supported by the figures. See, for example, 15 which is on Slide 17. Figure 15 is a partial sectional view of the container, and there is no indication that that back wall can move like a door. Instead, the back wall is shown as a solid wall.

Patent owner, in its papers and on its demonstrative Slide 23, argues that the portrayal of the doors in every figure of Sheesley somehow supports their argument; however, this is simply misdirection as these figures all show the exact same end of the container, the end with the doors.

How do we know that? Because it is undisputed that the control panels are positioned only in one end wall. You can see this on Slide -- or in Figure 15 on Slide 17 where the control panel, I believe, 200 is only shown on the one end wall.

And each of these doors in the figures show the control panel; therefore, the figures are all depicting the same end wall, the end wall with the doors.

Patent owner's argument that there is some ambiguity or vagueness that prohibits an obviousness finding is unsupported. This is not a scenario like *In re Hughes* or *In re Turlay* where the reference is vague.

For example, the *In re Turlay* language at issue was, "A pair of exhaust valves are shown at 30 and 31." This phrasing was subject to two different interpretations; either there was a pair of valves at each of 30 and 31, or there was only one valve at 30 and 31. The language here is clear, "Doors are only on one end thereof."

Furthermore, even assuming patent owner's manufactured ambiguity arguments are true, the presence of the control panel on the one end confirms that the end walls are structurally different, this is premised on patent owner's own claim construction arguments that the flow gate, inlet, and vent in only one end wall of the '772 or '066 patent container supported its construction of a second different end surface. A vent, for example, is no different structurally than a control panel.

Finally, turning to Slide 18, patent owner's own expert confirmed that the control panels and doors were only described in Sheesley on a single end.

JUDGE CHERRY: Was that -- the different end surface, was that added during the prosecution or -- or does the patent owner attribute any patentable significance to it?

MR. JEDLINSKI: So we'd have to check with respect to the prosecution history. I don't recall there being additional -- of the second different end surface.

But with respect to a discussion about the uniqueness of that second different end surface, outside of their -- the discussion of the wall being generally convex, I'm unaware of any statement in the specification that differentiates why that second different end wall is something special.

JUDGE CHERRY: Okay. I'm aware that the patent owner put in evidence of -- that there are some cargo containers that have two sets of doors. Is there -- is there any evidence that indicates that that's all -- all ISO cargo containers have two doors, or does the evidence suggest that there can be different kinds?

MR. JEDLINSKI: Yeah. So the evidence in record, and I believe I can get the exhibit number, I believe supported -- there are some additional ISO containers that show that there's only a single door on one end. And, in fact, the exhibits that patent owner have supplied that suggests there are a container with doors on both ends, it actually says it's an alternative, and when you look at what that alternative is provided by that manufacturer, it's a container with only doors on one end.

So it is consistent with the availability -- having doors on only one end is consistent with the availability of ISO containers, which Sheesley is a modification of in the marketplace.

Turning to Slide 20. We're going to move on to the next limitation, which is the positioning limitation of Claim 1 of the '066 patent.

And this element basically requires two things; positioning of plurality of empty containers on a trailer of a road vehicle.

Turning to Slide 22. Sheesley teaches that its containers can be stacked on mode of transportation. This is clearly shown in Figure 5 of a railcar. And it shows the railcar -- or it shows -- it also demonstrates that the containers, when they were stacked, were empty.

Sheesley further explains that its modified containers may be placed on alternative modes of transportation, not just the railcars shown in Figure 5. And one of those modes is importantly a truck, as you can see on Slide 20 -- on Slide 21.

On Slide 22, Sheesley also teaches how the containers can move through all these normal modes of transportation. For example, in Figure 2 demonstrates that the source, or quarry 30, can provide proppant to any of these different variety of methods of transportation, and this is an illustrate of some of the -- the method of getting the proppant to the well site.

So Sheesley further explains that modified containers cannot just be placed on, for example as shown in Figure 5, the -- the railcar, but can also be moved in these other varieties of methods of transportation.

As an initial matter, patent owner -- owner incorrectly states in its sur-reply that, "Petitioner admits that Sheesley does not actually disclose this limitation," and you can find that on the Demonstrative Slide 51.

And they do so by citing petitioner's use of the word "could", and in fact the POSITA reading Sheesley would understand that the containers could be filled with sand when positioned on the flatbed trailer.

While there's nothing necessarily wrong with the inclusion of "could" being one of the embodiments that is disclosed in Sheesley, but furthermore, how Mr. Schaaf's declaration actually states that a POSITA would understand that Sheesley discloses, "Positioning empty container on a truck to be filled and transported," without that "could" language to alleviate any concerns that patent owner might have.

Here, Mr. Schaaf, an undisputed person of ordinary skill in the art, does exactly that.

Patent owner seems to imply that Sheesley teaches a first phase wherein the containers are filled with proppant, and then a discrete second phase wherein the containers are placed on vehicles for transport. This is plainly incorrect, and Figure 5 of Sheesley, for example, shows the empty containers being filled with proppant after being placed on a mode of transportation.

Moreover, Sheesley makes it clear that these containers may be filled at any point in the supply chain, which includes the rail site.

JUDGE CHERRY: So with respect to the "could", you're not saying that someone could modify Sheesley, you're saying that this is one of the embodiments that Sheesley discloses a person of ordinary skill could use, right?

MR. JEDLINSKI: Correct. It's not necessarily saying you could take the teaching of Sheesley and then do something else to it. It's one of the teachings within Sheesley, so it's one of the options it has. So he could, as a person of ordinary skill in the art when reading Sheesley would understand that.

Moving to Slide 24, we're going to move to the next couple limitations, which we refer as to the vertically stacking limitations.

The first is found in Claim 1 of the '772 patent and requires vertically stacking a plurality of empty proppant containers in close proximity to a rail spur, and the second is found in a dependent claim which requires vertically stacking the second plurality of proppant-filled containers in close proximity to the rail spur.

Both of these limitations require stacking containers in close proximity to a rail spur. In the first instance, the containers are empty and set to be filled by a source, which is a railcar, and in the second instance the containers have been filled by the source, the railcar, and then stacked. Sheesley discloses these limitations to a person of ordinary skill in the art.

Turning to Slide 25. Sheesley teaches that the modified containers may be stacked while empty or filled with sand. And in fact, we note that during prosecution of the '066 patent, the examiner found that Sheesley disclosed vertically stacking containers in place, and that's at Exhibit 1011 at page 33.

And specifically, Figure 3 of Sheesley offers a pictorial illustration of the stackability of modified cargo containers with or without sand therein. And then further goes on that the modified frack containers can be stacked whether in transit or at the frack site.

Sheesley also teaches that these empty containers may be filled with proppant in the stacked container. This is clearly shown in Figure 5.

And while Figure 5 specifically portrays these containers being filled on a railcar, Sheesley makes clear that the containers may be filled at any location in the supply chain, which includes at the rail site.

And as petitioner's experts opined, an auger could be used to provide proppant from the railcar, which is the source in this claim, into proppant containers which would necessarily be nearby or in proximity to that rail spur.

And that's at paragraphs --

JUDGE KORNICZKY: Counselor?

MR. JEDLINSKI: Yes.

JUDGE KORNICZKY: Counsel. So as I understand patent owner's position, I think they would agree that Figure 5 shows that the containers are on -- up on the rail spur, but they take the position that Sheesley does not show that the containers are in close proximities to the rail spur.

What's your response to that?

MR. JEDLINSKI: So the response is, is that there's a teaching in Sheesley that the -- that the source could be a rail -- could be a railcar. So not containers with proppant on a railcar, but the source of proppant material could be a railcar, which would necessarily mean, when you need to load the empty containers, those containers need to be nearby the railcar. And you would use the teachings of Sheesley, which shows using that auger to deliver proppant material from a source into an empty proppant container nearby.

JUDGE KORNICZKY: So is your position then that Figure 5 does not show vertically stacked containers in close proximity to a rail spur?

MR. JEDLINSKI: Correct. That is not necessary -- our position is not that the containers on the mode of transportation is necessarily in close proximity to a rail spur.

JUDGE KORNICZKY: Why is that?

MR. JEDLINSKI: Well, Your Honor, I think --

JUDGE KORNICZKY: I mean, if you're on top of the rail spur, aren't you as near to the rail spur as you possibly can get?

MR. JEDLINSKI: So Your Honor --

JUDGE KORNICZKY: Isn't that in close proximity?

MR. JEDLINSKI: Yeah. So, I mean -- so our -- I guess, so our initial position in our petition was that not -- that was not necessarily the case.

When patent owner made that challenge in its response of trying to differentiate between the "on" and "in close proximity to", we actually adopted that and said, yes, you know, that is now a claim construction argument, and furthermore, Figure 5 would show when -- when the railcar is on the rail -- rail spur, it is in -- necessarily in close proximity to.

JUDGE KORNICZKY: I didn't catch that.

If the containers are on the rail spur, as shown in Figure 5, are they in close proximity to the rail spur or are they not?

MR. JEDLINSKI: So we think that distinguishment is -- is improper because that's a claim construction argument that wasn't -- and necessarily "in close proximity" would include "in".

My point was that in our initial petition, we weren't necessarily saying that. You know. What our expert was saying was that the auger would provide proppant from that railcar source --

JUDGE KORNICZKY: So -- so let's back up. What is your position? Is a vertically stacked container on a rail spur, as shown in Figure 5, is that in close proximity to the rail spur or is it not?

MR. JEDLINSKI: So petitioners -- that is in close proximity to a rail spur. But also --

JUDGE WOODS: You altered it.

MR. JEDLINSKI: -- but also --

JUDGE KORNICZKY: What's your support for that?

MR. JEDLINSKI: So our support for that -- like I said, so in our initial petition, that was not the approach.

When -- when the patent owner attempted to argue and differentiate and take our understanding that we are trying to say Figure 5 was on the rail spur, we actually said, you're right. Figure 5 is shown on a rail spur, and there is no difference, or in close proximity necessarily encompasses on a rail spur, and so that, too, as we set forth in our -- in our reply, would necessarily demonstrate it.

But in our initial petition, we were relying upon the expert of saying containers would be stacked in proximity to the -- to a railcar, which would be delivering that proppant to it using an auger.

JUDGE KORNICZKY: So just so that I'm clear, petitioner's position is that the -- the term "in close proximity to a rail spur" also covers containers that are on the rail spur.

MR. JEDLINSKI: Correct.

There are -- there are two teachings of -- of Sheesley; the one embodiment which has it on the rail spur being filled, and then furthermore, as petitioner's expert, Mr. Schaaf, has said, that it would also teach him that these containers could be -- could be stacked near that rail spur because that rail spur would necessarily be that source of proppant that would be filling that container, as well.

JUDGE KORNICZKY: And -- and where is that in Mr. Schaaf's declaration --

MR. JEDLINSKI: It's --

JUDGE KORNICZKY: -- or deposition testimony?

MR. JEDLINSKI: So that's in his declaration, Exhibit 1002, at paragraph 68. And that's in Exhibit 1002 of the '772 patent proceedings, to be clear.

So moving on. Patent owner attacks these disclosures by trying to look at what they teach in isolation rather than the holistic approach, let alone from the viewpoint of a person of ordinary skill.

For example, patent owner improperly isolates Figure 3's teaching of stacking containers to well sites because paragraph 83 reads, "At the well site to be fracked, modified containers can be stacked as shown in Figure 3."

But this statement simply emphasizes that the stackability portrayed in Figure 3 may be implemented at the well site, as well.

And Sheesley's primary characterization of Figure 3, "a pictorial illustration of the stackability of modified cargo containers with or without sand therein," contains no such spacial limitation.

Sheesley goes on to explain that, "The modified frack containers may be stacked in any conventional means, either while in transit or at the frack site."

By focusing myopically on the particular figures and a statement in isolation, patent owner misses the larger teachings of Sheesley to a person of ordinary skill in the art that because Sheesley's containers may be stacked while empty and may be stacked while at any point in the supply chain, including at the rail site, they may be stacked while empty in close proximity to that rail site, as well.

So taken together, these disclosures teach that Sheesley's containers may be stacked empty or filled at any point in the supply chain, including at the rail line. And indeed, to fill containers at a rail line, empty containers must be present, in close proximity thereto.

Turning to Slide 27. This depicts Claim 4 of the '772 patent and the conveying proppant to a road vehicle limitation.

This claim depends on Claim 1 and requires, in part, "Conveying the proppant from one or more of the plurality of proppant-filled containers to one or more proppant-transporting road vehicles on a second conveyor."

Turning to Slide 28. Sheesley renders this limitation obvious. Sheesley teaches that the proppant could be unloaded from the filled containers by opening the lower hatch, unloading the proppant onto a conveyor, and which then directs that proppant to a blender.

Sheesley also teaches unloading proppant from the modified container to a bulk sand container at the frack site.

In light of these disclosures, petitioner's expert, Mr. Schaaf, understood -- and so this is an obviousness argument -- that proppant could just be -- as easily be unloaded from the filled containers by opening that lower hatch, unloading proppant onto a conveyor, and conveying that proppant to a road vehicle.

This is particularly true when Sheesley discloses use of a conveyor to unload containers, and that those containers may be emptied into a bulk proppant container such as a SandKing.

JUDGE KORNICZKY: What's the basis for Mr. Schaaf's testimony?

MR. JEDLINSKI: So he is looking at -- he's combining, saying look, Sheesley teaches me that I can unload this container onto a conveyor and

direct that proppant to a frack -- to a frack container, like the SandKing.

Therefore, I could also -- it would teach him that he could also unload it to a rail vehicle, as well, to another mode of transportation.

And so the general teaching of being able to put it to a vehicle, such as a Frack King -- or a SandKing would also teach him the same.

JUDGE KORNICZKY: Are you saying that the SandKing is a road vehicle?

MR. JEDLINSKI: No. So -- not necessarily. So we're saying the SandKing teaches him -- being able to deliver proppant or unload proppant on a conveyor and deliver it to a SandKing teaches him that he could do the same thing necessarily with a road vehicle.

JUDGE KORNICZKY: Are you relying on anything else in Sheesley for that?

MR. JEDLINSKI: No. Outside of the disclosures that we reference in Mr. Schaaf's declaration, that -- that is what we're relying upon in support of that. In connection with the teachings of a person of ordinary --

JUDGE KORNICZKY: What -- what paragraph --

MR. JEDLINSKI: Sorry about that.

JUDGE KORNICZKY: -- what paragraph are you -- in his declaration are you referring me to?

MR. JEDLINSKI: I can get you that -- that quote on rebuttal. I don't have it here.

Actually, I think it's -- going back, it's Exhibit 1002, paragraph 121, and it's at the end on Slide 28. I believe he goes on to say that.

JUDGE KORNICZKY: Are you relying on anything in Figure 1 -- in discussion of Figure 1 in Sheesley?

MR. JEDLINSKI: I have to -- I can double check, but I don't -- I don't believe Mr. Sheesley, in his express discussion of this, is pointing to Figure 1 in the prior art methods of transporting material in connection with this limitation.

So alternatively, if Sheesley alone doesn't necessarily teach a person of ordinary skill in the art this conveying limitation, this limitation is rendered obvious by Sheesley in view of Uhryn.

Uhryn teaches unloading proppant from container 30 into a proppant transfer device, and that proppant transfer device may comprise of one or more of a hopper and a conveyor.

You can see that hopper on 60 leading to -- to the conveyor on 58 on Slide 29 of -- of the demonstrative exhibits.

Uhryn teaches -- further, Uhryn explains that the conveyor 62 may be moved -- could move proppant into a mountain mover 64, which is also shown in Figure 3 reproduced on Slide 29, and which that -- that mountain mover 64 notably has -- has wheels on it.

As such, patent owner's assertion that Frac Sander cannot transport vehicles over a road is inaccurate. In light of these disclosures, petitioner's expert, Mr. Schaaf, explained that a person of ordinary skill in the art would understand that the Mountain Mover referenced in Uhryn is a road vehicle capable of transporting proppant, and that Uhryn teaches conveying proppant from containers to road vehicles.

Petitioner's expert also opined from paragraphs as to why a person of ordinary skill in the art would have been motivated to combine the teachings and disclosures of Sheesley and Uhryn.

In particular, Uhryn's tilting table system, which includes the -- the -- the proppant conveyor, allowed for quicker transfer and less hazardous transfer, and also allowed for all the proppant to be unloaded out of the container.

And turning to Slide 30. Patent owner argues that neither Sheesley's bulk sand container or Uhryn's mountain mover 64 are the claimed proppant road vehicle.

However, patent owner's expert, Mr. Smith, confirmed at his deposition that the over-the-road Frac-Sanders are in the same category as the King -- as the SandKings and mountain movers and Frac-Sanders. They are essentially the same type of unit, and they -- "They do go over the road."

More importantly, again, Figure 3 of Uhryn shows wheels on that mountain mover, and as such, patent owner's assertion that these Frac-Sanders cannot transfer proppant over a road is inaccurate.

And finally, to the last limitation --

JUDGE KORNICZKY: Counsel. I'm sorry. I thought you earlier said that you're not saying that this is a road vehicle.

MR. JEDLINSKI: So --

JUDGE KORNICZKY: Or did I misunderstand what you said earlier?

MR. JEDLINSKI: So what I'm saying, in Uhryn, Figure 3 -- on Figure 3, on Slide 29, this item 64 is a road vehicle, and it's called out by Mr. Schaaf in his declaration.

So here we're saying --

JUDGE KORNICZKY: I believe we were talking Sheesley before.

MR. JEDLINSKI: Yes. Yeah.

JUDGE KORNICZKY: Okay. Thank you.

MR. JEDLINSKI: My apologies.

JUDGE CHERRY: Because Sheesley teaches using SandKings and Uhryn teaches using these related vehicles.

MR. JEDLINSKI: Correct. And they both use a conveyor to load those containers with proppant.

And finally, the last limitation, looking at Claim 3 of the '066 patent on claim -- on Slide 23 -- excuse me -- on Slide 32.

Claim 4 -- or Claim 3 of the -- of the '066 patent depends from Claim 1, and further requires, in part, "Conveying on a conveyor the proppant from one or more proppant-transporting road vehicles to a source from which to fill the plurality of empty proppant containers."

Patent owner appears to interpret this limitation as requiring the claim source be an intermediate source separate from the conveyor and the empty containers.

However --

JUDGE WOODS: Mr. Jedlinski.

MR. JEDLINSKI: Yes.

JUDGE WOODS: If I could interrupt to ask a question, I would appreciate that.

MR. JEDLINSKI: Absolutely.

JUDGE WOODS: Is there anything in the '066 or the '772 patent specification that describes what a source might be, or does the patent owner offer anything into evidence that defines or explains what a source is?

MR. JEDLINSKI: So, like I said, I think the only discussion -- or like I was going to get to -- the only discussion about something that might relate to this particular claim limitation is actually found in the paragraph

reproduced on Slide 33, that -- that has the bulk material being trained -- is open adjacent to the conveyor, the conveyor extends between the gate of the vessel and the hatch at the top wall of the container, and once the hopper of the bulk material train is unloaded into the vessel, the conveyor can be moved forward along the bulk material trains.

So there is no kind of discussion as to what this source might be in the spec of the '066 patent in particular related to this claim.

JUDGE CHERRY: So -- so you think that we should just construe "source" as its plain and ordinary meaning?

MR. JEDLINSKI: Yeah. And patent owner hasn't actually put forth another definition that it believes. So I think the broadest reasonable interpretation would be the broadest reasonable interpretation of "source".

JUDGE WOODS: Thank you.

MR. JEDLINSKI: So turning to Slide 34. Sheesley's disclosure of this limitation. And petitioner's expert, Mr. Schaaf, has focused on the features of the auger that satisfy the source of the conveyor limitation. Patent owner improperly argues that there's something wrong with this approach. But a multicomponent device can set aside more than one limitation. For example, one can point to the car for the disclosure of an engine and wheels, and here, Mr. Schaaf is pointing to the auger to satisfy the source and the conveyor limitation. This is akin to the Uhryn proppant transfer device, which included a hopper and a conveyor.

And then finally, turning to Slide 35. Sheesley itself explains that a conveying proppant to an intermediate source, and then from -- and then loading from that location to something that's well-known in the art.

So with that, I reserve the remainder of my time.

JUDGE CHERRY: Okay. Thank you.

Mr. Merkin, how much time do you want to reserve for rebuttal?

MR. MERKIN: Your Honor, I'd like to reserve five minutes for sur-rebuttal.

If I may approach to hand out copies of the slides?

JUDGE CHERRY: Sure.

MR. MERKIN: Thank you very much.

Good afternoon. May it please the Board. I'm Joel Merkin on behalf of patent owner.

I'm going to jump right into the issues. I'm going to start on Slide 16 of patent owner's slide deck.

The first issue I want to address relates to both the '772 and the '066 patent, and that issue is that Sheesley does not close containers with a second different end surface.

This was the first issue that petitioner spoke about today. In patent owner's briefing, it's the second issue they briefed in each case, both the '772 and the '066, under the subheading B, and this issue relates to all challenged claims, both of the '772 and the '066 patents.

Turning to Slide 17. It shows the relevant claim language in Claim 1 of the '772 patent highlighted.

Claim 1 requires that the containers include at least a first end surface and at least a second different end surface.

Petitioner does not dispute that it asserts that Sheesley discloses this limitation. This is not a case where petitioner is asserting the obviousness or asserting any sort of modification.

Turning to Slide 18. Before we get to petitioner's mapping of this limitation, there was a claim construction issue with this limitation.

In the Institution decision, the Board agreed with patent owner's claim construction arguments. This is shown at the top of Slide 18, citing to Paper 7 at 10.

JUDGE WOODS: Mr. Merkin?

MR. MERKIN: Yes.

JUDGE WOODS: If I could interrupt to ask a question, and just as you have done, I'll cut straight to it.

Would you agree that if Sheesley discloses doors on only one end of its container, then it would satisfy that limitation where you have a second different end surface?

MR. MERKIN: It may. And just to be very clear, it's our firm position that Sheesley does not disclose doors on only one end. But the keyword there is "only", and that is simply not disclosed in Sheesley.

I think that if there was any disclosure in Sheesley about what the -- what I'll call the far end surface, that's something that an expert would certainly opine on. That didn't happen in this case because there's simply no disclosure.

JUDGE WOODS: Well, if I could also follow up my question. Referring to paragraph 50 of Sheesley, and I -- to me, it appears that Sheesley does, in fact, disclose doors only on one end. It says, "Doors 132 and 134 on the one end thereof."

So can you explain how that language, the "one end thereof", is not a disclosure of doors on only one end?

MR. MERKIN: Well, sure, Your Honor.

The word "only" is what's missing from that disclosure then. It certainly discloses doors on one end. The parties don't dispute that. That's described. That's shown in the figures.

But what is absolutely silent where there's no disclosure about whether that's only on one end and whether there are doors also disclosed on the other end, to which there's nothing disclosed.

JUDGE WOODS: Well, it says "the one end", it doesn't say "either end" or "on both ends".

MR. MERKIN: Your Honor, it doesn't say either way. It just says "on the one end", it doesn't say -- that certainly doesn't imply there's not doors on another end, it's just absolutely silent.

It's an affirmative statement that there are doors on the one end. Now, that can't -- that shouldn't be interpreted -- and one of ordinary skill in the art would not interpret that -- to have any meaning about what is going on in the other doors, and that's certainly not an issue --

JUDGE CHERRY: But what -- but if you have -- if you say --

JUDGE WOODS: Well, how many contain -- how many ends are there?

MR. MERKIN: There -- two ends. Two on a container.

JUDGE WOODS: So wouldn't it say -- assuming your interpretation is right, wouldn't it say "on the two ends thereof"?

MR. MERKIN: There's just no discussion whatsoever about what is going on on the other end. And that's the issue with Sheesley. It doesn't care. It doesn't include that information.

The second end of Sheesley does not even include --

JUDGE KORNICZKY: Excuse me. Counsel?

MR. MERKIN: Yes.

JUDGE KORNICZKY: Counsel? But if you look at paragraph 6 of the Sheesley application, it says, "A general purpose cargo container has doors fitted at one end." And if you look at Figure 15, which is, I guess, a sectional view, it only shows doors at one end, and the second end is just a wall.

MR. MERKIN: So --

JUDGE KORNICZKY: So, I guess, can you address those two disclosures under Sheesley?

MR. MERKIN: Absolutely. I'll start with Figure 15.

And I would disagree with the premise that Figure 15 shows anything about the second end. This is -- there's not a label, there's no discussion, there's zero disclosed about what I'll call the far end wall.

The only thing that is shown here is that closer end wall with the doors, and so there's -- there's just nothing on that second door. There's nothing depicted.

JUDGE KORNICZKY: But the left end wall in Figure 15 is just a blank wall. It's -- it doesn't show a door.

MR. MERKIN: And that's showing it from the inside that's -- it's not showing anything. There's not a single line, there's nothing relating to that end door -- excuse me -- that what I'll call the far end door. It's not discussed in the reference, it's not discussed in the -- in the figures. There's just no discussion. There's no numeral attached to it, and so there's --

JUDGE WOODS: But we were -- I think I understand your position, but could we now refer to Figure 16 of Sheesley?

MR. MERKIN: Absolutely.

JUDGE WOODS: So to me, it appears that if we're referring to lines -- I believe you mentioned the absence of lines in Figure 16 -- well -- or in Figure 15, my apologies -- if I look at Figure 16, I actually see the presence of another line on the right side of the container which doesn't exist on the left side of the container, which appears to me to be part of the door shown in Figure 15.

MR. MERKIN: Are you referring, Your Honor, to the control panel that's on the right side?

JUDGE WOODS: I'm not referring to the control panel, I'm referring to underneath 154, there are three lines that -- three vertical lines that connect the two corner brackets, whereas if you look at -- it doesn't appear that line also exists on the left side of the container.

MR. MERKIN: I guess, as I see it, there's also three lines on the left side. There's nothing -- in my view, there's three lines on both sides there. There -- this doesn't show doors at all the way that the Figure 16 is kind of a cross-sectional view.

We know from other figures, there's doors on what I'll call the -- I'll call it the first end, the closer end, and there's just nothing -- there's nothing in Figure 16 about doors at all (inaudible).

And, you know, the lines here -- it's -- what we're doing is just speculating as to what the draftsman may have meant by lines that are not --

JUDGE CHERRY: But we're not speculating. I mean, Sheesley said that there's doors on one end. I mean, how many times does he have to say that there's only doors on one end? If it's not relevant. If the other end's not relevant. He said "doors on one end". Why shouldn't we take him at his word?

MR. MERKIN: Well, let me, I guess, respond to that. Even when you describe that, I just want to be clear, it doesn't say "only on one end".

And then my second point to that is, you actually made exactly my point. It's not relevant to Sheesley what's on the opposite end. He doesn't describe it at all.

And if petitioner wanted to make an obviousness argument about why that -- the second different end surface is actually present in Sheesley, you know, maybe they can come up with an argument. They didn't do that.

And so what they've done is just argue that Sheesley expressly discloses this, and it doesn't.

We haven't had an opportunity to respond to an obviousness argument about whether it would be obvious to have a second different end surface in Sheesley. That's not at issue.

JUDGE CHERRY: But I don't think that's what -- I don't think anybody's arguing that it's an obviousness argument. So I think it's -- it is what Sheesley discloses, and what it suggests, a person of ordinary skill in the art, so I don't think we need to worry about that. We're not going to bring up new arguments at the hearing.

MR. MERKIN: I'm going to skip ahead. Give me a moment.

JUDGE WOODS: Could -- could we also address petitioner's alternative position, which is the presence of a control panel on one end thereof?

If I refer again to Figure 16 of Sheesley, it appears to me that that control panel only sits on one end of the container, so why doesn't that structure also meet that limitation?

MR. MERKIN: Sure. The control panel suffers from the same issue that -- the control panel itself is not part of that end wall, the control panel sits within the container.

Now, what the end wall has on one end, at least one end, is the cutout for the control panel. And it is certainly possible, if not likely, that that same cutout would exist on the opposite end.

There's no disclosure in Sheesley. And certainly one can envision that the control panel could be on one -- could be fitted within the container on one end when a container is in one configuration and could be moved to the opposite end in another configuration.

So it gets into the exact same issue where there's no discussion on what I call the far end surface about whether there is even a control panel cutout, which is what we're looking for in part of -- to see if there's any sort of structural difference in the end wall.

And then, in addition to that, even if there was a -- not a cutout in the far end wall for the control panel, there is un rebutted expert testimony that that isn't really a structural difference, that doesn't impact the structure of the container at all. And that came up in Mr. Smith's deposition.

Point you to --

JUDGE WOODS: I apologize. But I'm looking at Figure 16, and so it -- it seems to me that, indeed, there are differences between the first two -- the first and the second end walls.

I think the control panel 200 only sits on one end, and so Figure 16 isn't silent about the other end. Indeed, it shows an absence of a control panel on that first end.

And -- and to your point about structural difference. You know, I understand that we adopted your proposed claim construction in our decision to institute, but I also don't understand how that difference shown in Figure 16 of Sheesley wouldn't also meet that limitation.

MR. MERKIN: Sure. So I want to address Figure 16, and I'm looking for a slide that shows that figure.

Because, you know, what -- I think we're slightly talking past each other. I disagree that 16 shows at all any structural difference between that end -- we'll call it the one end wall and the other end wall.

Even if it were to show a control panel on one side or the other, that control panel is not part of that wall.

At best, what the control panel is going to lead to is there to be a cutout in that end wall, and that cutout certainly could exist, and in fact may exist, on the other end surface.

And so it's not an issue of is there a control panel on one side or another, because the control panel isn't part of the wall, it's -- I don't even -- to my understanding, petitioner hadn't argued that, either. It's the cutout that relates to the control panel, I'll call it the --

JUDGE WOODS: Well, I'm sorry. So what is the reference numeral for the control panel?

MR. MERKIN: Your Honor, it's 200 in Figure 16.

JUDGE WOODS: Exactly. And referring to Figure 15, you show control panel 200 on the end wall. And it's not presented in phantom lines, so it's part of the end wall.

MR. MERKIN: And I guess what is actually part of the end -- you can see in Figure 16 that control panel might be adjacent to that end wall. That's not at least what they've pointed to as the end wall. They've -- what Petitioner has pointed to is an arrow that points to just that end wall.

Now you're, you know, providing petitioner an argument that they haven't made that something inside the container would also be part of that end wall.

I do agree on Figure 15 where 200 is shown, there's a cutout there that would be where the control panel is placed, applied in that end wall, and that certainly may exist on the other end wall, too. That's where it's the same issue that what I'll call the far end wall, it's completely silent about whether there's the cutout for a control panel.

JUDGE WOODS: And I guess what I struggle, again, is you review Figures 15 and 16 together, and I see there's no control panel 200 on the left wall.

MR. MERKIN: There's -- there's nothing on the left wall. There's nothing depicted. There's nothing described. There's no numerals. It is silent. It's not that it depicts -- I mean, there's nothing there, so it's silent.

And, you know, you can look at all the figures and it only describes one end wall. And I think that's part of the issue, and that's part of the issue that our expert struggled with.

Even when they're describing the end wall in Sheesley, there -- it's unclear which end wall they're talking about, and so you have all these figures, and we kind of made a collage of figures in one of our slides, and it just --

Look. When you -- when you're looking at the end walls of Sheesley, it could be that it's pointing to the same end wall, and that was petitioner's argument today at the hearing, it's always showing the same end wall. It could equally be showing -- always showing a different end wall, and yet the structure in Sheesley for the wall is always the same.

And that's why we're -- we're at a loss. We are -- we are just speculating about what is going on with that end wall because it's not an issue in Sheesley. Sheesley doesn't care.

JUDGE WOODS: Okay. Thank you very much.

MR. MERKIN: I'm going to go to Slide 28. I just want to make one quick point related to this same limitation that we've been discussing.

JUDGE CHERRY: What does the specification say about that?

JUDGE KORNICZKY: Counsel, would you move on to the vertical stacking and the close proximity limitations, please?

MR. MERKIN: Sure.

JUDGE CHERRY: Yes. Go ahead. You're fine.

MR. MERKIN: So I'm going to jump back now to Slide 9.

And so Slide 9, this was kind of the first issue briefed by patent owner that Sheesley does not disclose stacking empty proppant containers in close proximity to a rail spur.

I'm on Slide 10. This shows the claim language discussed earlier. 1A is vertically stacking the plurality of empty proppant containers in close proximity to a rail spur. Again, we're in a situation where it's petitioner's assertion that this is expressly disclosed.

Turning to Slide 11.

JUDGE KORNICZKY: Counsel, do you agree -- I'm sorry, counsel. There is a little lag here.

Do you agree that Sheesley discloses vertically stacking a plurality of empty proppant containers?

MR. MERKIN: Yes. Not --

JUDGE KORNICZKY: And as I understand your argument, you don't believe that the -- the vertically stacked containers in Sheesley are in close proximity to the rail spur?

MR. MERKIN: That's correct. They're not disclosed as in close proximity to a rail spur at all. It's just not there.

JUDGE KORNICZKY: Okay. Would you --

MR. MERKIN: And that's --

JUDGE KORNICZKY: -- address that point, please?

MR. MERKIN: Sure. That's -- that's the gap in the disclosure, and that's why we -- we're making a point to say, look, it's petitioner's burden. Petitioner has asserted that this is expressly disclosed in Sheesley.

What you do have in Sheesley, they've pointed to Figure 3 and Figure 5. Neither of them meet the claim element.

In Figure 3, you've got stacked containers. That's at the well site. That's expressly at the well site.

I'm on Slide 11. This is with citation to Sheesley at paragraph 83. It expressly prefaces the paragraph at the well site to be fracked.

And so what's being described in Figure 3 cannot be considered in close proximity to the rail spur, that -- it just doesn't work.

Then when we get to Figure 5, it's again describing stacked containers being filled with proppant, and it's expressly described as being done in transit and shown it being done on the rail spur.

That's not in close proximity to a rail spur. There's that -- there's a cer -- go ahead.

JUDGE KORNICZKY: I guess that's like, what's the difference between being on a rail spur and being in close proximity to a rail spur?

MR. MERKIN: So it's a huge difference, and it's distinguished between in -- in Sheesley itself. It's distinguished between in the '772 patent where you've got one thing being described as "on" and one thing being "in close proximity".

And from -- patent owner completely disagrees that it's necessarily in close proximity to something that's on in this situation.

So I'm on Slide 12. This is important because there is a, you know, fundamental difference, particularly in the context of this invention, where you're talking about delivering proppant to a well site, if you're stacking containers to be filled on a rail site -- excuse me -- yeah -- on the rails versus in close proximity to. That's going to make a huge logistical difference, and that's what our expert, Mr. Smith, is describing in -- on Slide 12 here where he says, "Sheesley teaches against stacking hefty containers near the rail spur. It discloses transporting empty containers on a railcar to the rail spur to be filled, it's filled on the rail spur, and then taking the full containers off the railcar for delivery to the well site."

That's kind of the key thing of -- of Sheesley. Sheesley describes over and over again how it wants to limit the number of times you're loading, unloading proppant from the containers. And so --

JUDGE CHERRY: What does the spec say about this?

MR. MERKIN: The Sheesley spec?

JUDGE CHERRY: No, no. Your specification.

MR. MERKIN: Sure.

JUDGE KORNICZKY: Yes. But -- but we're addressing the language in the claim. And the claim says that you have to be in close proximity to a rail spur. I mean, how -- you can't get any closer if you're on the rail spur, can you? That's as near as you can get.

MR. MERKIN: No. It's actually so near that it's not in close proximity to the rail spur anymore. Being on is fundamentally different, and this is what one of ordinary skill in the art would understand.

JUDGE KORNICZKY: Why?

MR. MERKIN: Why? Because you're taking up the -- the rail line when you're on the rail spur. And that's a fundamental difference between stacking something and filling something on the rail spur, as Sheesley discloses, and intentionally not being on the rail spur but being in close proximity to the rail spur, which is what the '772 describes and claims.

JUDGE KORNICZKY: So is it your position then that if someone were to fill the containers while it's on the rail spur, it would not be covered by your claim?

MR. MERKIN: That's correct. If -- if the -- granted, there's much more to the -- to the claim, but this claim expressly requires that the stacked -- in this part of the claim -- the stacked empty containers be at close proximity to the rail spur, and it's our argument Sheesley does not disclose that. What Sheesley is disclosing is stacking containers on the rail spur, and that's different.

JUDGE KORNICZKY: Okay. The petitioner also makes the argument that, you know, a reading of Sheesley shows that these containers can be put anywhere from on the rail spur, as shown in Figure 5, and located anywhere up to the frack site.

What's your position about that?

MR. MERKIN: So that's just an overreach. It's just not disclosed by Sheesley.

Sheesley talks about the source, that there's the claim, I think it's Claim 21, talks about it can be filled at different points, but that doesn't actually describe a point being at -- excuse me -- in close proximity to the rail spur where you'd actually have empty proppant containers stacked and then filled there. It's just not disclosed.

And that's the issue. And again, that's why we keep making the point --

JUDGE KORNICZKY: Yes. But -- but I think petitioner's position is that, you read what's in Sheesley, but a person of ordinary skill in the art would take away a little bit more than Sheesley -- from Sheesley.

And that when you read it, according to the petitioner, that it shows that these containers can be, as I said, on the spur, next to the spur, on a vehicle, all the way up to the frack site.

MR. MERKIN: It does not show them stacked and filled near a rail site. That's not there.

There's other disclosures, there's disclosure of it being stacked, again, at the well site, that's Figure 3. There's -- it's stacked on the rail spur. It could be filled there.

But that's not Sheesley. Because what Sheesley is doing -- and again, I can refer you to Sheesley's disclosure -- Sheesley is talking about delivering

empty proppant containers on the railcar, filling them on the -- excuse me -- on the rail spur on the rail, filling them there, and then taking them off for delivery to the frack site.

JUDGE KORNICZKY: Doesn't Figure 1 of Sheesley show that the -- that the -- I guess, the source could be different locations, and you could put the source -- or the proppant in the rail or next to the site?

I'm looking at Figure 1, at the bottom line or two in Figure 1.

MR. MERKIN: So the source can be multiple places, but it doesn't actually -- it doesn't disclose filling empty proppant containers at -- or excuse me -- into the rail spur. And there can be sources that come --

JUDGE KORNICZKY: But it shows -- if you look at Figure 1 in the -- well, I'll say the second line from the bottom, it shows a rail 42, it has a conveyor 56, and then it has a truck right next to it, 60.

Do you see that?

MR. MERKIN: I do.

JUDGE KORNICZKY: So doesn't that disclose that in the prior art it was known to move the proppant from the rail to a truck, which would have to be next to the rail --

MR. MERKIN: Look --

JUDGE KORNICZKY: -- which would have to be in close proximity to the rail?

MR. MERKIN: And that's where I'll immediately disagree with you saying there's no disclosure in -- in Figure 1, nor is there any testimony about what you're describing being in close proximity to the rail spur.

And that -- you know, that could be a --

JUDGE KORNICZKY: Well, if you're unloading the rail into a truck, truck has to be near the rail.

MR. MERKIN: That -- so this truck, at least in Figure 1, that's not -- I mean, that truck can be anywhere. But that truck is not being described as near -- that truck is going to have, presumably, containers on it, but that doesn't -- that's not described as being near the rail spur.

I think what you're start --

JUDGE CHERRY: How close is close to be?

JUDGE KORNICZKY: If -- if there are --

JUDGE CHERRY: I guess --

JUDGE KORNICZKY: -- loading the truck with a conveyor belt, it has to be near the source, which is the rail in this case.

MR. MERKIN: So -- and I think then we get into other issues, and there's nothing that you've described there where the truck that shows stacked containers, which is another element of the claim.

And so --

JUDGE KORNICZKY: I understand. But I'm just trying to -- I'm trying to understand what the outer boundaries of the language "in close proximity to" is.

And it seems that Figure 1 shows in the prior art that, you know, it was known to put a truck near a rail and then use a conveyor to unload the rail into the truck.

MR. MERKIN: And even if that is true, Your Honor, there's no disclosure of anything stacked there to be filled. That's not --

JUDGE KORNICZKY: I know. I understand that.

MR. MERKIN: So it's kind of whack-a-mole at this point because you get into different issues.

What the claim requires is stacked containers at close proximity to the rail spur. You can start describing, well, there's -- there could be an instance where something could be in close proximity to the rail spur, but that's -- they're not stacked. And when it is described as being stacked, it's on the rail spur or it's at the well site.

And again, this comes down to it's not -- it's not disclosed -- it's not fairly disclosed to one of ordinary skill in the art. We've got all these different permutations describing different things.

This isn't an obviousness case. This isn't a case where they've argued that this would have been obvious. If they would have, we would have responded to that. But we didn't have to because they haven't made that argument.

JUDGE KORNICZKY: Okay. Thank you.

MR. MERKIN: I wanted to turn to two dependent claims that I do think are important to address.

I'm going to jump ahead to Slide 35.

And so Slide 35. This is -- this solely relates to Claim 4 of the '772 patent. And the issue is that Sheesley, in combination with Uhryn, does not disclose or render obvious conveying proppant from containers to proppant-transporting road vehicles.

And that's really the issue here. This is the fourth argument, it's the last dependent claim that's in dispute of the '772 patent. It's under subheading D in the briefing.

Slide 36. This Claim 4 depends from Claim 1. And as part of Claim 4, there's this step that's recited of conveying the proppant from one or more of the plurality of proppant-filled containers to one or more proppant-transporting road vehicles on the second conveyor.

And there's all sorts of issues here where petitioner has asserted that Sheesley discloses proppant-transporting road vehicles, and they've argued that that's via the -- a SandKing, and I'll get to that in a minute why that's not true.

There's also the issue of Sheesley provides, and petitioner has provided, no motivation to modify Sheesley to actually describe -- to actually meet this limitation.

And then we've got similar issues with Uhryn where Uhryn describes a mountain mover. We've got very strong evidence, very strong testimony that the mountain mover -- and I think I even heard here today -- the mountain mover is not a proppant-transporting road vehicle, and again, we've got a motivation to combine issue.

So I want to turn to Slide 37, because as a threshold issue, when we get to this obvious argument, petitioner provides no rationale for modifying Sheesley.

And the petitioner states -- and they state this both in the petition and they repeat this in the reply -- that Sheesley could be modified to render this limitation obvious.

But petitioner's argument about what a person of ordinary skill in the art could have done, that's legally insufficient to show obviousness. This is black letter law. I don't need to recite this to the Board. You'll see this on Slide 37. *KSR*, the *Belden v. Berk-Tek* case, make this very clear.

Slide 38 -- and this is from -- once you get -- even if you were to get past that threshold issue that there's no described motivation to combine, it would not have been obvious to modify Sheesley to convey proppant from its containers to proppant-transporting road vehicles.

What petitioner points to in Sheesley as disclosing the proppant-transporting road vehicles are the SandKings -- and this is -- it's capital S, capital K, SandKings -- and the Frac-Sanders, capital F, capital S. This is in paragraph 83 of Sheesley. This is what petitioner points to.

And in Uhryn, they point to the mountain movers in paragraph 20.

But patent owner and Mr. Smith, patent owner's expert, has explained, "SandKings, mountain movers, Frac-Sanders, those are absolutely not proppant-transporting road vehicles. They are trailers that can be transported on the road, but they are not transported with proppant." And that's significant. They --

These are trailers that are transported on the road, but they're not transported with proppant on a road, then there's no way that these can be considered proppant-transporting road vehicles.

This is both -- this is made clear by the evidence of record in this proceeding.

Uhryn, shown at the bottom of Slide 38, makes this clear, and so does Stegemoeller. It's Exhibit 2011. It's a contemporaneous reference showing what one of ordinary skill in the art would understand.

Uhryn describes -- and this is shown at the bottom of Slide 38 -- that, "Mountain movers are provided to load one or more blenders on-site for mixing proppant into treatment fluids for injection downhill into the well" --

JUDGE WOODS: Counsel.

MR. MERKIN: -- "at the well site."

Yes.

JUDGE WOODS: You look at Figure 1 and -- of Sheesley. And if you go to that second, I guess, arrow from the bottom, it shows a rail 42, conveyor 56 filling, I guess, a road vehicle 60.

Would you agree with my characterization?

MR. MERKIN: I'm sorry. Your -- second from the bottom, Figure 1. I see 60.

JUDGE WOODS: Yeah. You see rail 42?

MR. MERKIN: Yes, I do.

JUDGE WOODS: You have the conveyor 56?

MR. MERKIN: Right. Yup.

JUDGE WOODS: And that's filling proppant into that truck, that road vehicle 60?

MR. MERKIN: Okay.

JUDGE WOODS: Would you agree with that?

MR. MERKIN: I believe so. I'd have to check how this specification describes that.

JUDGE WOODS: I mean, would that disclose the limitation in Claim 4 that we were just discussing?

MR. MERKIN: I think two immediate problems, and one is, that's not what petitioner's pointing to, and so, you know, that's not something that's been addressed by our expert.

And also, I think you're going to run into additional issues with the claim language. We're looking at part of the claim language somewhat in

isolation based on the arguments and the positions that petitioner has set forth, and so the claim language we're looking at is relevant there.

And it's tough for me to say. I don't believe that even what you're describing as 60 would meet the claim language "proppant-transporting road vehicle".

Even if it was a proppant-transporting road vehicle, my strong concern is that it wouldn't meet the rest of the claim limitation.

And so this is a little academic in the sense that that isn't what's been pointed to.

Right? Again. The claim language does say that the proppant is conveyed -- proppant from one of the proppant-filled containers to the proppant-filled -- proppant-transporting road vehicle. I don't think that is present. That wouldn't -- that's one reason why what you're pointing to as 60 wouldn't work.

And so going back to Slide 38. I just talked about, at the bottom there, the disclosure from Uhryn, the -- describing that what it's -- it's using that mountain mover expressly at the well site. That's how mountain movers are used. Mountain movers aren't intended at all to be at or with proppant and transported over the road.

Stegemayer makes this -- Stegemoeller, excuse me, makes this very clear, too. It explains -- this is at the bottom right of Slide 38 -- Stegemoeller explains that, "A mountain mover is a horizontal storage unit that may be positioned on a well site pad while the unit is empty. The horizontal storage unit may then be filled via tractor trailer proppant-transporting road vehicles."

So the evidence is clear that neither Sheesley's SandKing, Frac Sander, nor Uhryn's Mountain Mover satisfy the limitation of being a proppant-transporting road vehicle as used in this claim.

Slide 39. Petitioner attempts to move the goalposts by pointing to a different product, not one that's actually disclosed in Sheesley or in Uhryn. They're pointing to a product called a mini sand storage trailer, purportedly offered by a company, I believe, named Cambelt International.

Petitioner offers no expert support, no evidence that these mini sand storage trailers are the SandKings -- again, quoted in capital S capital K -- Mountain Movers, or the Frac Sanders actually disclosed in Sheesley, Uhryn, Stegemoeller.

As Mr. Smith explained, a SandKing is manufactured and sold by a company named Convey-All. A Frac-Sander is made by a company named NOV-HP Co.

Cambelt's mini sand storage trailer, it's not a SandKing, it's not a Frac Sander, it's just not disclosed in Sheesley or Uhryn.

Slide 40. As Mr. Smith explained -- and this is unrebutted expert testimony -- Sheesley would not be modified to use a proppant-transporting road vehicle, as claimed, because this is expressly taught against by Sheesley.

Slide 41. What Sheesley contemplates is that sand must be handled at the quarry and at the well site, but it teaches -- and this is quoting Sheesley from paragraph 17 -- that the sand never has to be handled again as it moves from the quarry to the frack site. So that's kind of the purpose of Sheesley.

This is really disclosed in paragraph 49 of Sheesley. This is shown at the top of Slide 41. It explicitly discusses the prior art problem that Sheesley was looking to solve where it says that, "Each time the sand has to be handled through the conveyor is an additional expense. Each additional expense means that sand costs more money from a well operator, which goes into additional costs, increasing oil, which flows on to the end customer for higher prices of gasoline, diesel fuel, or natural gas."

So Sheesley teaches away from adding a proppant-transporting road vehicle as claimed, because Sheesley specifically seeks to avoid the claim conveying from containers to proppant-transporting road vehicles.

Now, the last issue I want to address briefly is, I'm going to jump ahead to Slide 69.

And now, this is the Claim 3 of the '066 patent.

It's -- in the '066 patent case, this is the third argument in that briefing, the last argument there, it's under the subheading C. I'm on Slide 70.

Now, Claim 3 of the '066 patent depends from Claim 1, and further recites, "Conveying on a conveyor the proppant from one or more proppant-transporting rail vehicles to a source from which to fill the plurality of empty proppant containers."

Again, petitioner doesn't dispute, they are asserting that Sheesley discloses this limitation.

Slide 71 is showing, with using highlighting, all the various, separate, and distinct limitations from this claim language.

So, for instance, it shows a conveyor. This is shown in red. Slide 71.

It separately requires a proppant-transporting rail vehicle that's shown in orange.

It describes -- or it claims a source. This is shown in green.

And it shows -- it recites empty proppant containers, which is shown in blue.

And then the step itself needs to be performed, the step of conveying on the conveyor proppant from the proppant-transporting rail vehicle to the source.

I'm on Slide 72. Now, what -- petitioner originally pointed to Sheesley's auger 303. And we heard this here. We heard petitioner talk about this. They pointed to Sheesley's auger 303 in Figure 5 of Sheesley, and they pointed to that as both the claimed conveyor and the claimed source.

And petitioner's never disputed that it double counted Sheesley's auger as meeting these two separate claim elements.

But as I'm about to explain, it makes no sense for auger 303 of Sheesley to be both the claimed conveyor and the claimed source. Two separate claim elements, especially given the claim language.

JUDGE KORNICZKY: Mr. Merkin, I apologize for interrupting you, but if I could ask a question, I would appreciate that.

MR. MERKIN: Absolutely.

JUDGE KORNICZKY: So isn't it petitioner's alternative position that the top containers -- so let's refer to Figure 5 of Sheesley.

So I understand that Claim 3 of the '066 patent requires a conveyor which moves proppant from the rail vehicles to a source, and then from the source, it's used to fill a plurality of empty proppant containers.

And so review it -- first referring to Sheesley's Figure 5, I understand that petitioner's position to be auger 303 is the conveyor, and it moves to a

source, which is the top containers 302 and 309, and then from the source it's moved to a plurality of empty proppant containers, which is 304 and 311.

So without getting into whether auger 303 is being double counted as both the conveyor and the source, what about petitioner's alternative position that the source is the top containers shown in Figure 5?

MR. MERKIN: Sure. I can address that because that position fails for at least three separate reasons.

I'm on Slide 76, and I just want to point out, you called this their alternative position. This is not an alternative position, this is the position that came up for the very first time in petitioner's reply. You're not going to find this earlier than the reply. I think we are very clear in our sur-reply showing that petitioner, seeing that they made this -- that they double counted the auger in their position. So this was a new position, completely unfair to patent owner. We've cited ample case law -- it's shown on Slide 70 -- 76 and 77 -- both from the Board and the Federal Circuit saying, in IPR proceedings, this is absolutely against the rules, completely unfair, to change positions after the petition. So that's what we're dealing with here.

But then, even if you were to consider this -- and it's our position you should not even be considering this argument -- there's all sorts of reasons.

I'm on Slide 78. You've got the source. You've got the containers. Both those are separate claimed elements here.

It doesn't -- if you were to -- those are both containers. And I know you're talking about kind of the top container 302 being the source, as I understand when you're describing the bottom container 304 being the empty proppant container -- those are actually the same things.

You've got an issue where we don't believe – even using the plain and ordinary meaning of the word "source", a term that wasn't construed -- that 302, an empty proppant container, could possibly be considered a source.

And particularly in this claim language. This claim language talks about a source that is filling multiple empty -- empty containers. That's not shown in Figure 5.

Even if -- even if the top container could be considered a source -- and that doesn't make sense – and even if the bottom container would be considered an empty proppant container, you're only filling one.

And so, you know, you have one container that's the source filling multiple empty proppant containers. That doesn't actually make sense, which is why a -- a proppant container can't be the source in this circumstance. It just doesn't make sense given the claim language that it's filling multiple empty proppant containers. You've got one container filling multiple containers. That just doesn't work.

JUDGE CHERRY: Great. Thank you.

JUDGE KORNICZKY: Counsel, it says, "The source has to fill a plurality of empty proppant containers."

MR. MERKIN: Correct.

JUDGE KORNICZKY: What's a plurality? Is that at least one?

MR. MERKIN: Multiple. Multiple containers.

JUDGE KORNICZKY: So that's two or more?

MR. MERKIN: Correct.

JUDGE KORNICZKY: So just so I understand, patent owner's position is that the term "plurality" in Claim 3 has to mean two or more --

MR. MERKIN: Correct.

JUDGE KORNICZKY: -- containers.

MR. MERKIN: More than one containers.

And again, that's -- we're going down a far path to even get to that issue. It's kind of -- the threshold issue is, this is new on reply, that's prohibited.

Then you get to the issue of you're -- what you're doing, according to the claim language, is filling itself. You're taking a container, filling a container. If you look at the *Interactive Gift* case from the Federal Circuit, we cite to this.

When you're pointing to the same thing to meet two elements -- and here, they're somewhat trying to divide it up, but you're pointing to the same thing. You're pointing to the -- the proppant container to be both the source and the proppant container. That doesn't make any sense.

And a proppant container can't be a source, and then it can't be a source to multiple containers.

So there's -- you know, I lost track -- there are probably four different bases -- and this is all described in our sur-reply -- of why their reply argument doesn't work.

And this is even without the benefit of us having expert testimony on sur-reply because we're not allowed expert testimony on sur-reply, and which is why it's so prejudicial for petitioner to come up with a new position on reply.

JUDGE KORNICZKY: Okay. Thank you very much.

Could I also follow that question up with another question referring to Figure 1 of Sheesley?

So as I read Figure 1, I understand that it shows proppant below in a railcar 42, and then conveyed to a storage unit 58, and then conveyed again to a truck 64.

So in that instance, wouldn't the storage 58 be the claimed source, 56 be the claimed conveyor, 42 be the claimed railcars, and then 64 truck being the empty proppant container?

MR. MERKIN: So I'm struggling here only because this is yet -- this is kind of a third position. Again, petitioner hasn't ever asserted that the storage unit 58 is the source, and so we're going out on a limb here.

And I'm -- I'm sure that wouldn't meet the claim language -- again, this goes back to the issue we had before. There's going to be other issues with the claim language once you start going down this path. And I have to get back to the full claim language, because again, we're kind of looking at some -- some of the claim language -- this is just one part of the conveying step. There's another conveying step here in Claim 3. We're only looking at one part of it because we're -- you know, we're looking at what petitioner actually pointed to.

So my short answer to that is I'm -- even if that storage 58 might be considered a source in isolation, it's going to have problems meeting the claim language once you map that out.

Because I agree, we -- source hasn't been construed. Source should be given its plain meaning.

That doesn't mean it can be anything, like an empty container, because that doesn't make sense for that to be the source. It's possible that a storage unit like 58 could be a source of --

JUDGE CHERRY: You didn't offer any construction for a source, right?

JUDGE KORNICZKY: Well, we actually, if -- if we refer to the Sheesley patent itself, there is a discussion of source. Claim 21 defines "source", at least in that claim, as "any point along the supply chain", which I think would encompass the -- the storage containers.

MR. MERKIN: And I think that -- that may be right. Again, it's not that source is limited in the sense that it should be given its plain and ordinary meaning, it may be that a storage container could qualify as a source. That hasn't been brought up in this proceeding, and that's going to have other issues.

I guess the only thing that has been brought up, again on reply only, is that the source could be an empty container, and that we do take issue with.

I don't believe, even under what you're describing in Claim 21 saying a source may be any point along the supply chain, I don't think a container is a -- is a point along the supply chain.

So even under a --

JUDGE CHERRY: It's not? It's not a point along the supply chain?

MR. MERKIN: No. It's not a point, it's just a --

JUDGE CHERRY: It's not in the supply chain?

MR. MERKIN: It's part of the supply chain. I wouldn't consider it a point.

JUDGE CHERRY: Then what would be a point on the supply chain?

MR. MERKIN: So, for instance, a storage silo -- I'm just giving an example here, not in there -- that would be a point on the supply chain.

JUDGE CHERRY: So this wouldn't be a -- a storage container wouldn't be like near the endpoint of the supply chain? Wouldn't the well be the endpoint of the supply chain?

MR. MERKIN: So -- and then we get into kind of the issue of a source to be the endpoint seems antithetical to what a source is. And we're not saying that the source must be the originating source.

It's -- clearly, based on the claim language, it's not describing an origination source, it's describing some sort of what we'd say an intermediate source.

Not to say that -- you know, it doesn't use the word "intermediate", but that's just how the context of the claim reads. That's not the first source, but I don't think it's fair to say that the well site would be the source either, because that's just not a source.

JUDGE CHERRY: Okay. I have no further questions.

Judge Woods? Judge Korniczky?

JUDGE KORNICZKY: No further questions. Thank you.

MR. MERKIN: Okay. Thank you.

JUDGE CHERRY: Thank you. Thank you very much.

Mr. Jedlinski?

And we went long there. So you have 10 minutes, but, you know, we can be a little generous with that.

MR. JEDLINSKI: Famous last words, right? I don't plan to use the full 10 minutes, just want to hit on a few things that -- that patent owner's counsel raised.

With respect to the second different end surface, there is no ambiguity.

Now, counsel is trying to suggest that there could be a control panel opening on that other end. Figure 16 makes it clear that there is no control panel opening on that other end. And the language of Sheesley is clear as well that there is doors on the one end thereof.

With respect to vertically stacking. Patent owner seems to now suggest that there's some timing requirement with respect to these claims, and that is why there would be some sort of teaching away with respect to stacking these containers on a rail -- rail spur.

Again, that's not part of the claims whatsoever, so presumably, they could be -- they could be immediately filled and taken away.

And then furthermore, with respect to the vertically stacking, patent owner seems to be looking for and relying upon the need for a particular figure that shows exactly the scenario that we have in each of those claims, and that's just not the test.

The test is, do the figures and the description in the specification teach a person of ordinary skill in the art how to manipulate and move these containers and the proppant therein.

And Figure 1 shows the prior method. And then the point of Sheesley is that the containers can be inserted anywhere along -- inserted into that process at any point along -- along that time -- time frame.

So -- and then finally --

JUDGE KORNICZKY: Excuse me, counsel. Where is that in the record?

MR. JEDLINSKI: With respect to vertically stacking?

JUDGE KORNICZKY: No, no. You just said that somewhere -- a person of ordinary skill in the art would -- would look at Figure 1, which

shows the prior art, I guess, methods, and that the container -- Sheesley container can be inserted anywhere along that supply -- the supply line shown in Figure 1.

MR. JEDLINSKI: So I don't -- I don't --

JUDGE KORNICZKY: Is that supported by your expert?

MR. JEDLINSKI: I don't think that exact language of saying "Figure 1". I think what is in the record is the expert opining and saying, "Reading Sheesley, I would understand, you know, the fact that I can stack on a railcar," and then furthermore, he points to the language where it can be filled at any point along the process.

But in terms of tying it necessarily to the language of Figure 1, I -- I agree that our expert doesn't necessarily say that, but he does support that proposition by citing to other points of Sheesley.

And then finally, with respect to the conveying limitation to a road vehicle, they now -- patent owner now seems to be reading that this road vehicle necessarily means a highway, and instead -- but it cannot somehow be roads at a frack site.

And then furthermore, with respect to Sheesley -- Sheesley's disclosure of a -- of a particular road vehicle, paragraph 83 says claim -- or actually discloses, "a bulk sand container 300", and then gives some examples, and those examples are the ones that are, you know, the SandKing and whatnot.

But bulk sand container is something that's significantly broader than the -- than the specific limitations that figure shows.

And then furthermore, Uhryn has a more particular disclosure that's relevant to the case.

JUDGE KORNICZKY: What's the motivation to combine Uhryn and Sheesley?

MR. JEDLINSKI: So I believe I had said this in my openings. With respect to -- there is a -- there's a number of paragraphs -- I'll just pull that up here.

Sorry about that.

So paragraph 135 of -- of the expert reports, he talks about the tilting table, which, in that whole system of using the conveyor and the source, allowing for quicker and less hazardous proppant exchange, and also allowing all the proppant to be unloaded.

So there's a number of paragraphs, there's a whole section in Mr. Schaaf's declaration, but in particular, I think we point you to paragraph 135.

JUDGE KORNICZKY: One second. I've got to --

Okay. Thank you.

MR. JEDLINSKI: So unless the Board has any other questions, I have nothing further.

JUDGE CHERRY: I have no further questions.

JUDGE KORNICZKY: No questions. Thank you.

MR. JEDLINSKI: Thank you.

JUDGE CHERRY: Thank you.

MR. MERKIN: Your Honor, I don't know if I have any time left. I could do it very, very --

JUDGE CHERRY: You can use five minutes.

MR. MERKIN: Sure.

JUDGE CHERRY: You can use your five minutes.

MR. MERKIN: Okay. Well, thank you. I appreciate that.

Again, Joel Merkin on behalf of patent owner.

I just want to address just a few of the points that we just heard from petitioner's counsel.

We heard that patent owner allegedly has tried to put a timing requirement. That's not true. We address that in our sur-reply. We don't need a timing requirement. There's just no disclosure of any type of vertically stacking empty proppant containers at a rail site, and it doesn't matter the timing.

We also heard that we're requiring for the proppant-transporting road vehicle, somehow that the road must be a highway? Again, never said that. Never insinuated that in the papers. There just isn't disclosure of a proppant-transporting road vehicle as it's used in that claim.

When it talks about SandKings, those -- again, those can be transported over the road. Those can have proppant. They're not transported with proppant.

And we just heard that even -- there was a discussion of some broader disclosure, besides those very specific -- I kept saying capital S, capital K, SandKing. None of the bulk sand containers -- those are containers, those aren't proppant -- proppant-transporting road vehicles -- there's no disclosure that those containers would be transportable at all.

So again, you've got situations where you have types of containers which may hold sand, then you've got -- you've got vehicles that may go over the road, but you don't have any disclosure of proppant-transporting road vehicles, road vehicles with proppant in them that are going over the road.

And that doesn't mean a highway, that means any road. It's just not disclosed. At best, it's disclosed that it's stationary at the well site, or any small movements at the well site, but there's no suggestion that that would be a road.

And we have lots of expert testimony on this. We have Mr. Smith, who's one of ordinary skill in the art, undisputed. And he put all this evidence in, particularly about the proppant-transporting road vehicles, and the SandKings, that all came in with patent owner's response.

And then, I think it's -- it's worth pointing out, and we certainly pointed this out in the sur-replies, petitioner's expert didn't submit any response to patent owner's expert declaration, submitted with the response, and then -- and then the testimony that was also elicited at his deposition, it was just complete silence from petitioner on reply.

And the reason -- and we firmly believe this -- is that he couldn't support the positions that petitioner was making in many cases, and so they decided to just shield their expert and not even submit an expert reply declaration.

And we know, in the past, courts have frowned on that. That's not expected. And in this case here, when you have all this unrebutted testimony, that is very significant.

Even when we saw petitioner's expert declaration with their petition, in many cases it was entirely conclusory, just mapped identically to the petition.

And so when we called that out, made a point to explain that in our patent owner response, we were almost doubly surprised not to see a real declaration from petitioner's expert in their reply.

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But that was their choice. And when it comes to an issue like this about a proppant-transporting road vehicle, there is plenty of evidence from Mr. Smith explaining what one of ordinary skill in the art would understand, relying on other evidence, 2011, 2012, that is just, frankly, un rebutted.

And that's all I have, Your Honor. Thank you.

JUDGE CHERRY: Okay. Thank you very much.

Thank you both for your very able presentations.

The case is submitted.

JUDGE KORNICZKY: Counsel, I do want to complement you on your oral advocacy today. It was very helpful.

I also wanted to complement you on your briefs. I thought the briefs were very well-organized and written. And I appreciated the way you guys have addressed each other's arguments. It was logical and well-written, and I think you asserted your claims very well.

Thank you.

MR. MERKIN: Thank you.

MR. JEDLINSKI: Thank you.

(Proceedings conclude at 2:34 p.m.)

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