

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CULTEC, INC.,
Petitioner,

v.

STORMTECH LLC,
Patent Owner.

Case IPR2017-00777
Patent 9,255,394 B2

Before JOSIAH C. COCKS, BARRY L. GROSSMAN, and
BART A. GERSTENBLITH, *Administrative Patent Judges*.

GROSSMAN, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Cultec, Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of all the claims in U.S. Patent No. 9,255,394 B2 (“the ’394 patent”), which includes claims 1–20. Paper 1 (“Pet.”). StormTech LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

The Board reviews the Petition and Patent Owner’s Preliminary Response and, on behalf of the Director, determines whether to institute a trial. 37 C.F.R. § 42.4(a). An *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314.

Upon consideration of the Petition and Patent Owner’s Preliminary Response, we deny institution of an *inter partes* review because the same or substantially the same prior art or arguments previously were presented to the Office.

A. Related Proceedings

The ’394 patent is the subject of a suit captioned *StormTech LLC et al v. Cultec, Inc.*, 3:15-cv-01890-AVC (D. Conn. Dec. 31, 2015). Pet. 1; Paper 4, 1.

Patent Owner states that U.S. Patent Nos. 8,672,583 and 9,556,576 “claim priority to the same application to which the ’394 patent claims priority.” Paper 4, 1. Also, Patent Owner states that Petitioner filed a petition, IPR2017-00526, seeking *inter partes* review of U.S. Patent No. 8,672,583. *Id.* at 2. Institution of an *inter partes* review was denied in IPR2017-00526 because the Petition was barred under 35 U.S.C. § 315(b). *Cultec, Inc. v. StormTech LLC*, IPR2017-00526, Paper 14 (PTAB July 17, 2017).

B. The '394 Patent

The '394 patent relates generally to a stormwater management system. Stormwater results from rain or snowmelt flowing over the ground. Hard surfaces, like roofs, driveways, parking lots, and streets prevent stormwater from naturally soaking into the ground. If not managed properly, stormwater runoff can create stormwater pollution and/or flooding issues. The disclosed system uses arch-shaped, molded plastic, corrugated, sheet material to define a “storm chamber.” The arch-shaped sheet material is buried beneath the ground to define void spaces that collect stormwater. The collected stormwater is either discharged under controlled conditions or simply allowed to dissipate into the ground. Ex. 1001, 1:19–28.

The arch-shaped sheet material is an alternative to using buried corrugated plastic pipe. *Id.* at 1:56–2:8. Corrugated plastic pipes have circumferentially continuous cross sections, whereas storm chambers have open bottoms and open ends. *Id.* End caps close off the ends of the chambers. *Id.* at 2:62–63. An objective of the disclosed invention is to provide large stormwater chambers that have performance and safety factors consistent with those achieved with corrugated plastic pipe. *Id.* at 2:5–8. The disclosed invention uses a series of corrugations and sub-corrugations in the sheet material to achieve this objective. *Id.* at 3:6–25.

Figures 1, 2, and 4 from the '394 patent are reproduced below.

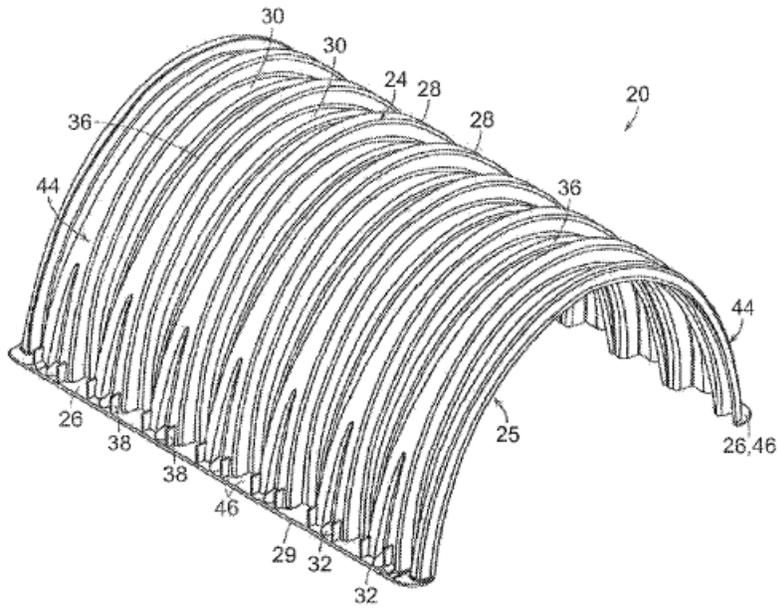


FIG. 1

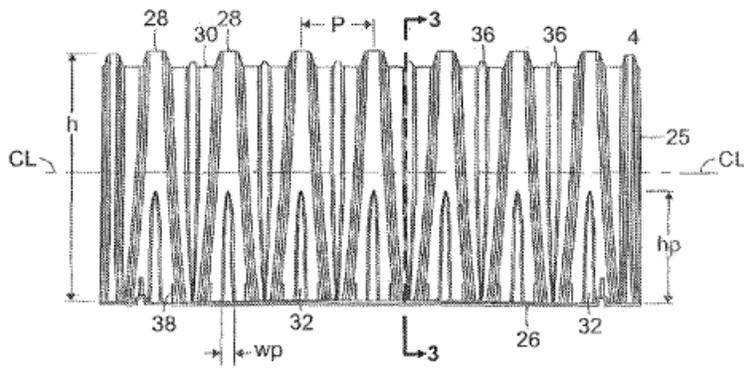


FIG. 2

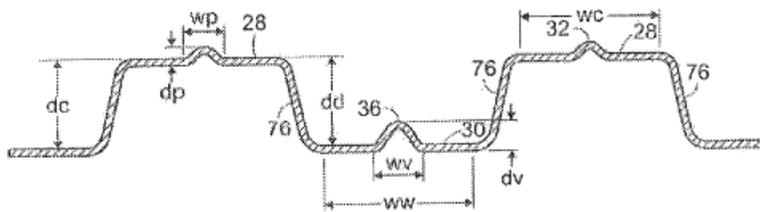


FIG. 4

Figure 1 is a perspective view of a stormwater chamber having crest and valley corrugations with associated sub-corrugations. Figure 2 is a side elevation view of a portion of the chamber shown in Figure 1. Figure 4 is a cross section through a portion of the sidewall of the chamber shown in Figure 1. Ex. 1001, 4:25–33.

As shown in Figures 1 and 2, and as disclosed in the Specification (*see* Ex. 1001, 4:54–59), stormwater chamber 20 has a curved arch shape cross section. Opposing sidewalls 44 rise upwardly from opposing side bases 26 and curve inwardly to top 24. Opposing side bases 26 have horizontal flanges 46 that provide bearing area upon the soil upon which the chamber rests.

Chamber 20 has a multiplicity of corrugations that run transverse to the chamber length axis CL (*see* Figure 2). *Id.* at 6:13–14. The corrugations include crest corrugations 28, valley corrugations 30, crest sub-corrugations 32, and valley sub-corrugations 36. *Id.* at 6:14–16; 7:10–28. Sub-corrugations 32, 36 are smaller or secondary corrugations superimposed on primary corrugations 28, 30, respectively. *Id.* at 3:24–27. According to the Specification, the sub-corrugations improve the strength of the chamber sidewalls. *Id.* at 3:63–64.

In use, a plurality of chambers are placed on a graded surface and connected end to end to form a string of chambers. *Id.* at 11:15–17. Stormwater chambers typically are buried in the soil. *Id.* at 5:21–30. End caps 50 (*see* Figures 10, 11) are placed on the outermost ends of the strings of interconnected chambers, to keep the surrounding soil from intruding into the interiors of the chambers. *Id.* at 11:35–38.

C. Representative Claim

Claims 1–20 in the '394 patent are challenged. Claims 1, 14, and 18 are independent claims. Claim 1, reproduced below, is illustrative of the claimed invention:

1. A chamber, for drainage, comprising:
 - opposing side bases;
 - a chamber top;
 - sidewalls extending from the opposing side bases to the chamber top;
 - a plurality of crest corrugations and a plurality of valley corrugations positioned along a length of the chamber; and
 - a plurality of crest sub-corrugations, wherein each crest sub-corrugation runs upwardly from an opposing side base and along a portion of a crest corrugation, wherein each crest sub-corrugation terminates at an elevation lower than the chamber top, wherein a height of each crest sub-corrugation decreases with increasing elevation from the opposing side base.

Claim 1 includes crest corrugations, valley corrugations, and *crest sub-corrugations*. It does not recite *valley sub-corrugations*. Claim 14 is substantially the same as claim 1. Rather than recite limitations about decreasing the “height” of each crest sub-corrugation as in the final clause of claim 1, however, claim 14 recites limitations about decreasing the “width” of each crest sub-corrugation. Claim 18 recites both crest and valley corrugations, and crest and valley sub-corrugations.

D. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Ground	Claims	Prior Art
§ 103(a) ¹	1–20	Cobb ²
§ 103(a)	1–20	Cobb and Fouss ³
§ 103(a)	1–20	Cobb and Ellis ⁴
§ 103(a)	1–20	Cobb, Fouss, and Ellis
§ 103(a)	8	Cobb and November ⁵

II. ANALYSIS

A. Previous Consideration of Cobb, Fouss, and Similar References by the PTO

Patent Owner asserts “[t]he Board should deny institution of Grounds 1-4^[6] because the Patent Office already considered their art and arguments.” Prelim. Resp. 2 (citing 35 U.S.C. § 325(d)). The second sentence of the statutory section on which Patent Owner relies states:

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 296–07 (2011), took effect on September 16, 2012. Because the application for the patent at issue in this proceeding has an effective filing date before that date, we refer to the pre-AIA versions of the statute.

² U.S. Patent No. 8,491,224 B2, issued July 23, 2013 (Ex. 1002).

³ U.S. Patent No. 4,360,042, issued November 23, 1982 (Ex. 1003).

⁴ U.S. Patent No. 6,497,333 B1, issued December 24, 2002 (Ex. 1004).

⁵ U.S. Patent No. 2,876,801, issued March 10, 1959 (Ex. 1007).

⁶ Patent Owner’s argument does not include Ground 5, asserting Cobb and November against claim 8. Nonetheless, we exercise our discretion and address whether the same or substantially the same prior art or arguments asserted in Ground 5 previously were presented to the Office.

In determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the [Patent and Trademark] Office.

35 U.S.C. § 325(d).

It is beyond reasonable dispute that Cobb and Fouss were presented to, and considered by, the Office.

1. Third Party Submission Regarding Cobb

On November 4, 2015, a Third Party Submission under 37 C.F.R. § 1.290⁷ (“Submission”) was filed in the application that matured into the ’394 patent, Application No. 14/165,503 (“the ’503 application”). Ex. 1010, 117–126.⁸ The Submission presented the Cobb patent, U.S. Patent No. 8,491,224, for consideration by the Examiner. Ex. 1010, 22, 117. Stephen P. McNamara, Attorney Registration Number 32,745, filed the Submission. *Id.* at 120. Mr. McNamara is Lead Counsel for Petitioner in the proceeding before us. Paper 2.

The Third Party Submission stated that Cobb was relevant to the claims in the ’503 application because Cobb “discloses claim elements in the present U.S. Patent Application No. 14/165,503.” Ex. 1010, 117. The Submission also stated that Cobb “has been recently cited in the related U.S. Patent Application No.

⁷ This Rule provides that “[a] third party may submit, for consideration and entry in the record of a patent application, any patents, published patent applications, or other printed publications of potential relevance to the examination of the application if the submission is made in accordance with 35 U.S.C. 122(e) and this section.” 37 C.F.R. § 1.290(a).

⁸ As stated in the Third Party Submission, this was a “resubmission” that was “responsive to a notification of non-compliance issued for an earlier filed third-party submission.” Ex. 1010, 120.

14/175,477 in the Office Action dated September 17, 2015.” *Id.* Additionally, the Submission stated that “[t]he statement of relevance presented in the Office Action dated September 17, 2015 is *adopted for this submission.*” *Id.* (emphasis added). Thus, we look at the cited Office Action, which is part of the Submission.

Application No. 14/175,477 eventually matured into U.S. Patent No. 9,556,576 (“the ’576 patent”). *See* Ex. 3002. The ’576 patent and the ’394 patent, and their underlying applications, disclose a corrugated stormwater chamber having sub-corrugations. *See* Exs. 3001, 3002. Both applications are continuations of the same parent application, and claim priority to the same provisional application. *Compare* the Related U.S. Application Data in Ex. 3001 *with* the Related U.S. Application Data in Ex. 3002.

The September 17, 2015 Office Action during prosecution of Application No. 14/175,477 did not contain a discussion specifically identified as a “statement of relevance.” *See* Ex. 3001. It did, however, rely on Cobb and Brochu, a published U.S. patent application, to reject claims 1–20 in Application No. 14/175,477 under 35 U.S.C. § 103. *Id.* at 5–7.⁹ Cobb was discussed extensively in the Office Action. *Id.* The Examiner relied on Brochu for the disclosure of “a chamber wherein the crest corrugations decrease in width with elevation from the base (fig. 1)” (*id.* at 5) and the disclosure of an “end crest corrugation [that] includes a height less than a height of the crest corrugation (fig. 15)” (*id.* at 6). The Examiner relied on Cobb for all other limitations recited in claims 1–20. *Id.* at 5–7. We note that the Examiner of Application No. 14/175,477 (*e.g.*, *id.* at 8) also was the Examiner in the ’394 patent (*e.g.*, Ex. 1001, 1). Thus, at the

⁹ We cite to the exhibit page number, not the Office Action page number.

time Cobb was presented in the Third Party Submission, the Examiner was well-aware of the Cobb reference and its specific disclosure.

Moreover, the Examiner considered the Third Party Submission. The Submission was signed by the Examiner on December 11, 2015. Ex. 1010, 23. As stated on the signed form, the Examiner's signature "indicates all documents listed above have been considered." *Id.* Additionally, typed on the bottom of the form is the statement "ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.F.F./." *Id.* No references were lined through. "B.F.F." appears to be the initials of the Examiner.

In addition to relying on the analysis of Cobb and Brochu from the September 17, 2015 Office Action in Application No. 14/175,477, the Third Party Submission also submitted and relied on "[a] chart with a *detailed identification* of the relevant portions of Cobb, U.S. Pat. No. 8491224 as applied to the pending claims [in the '503 application]." Ex. 1010, 117 (emphasis added). The submitted claim chart compares relevant sections of Cobb to each clause of pending application claims 25–44. Pending application claims 25–44 issued as claims 1–20, respectively, in the '394 patent. *Id.* at 21. For each clause in pending application claims 25–44, the submitted claim chart identifies the column, line, and relevant text, or the relevant figure, from Cobb where the claimed element or limitation is asserted to be disclosed in Cobb. *Id.* at 121–124.

The claim charts submitted with the Petition are an expanded version of the claim chart submitted with the Third Party Submission. *Compare, e.g.,* the Third Party Submission claim chart for application claim 25 (Ex. 1010, 121), *with* the

Petition claim chart for patent claim 1 (Pet. 30–33).¹⁰ The Petition claim chart adds copies of cited figures, some with annotations, and expanded explanations, but the basic citations to columns, lines, and figures from Cobb are substantially the same.

The Third Party Submission also asserted that “[a]dditional relevant disclosures are found in Fouss et al, US Patent No. 4,360,042 and/or Brochu, U.S. Pat. Appl. Pub. No. 2009/0067929 (both of record).” Ex. 1010, 117.

Based on the analysis above, we determine that the substantive disclosure of Cobb and arguments why claims in the ’503 application that matured into the ’394 patent were not patentable based, in substantial part, on Cobb previously were presented to the Office in the Third Party Submission.

We discuss below Fouss and other cited references in the Petition.

2. Fouss and Other Cited References in the Petition

The Examiner cited and applied Fouss throughout the examination proceedings of the ’503 application, which matured into the ’394 patent. *See, e.g.*, Ex. 1010, 131–32 (applying Fouss to application claim 38 in the Final Rejection Office Action). The Examiner found that Fouss disclosed all the claim limitations except a crest sub-corrugation that includes a width that diminishes with increasing elevation from the opposing base. *Id.* at 131. The Examiner also found that the missing limitation was disclosed in Moore and that it would have been obvious to modify the sub-corrugations in Fouss as disclosed in Moore to further strengthen

¹⁰ Patent claim 1 adds the phrase “for drainage” in its preamble. This preamble phrase was not in application claim 25 when the Third Party Submission was filed. Petitioner has not argued that “for drainage” patentably distinguishes the patent claims from the application claims.

the chamber at its base. *Id.* at 132. Thus, Fouss previously was presented to, and considered by, the Office.

Petitioner relies on Ellis for the disclosure that a plurality of discontinuous grooves arranged in rows provides added strength and rigidity against sidewall deflection in plastic, cylindrical objects. Pet. 29.

Brochu, cited in the Third Party Submission, discloses continuous curve semi-ellipse arch chamber 20 for receiving and dispersing wastewater when buried in soil. Ex. 3003, 35–36. Chamber 20 has alternating peaks 22 and congruent valleys 24, which together comprise corrugations running along the arch shape cross section that defines chamber interior 21. *Id.* at 36. Perforations or grooves 30 are closely spaced apart along the upward curve of sidewall 40. *Id.* Unperforated webs 23 connect the peaks and valleys. *Id.* As disclosed in Brochu, the closely spaced corrugations, the continuous arch curve cross section, and the engineered slot or groove perforation pattern combine to provide a lightweight and strong chamber. *Id.* at 37. We conclude that the disclosure relied on in Ellis of discontinuous grooves is substantially the same as the discontinuous slots in Brochu, previously presented in the Third Party Submission.

Petitioner relies on November for the disclosure of a corrugated tubing with valley *corrugations* of constant width. Pet. 41. Based on this disclosure in November, Petitioner concludes that it would have been obvious to provide valley *sub-corrugations* with constant width, as recited in challenged claim 8.

In the September 17, 2015 Office Action in Application No. 14/175,477, specifically cited in the Third Party Submission, the Examiner found that Cobb discloses at least one valley sub-corrugation of substantially constant width. *See* Ex. 3001, 7 (“With regard to claims 12-13, Cobb further discloses the at least one valley sub-corrugation includes a tapering height towards the base (fig. 20) and the

at least one valley sub-corrugation includes a substantially constant width (fig. 20).”) (emphasis added)). Moreover, the detailed claim charts, submitted in the Third Party Submission, adopted the Examiner’s position and asserted that Cobb disclosed valley sub-corrugations of constant width, as recited in claim 8.

Thus, the disclosure relied on in November is substantially the same as Cobb, previously presented by the Office through the Third Party Submission.

III. CONCLUSION

Upon review of the arguments and evidence in the Petition and Preliminary Response, and based on the analysis above, we conclude that the same or substantially the same prior art or arguments as are presented in the Petition previously were presented to the Office in the Third Party Submission. Accordingly, we exercise our discretion under 35 U.S.C. § 325(d) and do not institute an *inter partes* review of the ’394 patent.

IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that the Petition for an *inter partes* review of claims 1–20 of U.S. Patent No. 9,255,394 B2 is *denied*.

IPR2017-00777
Patent 9,255,394 B2

PETITIONER:

Stephen McNamara
Benjamin White
smcnamara@ssjr.com
bwhite@ssjr.com

PATENT OWNER:

Aaron Parker
Sonja Sahlsten
Justin Mullen
aaron.parker@finnegan.com
sonja.sahlsten@finnegan.com
justin.mullen@finnegan.com