

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTELLIGENT WELLHEAD SYSTEMS, INC.,
Petitioner,

v.

DOWNING WELLHEAD EQUIPMENT, LLC,
Patent Owner.

IPR2024-00300
U.S. Patent 11,560,770

PATENT OWNER PRELIMINARY RESPONSE

Patent Owner's Exhibit List

Exhibit	Description
Ex.2001	Wayback Machine - Downing Continuous Pumping Web Page
Ex.2002	Downing Continuous Pumping WordPress Page
Ex.2003	Tim Marvel Email RE Continuous Pumping Webpage with Attachment
Ex.2004	Marvel LinkedIn Post 1/12/2020
Ex.2005	Declaration of Tim Marvel
Ex.2006	Declaration of John Hughett
Ex.2007	CV of John Hughett

Grounds 1 and 2. The Petition merely asserts that “*Krupa* is 35 U.S.C. § 102(a)(2)-prior art” because the date of the *Krupa* Provisional is before the ’770 Patent’s priority date. Petition, 4. The Petition does not, for example, map the relevant portions of *Krupa* to portions of the *Krupa* Provisional. *See generally* Petition, 17-47. The Petition does not cite to or discuss the contents of the *Krupa* Provisional *at all*—nor could it, the *Krupa* Provisional is not even an exhibit. *See* Petition, vi-ix. Thus, even if the Board felt compelled to “play archaeologist with the record”—which it is under no obligation to do—the proverbial tomb would be empty. *DeSilva v. DiLeonardi*, 181 F.3d 865, 867 (7th Cir. 1999).

Because the Petition does not show that the subject matter relied upon in *Krupa* is supported by the *Krupa* Provisional, Petitioner has failed to establish that *Krupa* is prior art. Petitioner therefore cannot show a reasonable likelihood of prevailing on the *Krupa* Grounds.

B. Even if given priority to its provisional filing date, *Krupa* is not prior art due to Downing’s public disclosures under § 102(b)(2).

Even if the Petition had established that *Krupa* is entitled to the *Krupa* Provisional’s effective filing date (which it does not), the *Krupa* Grounds would still fail for another, independent reason—key portions of *Krupa* are disqualified as prior art under 35 U.S.C. § 102(b)(2)(B). Specifically, before the *Krupa* Provisional was filed, Patent Owner’s own website publicly disclosed portions of

Krupa that Petitioner relies upon for its Krupa Grounds, which removes those portions as prior art under the § 102(b)(2)(B) exception. Without those portions of Krupa, Petitioner cannot show a reasonable likelihood of prevailing on the Krupa Grounds.

As explained above, Petitioner contends that Krupa is prior art only under 35 U.S.C. § 102(a)(2). Petition, 4. Section 102(b)(2), however, provides three exceptions that eliminate certain disclosures as § 102(a)(2) prior art. 35 U.S.C. § 102(b)(2)(A)–(C). Relevant here, the exception under § 102(b)(2)(B) eliminates a disclosure as prior art if the same subject matter had previously been publicly disclosed by another who obtained the subject matter directly from a joint inventor:

(2) Disclosures appearing in applications and patents.—A disclosure shall not be prior art to a claimed invention under subsection (a)(2) if— . . .

(B) the subject matter disclosed had, before such subject matter was effectively filed under subsection (a)(2), been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor[.]

35 U.S.C. § 102(b)(2)(B).

The § 102(b)(2)(B) exception applies when the subject matter in a reference disclosure and the earlier inventor-originated public disclosure are the same. MPEP § 717.01(b)(2) (“The [§ 102(b)(2)(B) exception is] only applicable when the

MPEP § 717.01(b)(2). In this example, elements A, B, and C are disqualified from the reference disclosure because they were previously publicly disclosed, and only element D is available as § 102(a)(2) prior art.

1. Patent Owner publicly disclosed continuous pumping before the Krupa Provisional was filed.

The claims of the '770 patent are directed to continuous pumping. The claims recite limitations directed to pumping a second well while a first well is open, and, while pumping in the second well, closing the first well. *See, e.g.*, limitations 1.3 and 1.4. On October 12, 2020, Patent Owner published a webpage describing continuous pumping on its public-facing website. Ex.2002; Ex.2005, ¶¶5, 11. The Internet Archive Wayback Machine archived a copy of this webpage on October 20, 2020, eight days after it was originally published. Ex.2001; Ex.2005, ¶5.² Patent Owner thus publicly disclosed continuous pumping on October 12, 2020, and no later than October 20, 2020.

Given its October 2020 publication date, Patent Owner's continuous pumping webpage was published four months before the Krupa Provisional was

² The Internet Archive Wayback Machine archived copy is captured in Ex.2001 and accessible at <https://web.archive.org/web/20201020115107/https://downingusa.com/freedomseries/continuouspumping>.

filed (February 25, 2021) and over one year before Krupa was filed (February 18, 2022). Accordingly, Patent Owner publicly disclosed continuous pumping before either the Krupa Provisional or Krupa had been filed.

2. The information on the continuous pumping webpage was obtained directly from a joint inventor of the '770 Patent.

Timothy Marvel, Vice President of Business Development and Technology at SEF Energy,³ drafted and published the continuous pumping webpage on Patent Owner's public-facing website. Ex.2005, ¶¶4, 6. Mr. Marvel learned about continuous pumping directly from Austin Johnson, a joint inventor of the '770 patent. *Id.*, ¶¶6-10.

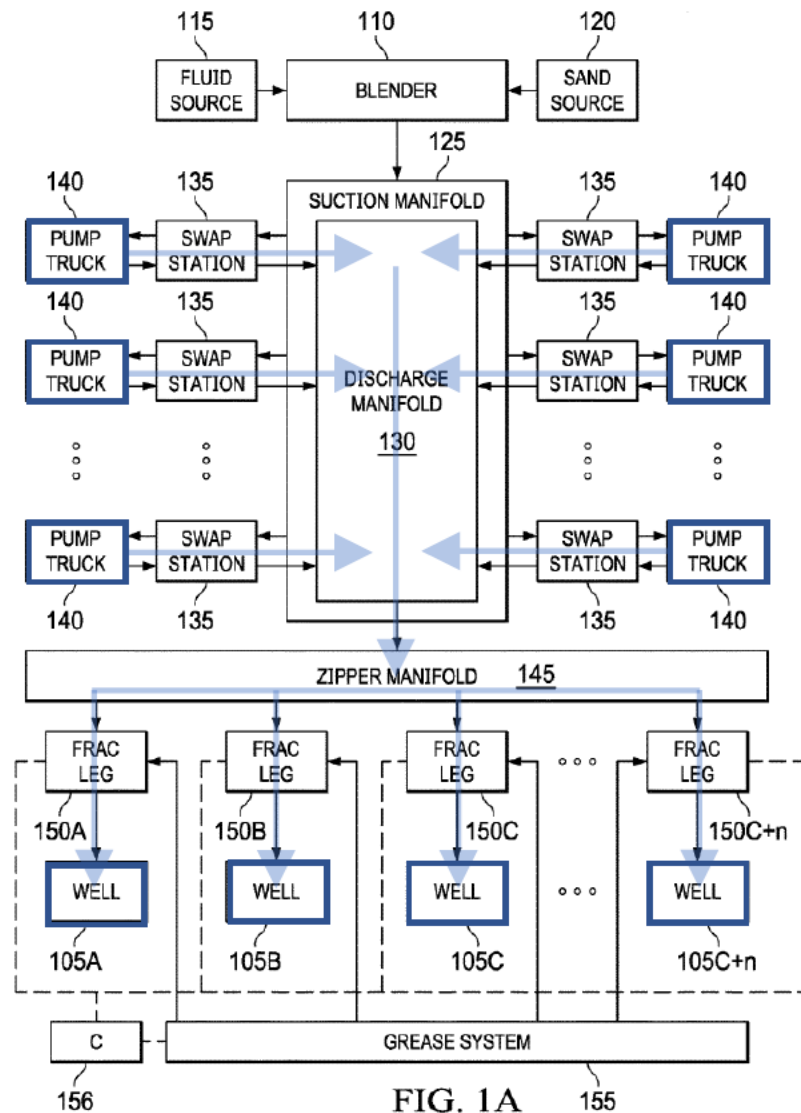
In September 2020, Mr. Marvel learned about Patent Owner's team successfully performing continuous pumping via Patent Owner's commercial fracking system, the Freedom Series Completion System. Ex.2005, ¶8. Mr. Marvel learned this directly from Mr. Johnson. *Id.* Mr. Marvel subsequently began preparing materials to promote Patent Owner's continuous pumping capability. *Id.* One of the materials Mr. Marvel prepared was the continuous pumping webpage that would be published on Patent Owner's public-facing website. *Id.*, ¶¶5-6, 9; Ex.2001; Ex.2002. Using the information obtained from

³ Patent Owner is a subsidiary of SEF Energy. Ex.2005, ¶4.

Thus, pumping into a given well may be accomplished by closing the valves to all but one well, so that fluid is directed to the desired well. *Id.*

Hydraulic fracturing and perforating operations on a particular well may take hours to perform, resulting in significant idle time for pumping and wireline personnel while one crew waits for the other to finish. *Id.*, ¶95. Zipper fracturing reduced this downtime by allowing one well to be fractured while the next well in the series is perforated. *Id.* When both operations are complete, the newly fractured well can be isolated, fluid may be rerouted through the zipper manifold to the newly perforated well for fracturing, and wireline operations can begin immediately in the next well in the series. *Id.* In this manner, operations move through a series of wells in assembly-line fashion, cutting the time to complete wells nearly in half.

Figure 1A of the '779 Patent shows a diagram of a conventional zipper fracturing setup:



Ex.1001, Fig. 1A (annotated).

The dramatic reduction in non-productive time enabled by zipper fracturing resulted in its widespread adoption in the industry. *See, e.g.*, Ex.1008, 1. But operators accustomed to significant downtime between pumping operations had to adapt to the relatively fast-paced pumping schedule in zipper fracturing operations. *Id.*, 2. One Journal of Petroleum Technology article from 2014 described this