NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

IN RE: CSP TECHNOLOGIES, INC.,
Appellant

2020-1530

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 12/992,749.

Decided: January 21, 2021

DAVID B. GORNISH, Eckert Seamans Cherin & Mellott, LLC, Philadelphia, PA, for appellant. Also represented by MARK T. VOGELBACKER; EDWARD C. FLYNN, Pittsburgh, PA.

WILLIAM LAMARCA, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, for appellee Drew Hirshfeld. Also represented by THOMAS W. KRAUSE, FARHEENA YASMEEN RASHEED, PETER JOHN SAWERT.

Before MOORE, HUGHES, and STOLL, *Circuit Judges*.

STOLL, *Circuit Judge*.

CSP Technologies, Inc. appeals from the final decision of the Patent Trial and Appeal Board affirming the

rejection of certain claims in U.S. Patent Application No. 12/992,749 under 35 U.S.C. § 103. The rejected claims recite a moisture-tight, resealable container for storing diagnostic test strips. Because substantial evidence supports the Board's determination of obviousness, we affirm.

BACKGROUND

The '749 application discloses a "moisture proof, resealable non-cylindrical container and lid assembly" that can be used to "house test strips, pills, capsules, particulate materials, liquids, or other objects or materials and control the ingress and/or egress of moisture." J.A. 57. The body of the container "has a generally tubular sidewall" and a "non-round body sealing surface," and the container's lid includes a "lid sealing surface" and is "configured to seat on the body." J.A. 58. Figures 1 and 2 illustrate an embodiment of the container that has an elliptical cross-section:

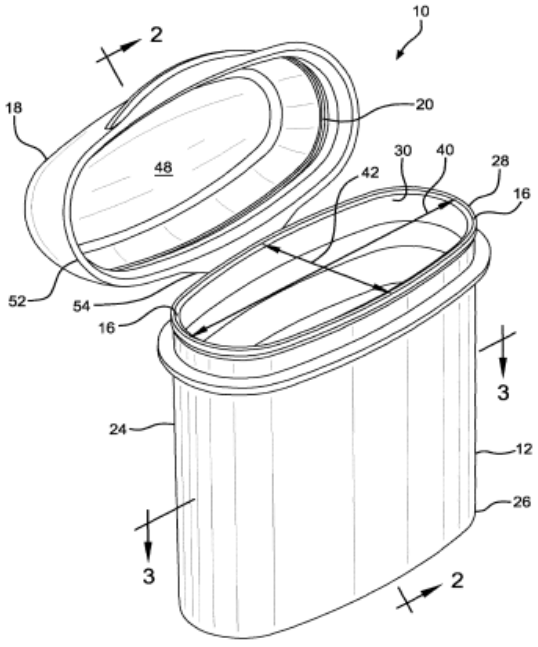

FIG. 1

J.A. 96.

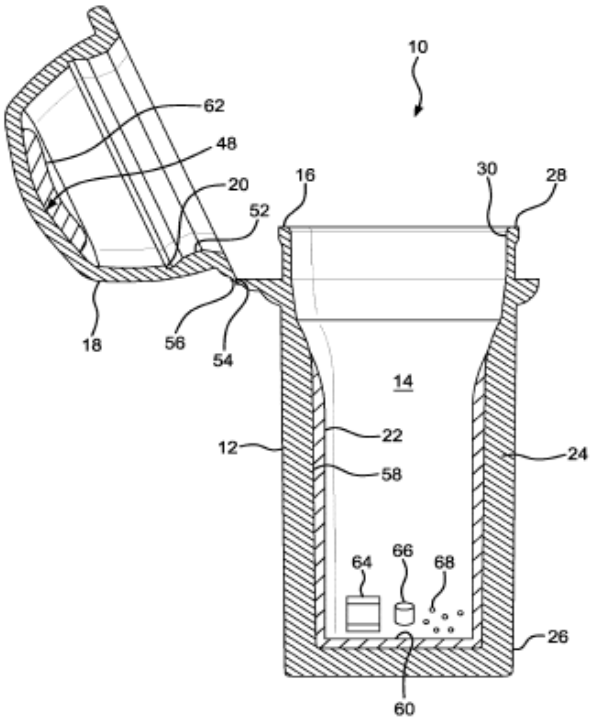

FIG. 2

J.A. 97. The body sealing surface (16) and the lid sealing surface (20) "can be configured to mate to form a seal" between the lid (18) and the body (12) when the lid is seated on the body, which "isolate[s] the interior space 14 from ambient conditions." J.A. 75. In addition, an "integral hinge" (54) "links" the body and lid.[1] *Id.*

Independent claim 14 is illustrative of the claims at issue on appeal:

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[1] CSP refers to this feature whereby the lid is connected to the body by a hinge as the "flip-top" feature. Appellant's Br. 4, 8.

14. A moisture-tight, re-sealable container comprising:

a. *a body that is generally elliptical in cross-section* having a generally tubular sidewall with first and second axially opposed ends, a base, and a dispensing opening axially spaced from the base and at least adjacent to the second end;

b. an interior space disposed generally within the sidewall and at least generally between the base and the dispensing opening;

c. the generally tubular sidewall having a generally elliptical cross-section having a major diameter and a minor diameter, wherein the ratio between the major diameter and the minor diameter of the sidewall cross-section is a value between 1.1 : 1 and 10 : 1, inclusive;

d. a generally elliptical body sealing surface located on an exterior portion of the body and disposed about the dispensing opening, the body sealing surface having a major diameter and a minor diameter, wherein the ratio between the major diameter and the minor diameter of the body sealing surface is a value between 1.1 : 1 and 10 : 1, inclusive;

e. *a lid configured to seat on the body, the lid being linked to the body by a hinge*;

f. a lid sealing surface located on an interior portion of the lid, the lid comprising a lid sidewall extending from the lid sealing surface and terminating at a lid underside;

g. the body sealing surface and the lid sealing surface being configured to mate to form a seal between the lid and the body when the lid is seated on the body; and

> h. the lid and lid sealing surface at least substantially closing the dispensing opening and isolating the interior space from ambient conditions, *wherein the container is configured to store test strips such that exposed ends of the test strips extend beyond the entire dispensing opening of the body and wherein the exposed ends are positioned within the lid when the lid is seated on the body without damaging the exposed ends*;
>
> the container having a moisture ingress rate of 100-1000 micrograms per day, at 80% relative humidity and 22.2°C.

J.A. 967 (emphases added to disputed claim limitations).[2]

The Examiner rejected claims 14–21, 23, 25, 27, 33, and 36–46 under 35 U.S.C. § 103 as being unpatentable

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[2] The other independent claim at issue on appeal, claim 38, similarly recites a moisture-tight, resealable container comprising "a body that is generally elliptical in cross-section" and "a lid configured to seat on the body, the lid being linked to the body by a hinge." J.A. 970. Claim 38 also includes a discrete limitation requiring the lid to have "a lid underside that is axially spaced from the lid sealing surface and from the entire dispensing opening when the lid is seated on the body." *Id.* CSP contends that this limitation corresponds to the limitation in claim 14 that "the container is configured to store test strips such that exposed ends of the test strips extend beyond the entire dispensing opening of the body and wherein the exposed ends are positioned within the lid when the lid is seated on the body without damaging the exposed ends." CSP focuses its appeal on claim 14 and does not present separate arguments for claim 38 or any dependent claims.

over Giraud[3] in view of Hagen[4]. The Examiner rejected claim 29, which ultimately depends from claim 14, under § 103 as being unpatentable over Giraud, Hagen, and further in view of Moon[5].

Giraud discloses "a moisture proof, resealable non-cylindrical container and lid assembly." Giraud col. 2 ll. 9–10. Giraud's container may be "used to hold a pharmaceutical product such as pills or glucose test strips." *Id.* at col. 2 ll. 58–60. As shown in Figures 1 and 2 (duplicated below), the container has a "flip-top" lid, whereby the resealable cap is attached to the body of the container by a hinge that has a recess, which functions as a bending point during the opening and closing of the container. *Id.* at col. 2 ll. 26–31, 38–40. Giraud's container and cap are "non-circular in shape," with "[s]uitable shapes includ[ing] the square, triangle, ellipse, rectangle, trapezoid, and numerous others." *Id.* at col. 2 ll. 45–51.

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3 U.S. Patent No. 7,059,492.
4 U.S. Patent Pub. No. 2003/0133847 A1.
5 U.S. Patent No. 2,727,547.

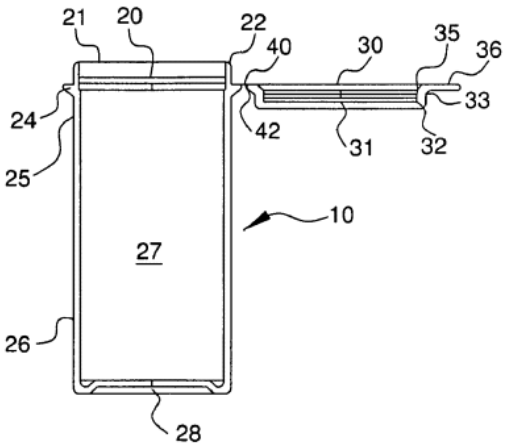

FIG. 1

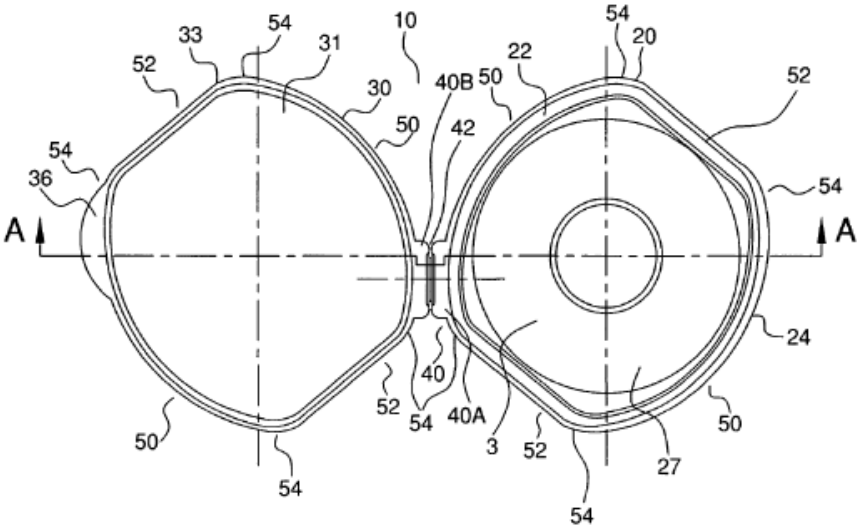

FIG. 2

Id. Figs. 1, 2.

Hagen discloses a container that has a "substantially air and moisture tight seal" and "a housing made of a cover and a base configured to retain a plurality of test strips." Hagen ¶ 14. Hagen teaches that, for certain embodiments, "the height of the base is less than the height of each of the test strips, such that a portion of each of the test strips extends beyond the distal or top edge of the base." *Id.*; *see id.* ¶ 60. Hagen also discloses that the container's housing "may take any of a variety of shapes," including a "substantially elliptical or substantially oval shape." *Id.* ¶ 59. Hagen discloses an exemplary configuration whereby the housing and cap are not attached (a "separable configuration"). *Id.* Hagen further explains that, as compared to prior-art containers, its extended-test-strip container design makes it easier for users, particularly "visually and dextrally impaired" individuals, to retrieve a single test strip from the container "without damaging or contaminating any of [the] test strips." *Id.* ¶ 5; *see id.* ¶¶ 3, 13, 60.

Moon discloses a "leak proof, water resistant and reusable" container with a flip-top lid that can be used for carrying medical supplies. Moon col. 1 ll. 20–22, 62–66. Moon's container is non-cylindrical in shape. *See id.* at col. 2 ll. 26–32, Figs. 1–4.

In a non-final office action, the Examiner found that Giraud teaches most of the limitations of claim 14, but acknowledged that it does not teach a container that is "configured to store test strips such that the entire exposed ends of the test strips extend beyond the dispensing opening of the vial body and wherein the exposed ends are positioned within the lid when the lid is seated on the body without damaging the exposed ends." J.A. 912. The Examiner found that Hagen similarly discloses an air-tight, elliptical container, but also one wherein the "exposed ends of the test strips extend beyond the dispensing opening of the vial body and wherein the ENTIRE exposed ends are positioned within the lid when the lid is seated on the body without damaging the exposed ends." *Id.* (emphasis in

original). The Examiner determined that it would have been obvious to a person of ordinary skill in the art to modify Giraud's container with the configuration of test strips taught in Hagen because "such a configuration allows for easy manipulation of individual test strips." *Id.* (citing Hagen ¶ 60).

The Board affirmed the Examiner's rejection of claims 14–21, 23, 25, 27, 33, and 36–46 over Giraud and Hagen.[6] *Ex Parte Bucholtz*, No. 2018-002139, 2019 WL 7374906, at *5–6 (P.T.A.B. Dec. 26, 2019) (*Decision*). The Board rejected CSP's argument that, because Hagen "discourages" skilled artisans from using a hinge, the containers of Giraud and Hagen "would not have been 'predictably capable of being combined to achieve moisture tightness.'" *Id.* at *3–4 (citations and emphasis omitted). The Board explained that the Examiner's combination did not rely on Hagen's "separable configuration," nor was it "based on a bodily incorporation of" such exemplary configuration into Giraud's container. *Id.* at *4. According to the Board, though Hagen teaches that its "separable configuration advantageously enables substantially air and moisture tight seals to be created and maintained between the cover and base by a variety of means," *id.* (quoting Hagen ¶ 59), that did not mean that an ordinarily skilled artisan "would be discouraged from combining Hagen's ability to store test strips with exposed ends that are not damaged when the lid is closed with Giraud's container," *id.*

Next, the Board rejected CSP's argument that a person of skill in the art would not have reasonably expected to succeed in creating a moisture-tight container having an elliptical shape, a flip-top, and a "heightened lid." The

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[6] The Board reversed, however, the Examiner's obviousness rejection of claims 14, 27, 36–39, and 42–44 over the combination of Hagen and U.S. Patent Pub. No. 2007/0080093 A1 (Boozer).

Board noted that CSP had defined "heightened lid" as "where test strip ends extend beyond the dispensing opening and are positioned within the lid when closed without damaging the strip ends," and had described such feature as being "'designed such that the strips would somehow be rendered accessible and easily extractable, particularly by a patient who has finger swelling and/or arthritis secondary to diabetes,' such as by 'vaulting the lid [to] reduce[] hoop strength (resistance to inward deflection) in the lid, particularly around the longer arcs of the elliptical cross-section.'" *Id.* (alterations in original) (citations omitted). The Board concluded that because claim 14 "does not recite a specific part of the container and how it is so configured or designed, such as the lid having a specific height or structural vaulting designed to reduce hoop strength," CSP's argument and the declaration of inventor Michael Bucholtz submitted in support thereof were "not commensurate with the scope of claim 14." *Id.*

Finally, because CSP had not provided a separate argument for the Examiner's rejection of dependent claim 29, the Board sustained the rejection of this claim over the combination of Giraud, Hagen, and Moon for the same reasons it sustained the rejection of claim 14.

CSP appeals. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

We review the Board's legal determinations de novo, *In re Elsner*, 381 F.3d 1125, 1127 (Fed. Cir. 2004), and its fact findings for substantial evidence, *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000). Substantial evidence is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *OSI Pharms., LLC v. Apotex Inc.*, 939 F.3d 1375, 1381 (Fed. Cir. 2019) (quoting *Consol. Edison Co. v. N.L.R.B.*, 305 U.S. 197, 229 (1938)). "Obviousness is a question of law based on underlying findings of fact." *Id.* at 1382 (quoting *In re Kubin*,

561 F.3d 1351, 1355 (Fed. Cir. 2009)). "An obviousness determination requires finding that a person of ordinary skill in the art would have been motivated to combine or modify the teachings in the prior art and would have had a reasonable expectation of success in doing so." *Id.* (quoting *Regents of Univ. of Cal. v. Broad Inst., Inc.*, 903 F.3d 1286, 1291 (Fed. Cir. 2018)). "Whether a person of ordinary skill in the art would have been motivated to modify or combine teachings in the prior art, and whether he would have had a reasonable expectation of success, are questions of fact." *Id.* (quoting *Regents of Univ. of Cal.*, 903 F.3d at 1291)).

Substantial evidence supports the Board's finding that a person of ordinary skill in the art would have modified Giraud in view of Hagen to arrive at the claimed container. Giraud discloses a moisture-tight, elliptical container nearly identical to the claimed container except for a lid that, when closed, can cover extended test strips, i.e., the "heightened lid" feature. Giraud col. 2 ll. 9–10, 26–31, 38–40, 45–51, 58–60. Hagen discloses a moisture-tight container with extended test strips that are undamaged by a closed lid. Hagen ¶¶ 14, 60. Hagen also teaches that, like Giraud's container, its container can be elliptical in shape. *Id.* ¶ 59. Hagen further teaches that known difficulties with grasping and manipulating test strips created a need for easy manipulation that could be cured with an extended-strip container design. *Id.* ¶¶ 3, 5, 13, 60. Substantial evidence thus supports the Board's and the Examiner's finding that a skilled artisan would have been motivated to use Hagen's test-strip configuration with a container like Giraud's to "allow[] for easy manipulation of individual test strips." *Decision*, 2019 WL 7374906, at *3; J.A. 912.

On appeal, CSP contends that the Board failed to articulate a "rational apparent reason" why a person of ordinary skill would have combined Giraud and Hagen. Appellant's Br. 20. In particular, CSP argues that the Board's "alleged

reason to modify Giraud in view of Hagen (i.e., to allow for 'easy manipulation of individual test strips') has no support in the evidence of record." *Id.* at 20–21; *see id.* at 23 ("There is no evidence of record that the problem Hagen was addressing exists in Giraud's disclosure.").

We disagree. Both the Examiner and the Board cited Hagen's teaching that extending a portion of the test strip "beyond the base assembly . . . enable[s] an individual to easily grasp a single test strip while avoiding many of the problems associated with prior art devices," namely, damage or contamination of the test strips. Hagen ¶ 60; *see id.* ¶ 5. That Hagen rather than Giraud expressly acknowledges the problem in the art and the need for easier retrieval of test strips does not undermine the Board's obviousness determination based on the *combination* of Giraud and Hagen. A conclusion of obviousness "cannot be overcome 'by attacking references individually where the rejection is based upon the teachings of a combination of references.'" *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (quoting *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986)); *see In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Substantial evidence thus supports the Board's finding that a skilled artisan would have been motivated to modify Giraud's container with the extended-test-strip configuration of Hagen based on the benefits of such configuration taught by Hagen.

CSP also contends that the Board "fail[ed] to establish any record" that a person of ordinary skill "would have had a reasonable expectation of success in modifying Giraud in light of the teachings of Hagen to achieve the claimed invention." Appellant's Br. 23. Specifically, CSP argues that the Board disregarded the declarations by inventor Mr. Bucholtz and CSP employee William Spano that, in CSP's view, establish a lack of a reasonable expectation of success in combining the various features of the prior art (i.e., the elliptical, flip-top container of Giraud and the extended-test-strip configuration of Hagen) "into a single

container, while still achieving the exacting moisture tightness standard" of the claims. *Id.* at 25.

Contrary to CSP's assertion, the Board's decision shows that it considered—and rejected as unpersuasive—CSP's evidence on the issue of reasonable expectation of success. The Board accepted the Examiner's reasoning as to why the declarations failed to show that an ordinarily skilled artisan would not have reasonably expected Hagen's extended-test-strip configuration to work with Giraud's elliptical container. Moreover, substantial evidence supports the Examiner's and the Board's finding that a person of ordinary skill would have reasonably expected Hagen's configuration to be workable in Giraud's container. Hagen teaches that elliptical-shaped containers, such as Giraud's, are workable with its configuration. Hagen ¶ 59. Though CSP focuses on Hagen's "separable configuration" embodiment that omits a hinge, neither Hagen nor Giraud discourages incorporating an extended-test-strip feature into an elliptical, hinged container, or otherwise suggests that such combination would be potentially problematic in terms of moisture tightness.

Furthermore, in response to the Board's conclusion that the declaration evidence was not commensurate with the scope of the claims, CSP asserts on appeal that "a vaulted lid alone would present a challenge to achieving the claimed moisture tightness." Appellant's Br. 33; *see* Reply Br. 22 (arguing that a skilled artisan "would have known that the claimed Heightened Lid Feature detracts from moisture tightness because vaulting the lid reduces hoop strength" and CSP "should not be required to claim the negative consequence of reduced hoop strength"). As the Board correctly recognized, however, claim 14 merely requires that the container "store test strips such that exposed ends of the test strips extend beyond the entire dispensing opening of the body" and that the lid form a seal when closed "without damaging the exposed ends." As discussed above, substantial evidence supports the Board's

finding that Hagen teaches this feature and that its configuration can be used with an elliptical-shaped container such as Giraud's.

CONCLUSION

We have considered CSP's remaining arguments but find them unpersuasive. Accordingly, the decision of the Board is affirmed.

AFFIRMED

COSTS

No costs.