NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

VICTAULIC COMPANY,
Appellant

v.

ANDREI IANCU, UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE,
Intervenor

2017-2424, 2017-2426

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2016-00278, IPR2016-00279.

Decided: November 29, 2018

BRYAN PATRICK COLLINS, Pillsbury Winthrop Shaw Pittman LLP, McLean, VA, argued for appellant. Also represented by BENJAMIN LEE KIERSZ.

MEREDITH HOPE SCHOENFELD, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, argued for intervenor. Also represented by THOMAS

W. KRAUSE, MICHAEL S. FORMAN, JOSEPH MATAL, ROBERT J. MCMANUS, FARHEENA YASMEEN RASHEED.

Before PROST, *Chief Judge,* MOORE and STOLL, *Circuit Judges.*

STOLL, *Circuit Judge.*

Victaulic Co. appeals from two inter partes review final written decisions of the Patent Trial and Appeal Board. The Board determined that certain claims of U.S. Patent No. 8,646,165 are unpatentable in view of the prior art. *See Tyco Fire Prods. LP v. Victaulic Co.*, IPR2016-00278, Paper No. 39 (P.T.A.B. June 12, 2017) ("278 Decision"); s*ee also Tyco Fire Prods. LP v. Victaulic Co.*, IPR2016-00279, Paper No. 40 (P.T.A.B. June 12, 2017) ("279 Decision"). Because we conclude that the Board's findings are supported by substantial evidence and its legal conclusions are not erroneous, we affirm.

BACKGROUND

Victaulic is the assignee of the '165 patent, which discloses methods of joining and sealing pipe ends together using a preassembled coupling. The disclosed coupling is comprised of "a plurality of coupling segments attached to one another end-to-end surrounding a central space." '165 patent col. 2 ll. 27–29. The invention allows a user to insert pipe ends into the central space for installation without disassembling the coupling. *Id.* at col. 4 ll. 24–28. The specification asserts that the invention provides an advantage over prior art couplings that "must be assembled onto the pipe ends piece by piece." *Id.* at col. 4 ll. 29–30. Figures 1A and 2 show cross-sectional views of the coupling:

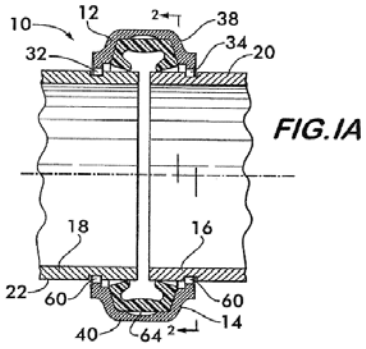
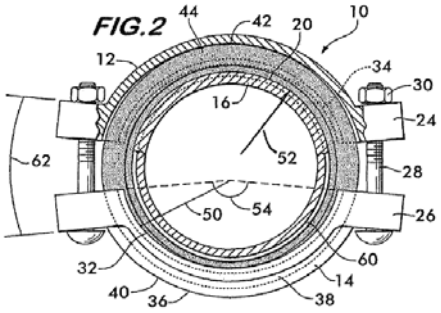


FIG.1A



The disclosed method involves inserting pipe elements 16 and 18 into coupling 10, which is comprised of segments 12 and 14 attached to one another by nut 30 and bolt 28 fasteners. *Id.* at col. 3 ll. 47–52, 58–63. Segments 12 and 14 each have a pair of arcuate surfaces 32 and 34 that project radially inward. *Id.* at col. 3 ll. 64–67. After the pipe ends are inserted into the coupling 10, the fasteners (nuts 30 and bolts 28) are tightened to draw arcuate surfaces 32 and 34 of segment 12 towards those of segment 14. *Id.* at col. 4 ll. 44–48. This brings segments 12 and 14 into contact with the outer surface of pipe elements 16 and 18 and causes segments 12 and 14 to deform such that surfaces 32 and 34 substantially conform to the curvature of pipe elements 16 and 18. *Id.* at col. 4 ll. 48–53. Independent claim 1 and dependent claim 2 are representative[1]:

> 1. A method of securing facing end portions of pipe elements together in end-to-end relationship, wherein said end portions of said pipe elements have an outer surface of substantially cylindrical profile, said method comprising:
>
> using a coupling having a plurality of coupling segments attached to one another at both ends

---

[1] Claims 1–8 are substantively identical to their counterparts, claims 9–16. *See 279 Decision*, at 7–8.

> surrounding a central space, said coupling segments having arcuate surfaces adapted to interface with the outer surfaces of said pipe elements;
>
> while said segments are attached to one another at said both ends, supporting said segments in spaced relation sufficient to permit insertion of said end portions of said pipe elements into said central space;
>
> while said segments are attached to one another at said both ends and supported in spaced relation, axially inserting said end portions of said pipe elements into said central space; and
>
> drawing said coupling segments towards one another so as to engage said arcuate surfaces with said outer surfaces of said pipe elements.

Id. at col. 10 ll. 31–50.

> 2. The method according to claim 1, further comprising deforming said coupling segments so as to conform the curvature of said arcuate surfaces of said coupling segments to said outer surfaces of said pipe elements.

Id. at col. 10 ll. 51–54 ("deform to conform limitation").

Prior art U.K. Patent Application GB 2 211 255 A ("Lewis") discloses several variations of pipe couplings and methods of using the pipe couplings. The summary of invention section teaches the use of "a plurality of segments and fastening means" for larger-sized pipe joints. Lewis at 5 ll. 12–14. The same section discloses three fastening means: "nuts and bolts fitting within bores in lugs," "a toggle," and a "latch arrangement." *Id.* at 5 ll. 8–11.

Lewis's detailed description section discloses two embodiments. In one of them, the coupling housing is comprised of "a single segment split by a single axially

extending slit" and may be supplied to a user "in a pre-assembled condition" with the nut and bolt fastenings loosely positioned. *Id.* at 7 ll. 16–17, 8 ll. 22–25. Once pipe ends are inserted into the coupling, the nut and bolt fastenings are tightened until the axial slit is closed and the housing "is in partial or total contact with the outside diameter of the pipes." *Id.* at 8 l. 25–9 l. 13. Lewis's second embodiment is comprised of two segments. *Id.* at 9 ll. 22–23. These segments are attached to one another at one end by a latch and at the other end by a nut and bolt. *Id.* at 9 l. 23–10 l. 5. Lewis further provides that in "[t]he coupling and joint as herein described . . . the coupling may be easily and quickly fitted to pipe ends, and can be assembled on the pipe ends without any dismantling." *Id.* at 12 ll. 16–21.

Prior art U.K. Patent Application GB 2 218 768 A ("Lane") also discloses several pipe coupling variations and methods of using the pipe couplings. Lane teaches a coupling with an annular enclosure ring containing a tubular body and a gripper ring element. Lane at 7 ll. 15–16. The enclosure ring is comprised of two shells with mating flanges that can be clamped and drawn inwardly by means of fasteners such as nuts and bolts. *Id.* at 7 ll. 17–20. Once the pipes are inserted into the coupling, the clamping fasteners are tightened such that "[t]he gripping edges of the gripper rings are deflected radially inwards towards the pipe surfaces and then into the pipe surfaces." *Id.* at 8 ll. 3–9. The tubular body is also compressed and deforms until contact is made with the outer surfaces of the pipes. *Id.* at 8 ll. 11–14. In Lane's Figure 4 embodiment, the enclosure ring shells carry "gripping formations" in lieu of containing gripper rings. *Id.* at 9 ll. 20–22.

Tyco Fire Products LP filed two petitions requesting inter partes review of claims 1–16 of the '165 patent. *See 278 Decision*, at 2; *see also 279 Decision*, at 2. The Board instituted review of some, but not all, of the claims.

Relevant to this appeal, the Board found that Lewis discloses a multi-segment coupling that permits axial insertion of pipe ends "while the two or more segments are attached to one another at said both ends," as required by claim 1. *279 Decision*, at 18–19. The Board relied on Lewis's descriptions of its one-piece and two-piece couplings and on disclosures and testimony showing that multiple segments and different fastening means can be used. *Id.* at 16–18. Based in part on this evidence, the Board found that Lewis anticipates claims 1, 3, 4, 8, 9, 11, 12, and 16 of the '165 patent. *Id.* at 24–26. The Board also determined that claims 5, 6, 13, and 14 would have been obvious in view of Lewis. *Id.* at 31.

In addition, the Board found that Lane teaches claim 2's "deform to conform limitation," and determined that claims 2 and 10 would have been obvious in view of Lewis and Lane. *Id.* at 36, 49. In IPR2016-00278, the Board concluded that claims 2 and 10 would have been obvious in view of German Patent Application DE 100 06 029 A1 ("Vieregge") and Lane. *278 Decision*, at 35. Victaulic appeals.[2] We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).[3]

---

[2] Tyco withdrew as a party shortly after Victaulic filed its notices of appeal. The Director of the U.S. Patent and Trademark Office intervened under 35 U.S.C. § 143 to defend the Board's decisions.

[3] The parties have not requested a remand to address the non-instituted claims under *SAS Institute, Inc. v. Iancu*, 138 S. Ct. 1348 (2018). We have jurisdiction to rule on these appeals and need not reopen the non-instituted claims and grounds. *See PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018).

DISCUSSION

We review the Board's legal conclusions de novo and its fact findings for substantial evidence. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). A finding is supported by substantial evidence if a reasonable mind might accept the evidence as sufficient to support the finding. *See Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938).

I

"[A] claim is anticipated 'if each and every limitation is found either expressly or inherently in a single prior art reference.'" *King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1274 (Fed. Cir. 2010) (quoting *Celeritas Techs., Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998)). Anticipation is a question of fact that we review for substantial evidence. *See In re Gleave*, 560 F.3d 1331, 1334–35 (Fed. Cir. 2009).

Victaulic argues that Lewis does not disclose claim 1's "axial insertion limitation." Appellant Br. 11. This limitation requires (1) a multi-segment coupling (2) that permits axial insertion of pipe ends (3) while the coupling is fully assembled or preassembled (i.e., the segments are attached to one another at both ends). *See* '165 patent col. 10 ll. 44–47. Victaulic notes that Lewis teaches two embodiments that collectively disclose these three elements. Appellant Br. 11. It argues, however, that there can be no anticipation because Lewis does not disclose these elements in a "single, actually disclosed embodiment." *Id.* at 17. We disagree.

Lewis's summary of invention section discloses the use of "a plurality of segments and fastening means," where the fastening means can comprise a nut and bolt, a toggle, or a latch, and are securable across "the or each slit." Lewis at 4 ll. 23–24, 5 ll. 9–14. These disclosures expressly teach various combinations of multiple seg-

ments with different fastening means. The specification also describes the axial insertion of pipe ends into a fully assembled, single-segment coupling. *See id.* at 8 l. 21–9 l. 13. Further, Lewis's disclosure that the coupling can be assembled on pipe ends "without any dismantling" is not limited to any particular figure or embodiment. *See id.* at 12 ll. 16–21. Lewis thus teaches (1) a multi-segment coupling (2) that permits axial insertion of pipe ends (3) while the coupling is fully assembled. The Board's finding that Lewis discloses the axial insertion limitation is supported by substantial evidence.

Victaulic reads Lewis differently. It argues that the disclosures in Lewis's summary of invention section are limited to describing only the preferred embodiments. Appellant Br. 18–20. According to Victaulic, these disclosures cannot form the basis for an anticipation rejection as they merely preview the two embodiments that come later. *Id.* at 20. We disagree. We are aware of no precedent limiting statements like those in the summary of invention here to describing nothing more than the preferred embodiments. Lewis's discussion of the use of a plurality of segments and three different kinds of possible fastening means is not so limited and is part of what Lewis discloses. *See* Lewis at 5 ll. 9–14.

Our decision in *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376 (Fed. Cir. 2015) is relevant here. There, the challenged claim required the use of a ruthenium binding agent and a PVD coating. *Id.* at 1379. The prior art reference disclosed five binding agents (including ruthenium) and three coating methods (including PVD), but did not describe the specific combination of ruthenium and PVD. *Id.* at 1380. We held that substantial evidence supported the Board's finding that the prior art reference effectively taught fifteen combinations, one of which anticipated the challenged claim. *Id.* at 1383. Lewis is similar to the *Kennametal* reference. While Lewis does not specifically describe axial insertion into a multi-

segment coupling secured by nuts and bolts, it does disclose that a plurality of segments and fastening means, such as a nut and bolt, can be used and that axial insertion is permitted. Lewis at 5 ll. 8–14, 8 l. 21–9 l. 10.

We disagree with Victaulic that our decision in *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008) compels a different result. *See* Appellant Br. 17. In *Net MoneyIN*, we held that it was error for the district court to combine limitations from two separate embodiments in a prior art reference to find anticipation. *Net MoneyIN*, at 1371. While the reference disclosed all of the limitations in the challenged claim, it did not do so in the same way as recited in the claim and did not teach that the limitations could be so combined. *Id.* This case is distinguishable from *Net MoneyIN* because, as mentioned above, Lewis expressly contemplates the use of multiple segments, nuts and bolts, and axial insertion as required by claim 1.

We have considered Victaulic's remaining anticipation arguments and do not find them persuasive. We hold that substantial evidence supports the Board's finding that Lewis anticipates claim 1 and its substantively identical counterpart claim 9. Because Victaulic agrees that the dependent claims "stand or fall" with claims 1 and 9, Appellant Br. 16 n.2, we also hold that substantial evidence supports the Board's finding that Lewis anticipates claims 3, 4, 8, 11, 12, and 16.

II

"The obviousness inquiry entails consideration of whether a person of ordinary skill in the art 'would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and . . . would have had a reasonable expectation of success in doing so.'" *Insite Vision Inc. v. Sandoz, Inc.*, 783 F.3d 853, 859 (Fed. Cir. 2015) (quoting *Procter & Gamble Co. v. Teva Pharm. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009)).

We review the Board's ultimate obviousness determination de novo and its underlying factual findings for substantial evidence. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016).

The Board determined that dependent claims 5, 6, 13, and 14 would have been obvious in view of Lewis alone. Victaulic's sole argument regarding why dependent claims 5, 6, 13, and 14 would not have been obvious in view of Lewis is that Lewis does not disclose the axial insertion limitation in independent claims 1 and 9. Appellant Br. 36–37. As discussed above, substantial evidence supports the Board's finding that Lewis does disclose this limitation. We thus affirm the Board's conclusion that claims 5, 6, 13, and 14 would have been obvious in view of Lewis.

The Board determined that claims 2 and 10 would have been obvious in view of Lewis as modified by Lane. On appeal, Victaulic first argues that substantial evidence does not support the Board's finding that Lane discloses the deform to conform limitation in dependent claims 2 and 10. Appellant Br. 37. This limitation requires that the coupling segments deform such that the arcuate surfaces of the segments conform to the outer surfaces of the pipe. '165 patent col. 10 ll. 51–54.

Lane teaches that, once the coupling fasteners are tightened, "[t]he gripping edges of the gripper rings are deflected radially inwards towards the pipe surfaces and then into the pipe surfaces." Lane at 8 ll. 3–9. The Board relied on this disclosure in finding that Lane teaches the deform to conform limitation. *279 Decision*, at 36. It also relied on expert testimony stating that a person of ordinary skill:

> would have been guided by the description in Lewis and Lane that list plastic, ductile iron or steel for forming the coupling segments (Lewis, Ex. 1102 at 7:17–19; Lane, Ex. 1103 at 7:1–10;

> 9:2–4) to provide a *deformable coupling segment having gripping elements that deform by deflecting* and driving into the pipe surfaces as the nuts and bolts are tightened.

Id. The Board found that this evidence suggests to a person of ordinary skill in the art that having deflection in Lane's Figure 4 embodiment—where grippers are a part of the coupling segment—would be beneficial to "ensure a better and tighter fit around the joint." *Id.* at 36–37. We hold that the above substantial evidence supports the Board's finding that Lane teaches the deform to conform limitation in claims 2 and 10.

After considering the above evidence, the Board found that the Lewis and Lane couplings were similar and that one of ordinary skill in the art would have been motivated to modify Lewis in view of Lane to provide a tighter seal around the pipe joint. *279 Decision*, at 35–39. The Board also found that combining Lewis and Lane "would have resulted in no more than a predictable result." *279 Decision*, at 39. We discern no error in the Board's analysis and affirm its conclusion that claims 2 and 10 would have been obvious in view of Lewis and Lane. We thus do not reach the question of whether claims 2 and 10 would have been obvious in view of Vieregge and Lane. *See 278 Decision*, at 35.

CONCLUSION

For the above reasons, we affirm the Board's decision that claims 1, 3, 4, 8, 9, 11, 12, and 16 of the '165 patent are anticipated by Lewis, that claims 5, 6, 13, and 14 would have been obvious in view of Lewis, and that claims 2 and 10 would have been obvious in view of Lewis and Lane.

AFFIRMED