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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* KURT A. BURKHART SR. and RONALD E. BURKHART SR.

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Appeal 2019-000884  
Application 15/236,843  
Technology Center 3600

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Before MICHAEL L. HOELTER, JILL D. HILL, and  
LEE L. STEPINA, *Administrative Patent Judges*.

STEPINA, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–3 and 5–17.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM IN PART.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Arrow Concrete Products, Inc, and Retain-It, LLC. Appeal Br. 2.

<sup>2</sup> Claim 4 is cancelled and claims 18–22 are withdrawn. Appeal Br. 20–22 (Claims App.).

CLAIMED SUBJECT MATTER

Appellant's disclosure is related to systems for the detention or retention of storm water or runoff beneath a ground surface. Spec. 1.

Claim 1, reproduced below with emphasis added, is illustrative of the claimed subject matter.

1. A fluid retention or detention system comprising:
  - a plurality of interior modules, each interior module having at least one vertically disposed side portion supporting a horizontally disposed roof each said side portion having a bottom edge; and
  - a plurality of exterior modules, each exterior module having at least one vertically disposed side portion supporting a horizontally disposed roof;
  - each of said plurality of interior modules having at least one side portion defining a fluid passage extending therethrough, each said fluid passage extending upward from the bottom edge of said side portion;
  - said plurality of interior and exterior modules being arranged in an assembly in a plurality of rows and columns, said plurality of exterior modules being peripherally located in said assembly with respect to said interior modules so as to define a boundary of the assembly;
  - each of one or more of the plurality of the interior and exterior modules in the assembly being in fluid communication, either directly or indirectly, with each of the other of the one or more of the plurality of interior and exterior modules; and
  - a plurality of flow obstructers located in said plurality of interior modules such that at least one flow obstructer is located in each of: said rows of said plurality of interior modules, or said columns of said plurality of interior modules, or said rows and said columns of said plurality of interior modules;*
  - wherein the plurality of flow obstructers cause circuitous fluid flow through said one or more of the plurality of interior modules.

## REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Nicholas '780	US 1,394,780	Oct. 25, 1921
Nicholson '319	US 2,866,319	Dec. 30, 1958
Burkhart '473	US 2004/0076473 A1	Apr. 22, 2004
Graf '975	EP 1 932 975 A1	Dec. 15, 2006

## REJECTIONS

I. Claims 1–3 and 5–17 are rejected under 35 U.S.C. § 103(a) as unpatentable over Burkhart '473 and Graf '975. Final Act. 5, 6–10.

II. Claims 1–3 and 5–17 are rejected under 35 U.S.C. § 103(a) as unpatentable over Burkhart '473 and Nicholson '319. Final Act. 5, 7–8, 10–11.

III. Claims 1–3 and 5–17 are rejected under 35 U.S.C. § 103(a) as unpatentable over Burkhart '473 and Nicholson '319. Final Act. 5, 7–8, 11–12.

## OPINION

### *Rejection I–Burkhart '473 and Graf '975*

#### *Claims 1–3, 5–10, and 13–17*

The Examiner finds that Burkhart '473 discloses many of the elements recited in claim 1, including pluralities of interior and exterior modules, but does not disclose a plurality of flow obstructers. Final Act. 5, 8. The Examiner relies on Graf '975 to remedy this deficiency, stating,

Graf '975, as best illustrated in Figure 8, discloses a fluid retention or detention system comprising a plurality of modules (K) arranged in an assembly and a plurality of flow obstructers (20) located in some of the modules such that at least one flow

obstructor is located in each of the rows of modules, or the columns of modules, or the rows and the columns of the modules (para. 0033), wherein the plurality of flow obstructers causes circuitous fluid flow through the modules, and wherein the plurality of flow obstructers enhance the dimensional stability of the assembly (para. 0033).

Final Act. 8–9. Thus, the Examiner finds that Graf '975 discloses flow obstructers in some modules of a fluid detention system. The Examiner reasons:

It would have been obvious for one having ordinary skill in the art at the time of invention to have modified the plurality of interior modules in the system of Burkhart '473 such that it would have included flow obstructers as taught to be known by Graf in each of the rows or each of the columns of the assembly or each of the rows and columns of the assembly. The motivation would have been to add dimensional stability to each of the rows and/or columns of the assembly.

*Id.* at 9.

Appellant argues “Burkhart [’473] seeks to have relatively unconstrained flow.” Appeal Br. 6 (citing Burkhart '473, 1:38–40, 4:43–47). Appellant’s position is that this disclosure in Burkhart '473 would have led a person of ordinary skill in the art away from including flow obstructers in interior modules. *Id.* at 10.

In response, the Examiner refers to a related appeal (Appeal Number 2013-007366) and states,

Appellants presented the same argument in the appeal of the parent application, and the Board was not persuaded on this point. The Board found Burkhart (US Patent No. 6,991,402 B2), which is the corresponding patent of Burkhart (US Patent Application Publication No. 2004/0076473 A1) applied against the appealed claims of the instant application, is concerned with excessive lateral loads on the fluid retention/detention structure

and teaches the benefit of structural braces 18 for supporting these loads.

Ans. 5. The Examiner's discussion on this issue points out the fact that the motivation/benefit statement in the Final Office Action 9 (finding that the proposed modification would enhance dimensional stability) corresponds to a similar statement discussed in the appeal of a related case in which the patent corresponding to Burkhart '473 was used as prior art.

In reply, Appellant asserts that the Examiner's proposed modification would change the principle of operation of Burkhart '473 and

the combination cannot be something that the prior art teaches away from. Here, the examiner is proposing adding the "filler plates 20" to the Burkhart reference which describes over and over the desirability to provide relatively unconstrained flow. (*See e.g.* Burkhart Col. 4, II. 43-47, 1, II. 38-40). However, these filler plates would necessarily add flow constraint to the Burkhart system and especially in the interior modules where examiner proposes the addition of the Graf "filler plates 20". Thus, examiner's motivation to combine the references relies on ignoring an express teaching of the Burkhart to avoid constraining flow and favors disclosure of Graf which fails to explicitly teach or suggest use of the "filler plates 20." This is the very picture of a failure to consider the references as a whole.

Ans. 4. Thus, Appellant reiterates the assertion that Burkhart '473 intends to achieve "relatively unconstrained flow." However, Appellant does not address the Examiner's discussion of the benefit the Examiner finds would result from the proposed combination or how this should be balanced against the preference in Burkhart '473 for relatively unconstrained flow.

The Examiner has the better position on this point. We agree with Appellant that Burkhart '473 discloses a preference for *relatively* unconstrained flow. "Another disadvantage of current underground systems

is that they do not provide unrestricted storm water flow throughout the system. So it is desirous to provide a system which can permit relatively unconstrained flow throughout the system.” Burkhart ’473 ¶ 4. “Preferably, each channel has about the same cross section and extends upwardly from the bottom edges to allow relatively unconstrained fluid flow in the longitudinal and lateral directions.” *Id.* ¶ 9.

However, Burkhart ’473 is also concerned with the structural capacity of its side modules. “When the side modules are required to support lateral loads that exceed the structural capacity of the cantilever beam configuration of the side modules, one or more integral structural braces 18 may be added. This variation is illustrated in FIG. 6.” *Id.* ¶ 68. Although this concern is discussed in relation to side modules rather than interior modules, a person of ordinary skill in the art would understand that the entire assembly (including interior modules) must provide structural support. “The modules are suitable for numerous applications, and, by way of example but not limitation, may be located under lawns, parkways, parking lots, roadways, airports, railroads, or building floor areas.” *Id.* ¶ 43. Paragraph 33 of Graf ’975 explicitly teaches “for reasons of structural strength, some or all of the internal arcuate apertures 11 could be provided with filler plates 20, if deemed desirable,” which provides rational underpinning to the Examiner’s reasoning. Accordingly, the Examiner’s determination that it would have been obvious “included flow obstructers as taught to be known by Graf in each of the rows or each of the columns of the assembly or each of the rows and columns of the assembly . . . to add dimensional stability to each of the rows and/or columns of the assembly” is adequate to support the rejection, even if such a modification might further curtail the ability to provide “relatively” unconstrained flow as preferred by Burkhart ’473. *See In re*

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*Urbanski*, 809 F.3d 1237, 1244 (Fed. Cir. 2016) (“As the Board properly found, one of ordinary skill would have been motivated to pursue the desirable properties taught by Wong, even if that meant foregoing the benefit taught by Gross;” *see also Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (“[A] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.”)).

Appellant also argues that Graf '975 does not disclose flow obstructers on *interior* modules. *See* Appeal Br. 6–11. Specifically, Appellant states:

In order to teach the plurality of flow obstructers, examiner relies upon Graf to disclose “a plurality of modules (k) arranged in an assembly and a plurality of low obstructers (20) **located in some of the modules**” (Final Office Action at 8, emphasis added). Notably, examiner seems to acknowledge that Graff does not expressly disclose flow obstructers in interior modules.

*Id.* at 6.

In response, the Examiner finds that Graf '975 discloses including flow obstructers on interior modules. Ans. 4–5 (citing Graf '975 ¶¶ 8, 33).

In this regard, the Examiner states:

as the [Graf '975] relates width and length of the overall fluid retention/detention structure (V) to the number of modules (K) required to assemble the fluid retention/detention structure (V), the examiner finds a clear teaching for adding modules (K) to the width and/or length of the fluid retention/detention structure (V) to increase its overall size thereby creating interior modules.

*Id.* at 4. Thus, according to the Examiner, Graf '975 discloses changing the size of the structure V by adding or subtracting molds K. *Id.* at 4–5.

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Citing paragraph 34 of Graf '975, the Examiner finds that Graf '975 discloses that openings within structure V may include filling plates 20, which the Examiner considers to correlate to flow obstructers. *Id.* Based on this finding, the Examiner concludes that Graf '975, when provided with a sufficient number of modules K, would include interior modules, and these would include flow obstructers. *Id.* at 5.

In reply, Appellant contends that when Graf '975 discloses increasing or decreasing the size of structure V, Graf '975 discloses changing the size of each module K, not changing the number of modules K. Reply Br. 2. Appellant asserts, “[the] Examiner continues to [misconstrue] the disclosure of Graf. [0033] of Graf says that the size of element ‘K’ can be ‘larger or smaller than shown in each direction (height direction and lateral direction).’ Element ‘K’ in Graf is [a]n individual module and not the entire 2x3 structure disclosed.” *Id.*

Even assuming for the sake of argument that Graf '975 does not disclose interior modules, the Examiner has the better position because the original statement of the rejection relied on Burkhart '473 to teach interior modules and did not rely on Graf '975 to teach this element. *See* Final Act. 5–6, 8–10. Indeed, as Appellant correctly points out (Appeal Br. 6), the Examiner appears to acknowledge that Graf '975 does not expressly disclose flow obstructers on interior modules (*see* Final Act. 8). The Examiner’s reasoning for modifying Burkhart '473 to include flow obstructers on the interior modules disclosed by Burkhart '473 (in order to enhance dimensional stability of the assembly) does not rely on the disclosure of any interior modules in Graf '975. *See id.* at 9. The Examiner’s attempt, noted *supra*, to address Appellant’s argument regarding the alleged failure of Graf '975 to disclose interior modules (or flow obstructers therein) was not in

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accordance with the original statement of the rejection and was unnecessary. Appellant does not contest the Examiner's finding that adding flow obstructers would enhance dimensional stability, and this finding is not premised on a finding that Graf '975 discloses interior modules, much less flow obstructers in interior modules. Accordingly, we sustain the Examiner's rejection of claim 1 as unpatentable over Burkhardt '473 and Graf '975. Appellant does not make arguments for the patentability of claims 2, 3, and 5–17 aside from those discussed above regarding claim 1. *See* Appeal Br. 6–11. Accordingly, these claims fall with claim 1, from which they depend.

*Claims 11 and 12*

Claim 11 depends from claim 1 and recites, “at least one of said plurality of interior modules has a side portion having no openings.” Appeal Br. 20 (Claims App.). Claim 12 depends from claim 1 and recites, “at least one of said plurality of interior modules has two side portions having no openings.” *Id.* at 21.

In the statement of rejection of claim 11, the Examiner states:

It would have been obvious for one having ordinary skill in the art at the time of invention to have modified at least one of the interior modules of Burkhardt such that it would have included a side portion having no openings. The motivation would have been to preclude the passage of fluid flow beyond the side portion; i.e., redirect the fluid flow as desired.

Final Act. 13. The Examiner makes a similar statement regarding claim 12. *See id.*

Appellant argues that the Examiner's reasoning is not supported by rational underpinnings because the Examiner has not identified any factual basis supporting the reasoning. Appeal Br. 16–17. In this regard, Appellant

states, “[the] Examiner simply concludes that one reference fails to teach the limitation and then decides that despite this lack of teaching that one of skill in the art would somehow be motivated to have no openings. Graf discloses that the flow obstructer has holes therein.” *Id.* (citing Graf ’975, Fig. 8).

In response, the Examiner states a person of ordinary skill in the art would have found it obvious to further modify the Burkhart system such that at least one interior module would have had one or two side portions with no openings to preclude the passage of fluid beyond the side portions. *As Burkhart teaches exterior modules having side portions with no openings to preclude the passage of fluid beyond the system boundary, it follows that the same structure, side portions with no openings, could be selectively added to interior modules to preclude the passage of fluid within the system boundary.*

Ans. 11 (emphasis added).

In reply, Appellant contends, “[a]gain, [the Examiner’s statement of] motivation is contrary to Burkhart[’]s repeated disclosure of and desire for unconstrained flow in interior modules. Further, each and every alleged flow obstructer in Graf/Nicholson and Nicholas is provided on a portion which has openings.” Reply Br. 7.

We note that, unlike the reasoning used in the rejection of claim 1, the reasoning for the rejections of claims 11 and 12 is simply the reverse of the stated preferred manner of operation disclosed by Burkhart ’473, namely, to provide relatively unrestricted flow. *See* Final Act. 9, 13; Burkhart ’473 ¶ 4. Further, in the rejection of claim 1, the Examiner’s proposed rejection relied on a benefit explicitly disclosed by Graf ’975, enhanced dimensional stability (improved structural strength). *See* Final Act. 9; Graf ’975 ¶ 33. The Examiner identifies no such factual support of any benefit that would support the reasoning presented in the rejections of claims 11 and 12. *See*

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Final Act. 13; Ans. 11. The Examiner's explanation that Burkhart '473 prevents water from *leaving the system* by using exterior modules that have side portions with no openings, and this teaching would have been obvious to apply to *interior* modules (Ans. 11) is not supported by the record or any technical explanation. In contrast, the Examiner's determination, in the rejection of claim 1, that adding flow obstructers to interior modules would *enhance their strength*, just as it would do for exterior modules, is a natural extension of the teachings of paragraph 33 of Graf '975. Accordingly, we do not sustain the rejection of claims 11 and 12 as unpatentable over Burkhart '473 and Graf '975.

*Rejection II— Burkhart '473 and Nicholas '780*

Similar to Rejection I, Examiner finds that Burkhart '473 discloses the elements recited in claim 1 except for a plurality of flow obstructers. Final Act. 5, 10. The Examiner relies on Nicholas '780 to disclose “a fluid retention or detention system comprising a plurality of modules (7) arranged in an assembly and a plurality of flow obstructers (10, 10') located in some of the modules.” *Id.* at 10. The Examiner determines it would have been obvious to a person of ordinary skill in the art to include such flow obstructers in each row or column in Burkhart '473 “to restrain or regulate fluid flow and form settlement pools within each of the rows and/or columns of the assembly.” *Id.*

Appellant contends that the Examiner's reasoning is contrary to the teachings of Burkhart '473, which intends to produce relatively unrestricted flow. Appeal Br. 15.

Appellant has the better position on this point. The Examiner does not adequately explain, via technical reasoning or by reference to objective evidence, why it would have been beneficial to restrain flow in the system

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disclosed by Burkhart '473, considering the intention of Burkhart '473 to achieve “relatively unconstrained flow.” Burkhart '473 ¶¶ 4, 9. Unlike the Examiner’s proposed combination of the teachings of Burkhart '473 and Graf '975, which was supported by rational underpinnings based on the teaching of enhanced *structural strength* in paragraph 33 of Graf '975, the reasoning for the proposed combination of the teachings of Burkhart '473 and Nicholas '780 appears to be based on merely reversing the purpose of the system disclosed by Burkhart '473 from one that facilitates flow to one that constrains flow. Accordingly, we do not sustain the rejection of claim 1 and claims 2–3 and 5–17 depending therefrom as unpatentable over Burkhart '473 and Nicholas '780.

*Rejection III—Burkhart '473 and Nicholson '319*

Using reasoning similar to the reasoning set forth in Rejection II, the Examiner reasons it would have been obvious to add flow obstructers, as taught by Nicholson '319, to the system disclosed by Burkhart '473, “to restrain or regulate fluid flow and form settling chambers within each of the rows and/or columns of the assembly.” Final Act. 11–12.

For the same reason discussed above regarding Rejection II, we do not agree that this reasoning is supported by rational underpinnings. Rather, it is based on reversing the purpose of the system disclosed by Burkhart '473 from one that facilitates flow to one that constrains flow without (in the context of the system in Burkhart '473) any benefit. Accordingly, we do not sustain the rejection of claims 1–3 and 5–17 as unpatentable over Burkhart '473 and Nicholson '319.

CONCLUSION

The Examiner's rejections are AFFIRMED-IN-PART.

More specifically,

DECISION SUMMARY

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-3, 5-17	103(a)	Burkhart '473, Graf '975	1-3, 5-10, 13-17	11, 12
1-3, 5-17	103(a)	Burkhart '473, Nicholas '780		1-3, 5-17
1-3, 5-17	103(a)	Burkhart '473, Nicholson '319		1-3, 5-17
<b>Overall Outcome</b>			1-3, 5-10, 13-17	11, 12

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART