

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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IN RE ZHENGXU HE,  
*Appellant*

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2026-1177

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. 16/997,933.

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Decided: June 9, 2026

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ZHENGXU HE, Reno, NV, *pro se*.

MONICA BARNES LATEEF, Office of the Solicitor, United  
States Patent and Trademark Office, Alexandria, VA, for  
appellee John A. Squires. Also represented by NICHOLAS  
THEODORE MATICH, IV, AUSTIN PHILIP MAYRON, ROBERT J.  
MCMANUS, MICHAEL TYLER.

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Before DYK, MAYER, and PROST, *Circuit Judges*.

PER CURIAM.

Zhengxu He appeals a decision of the Patent Trial and  
Appeal Board (“Board”) affirming an examiner’s rejection  
of claims 1–22 of U.S. Patent Application No. 16/997,933

(“the ’933 application”) for obviousness. For the following reasons, we affirm.

#### BACKGROUND

The ’933 application is directed to an automated kitchen system that transports and unloads ingredient containers between storage and cooking stations. App’x 29.<sup>1</sup> Independent claim 1 is representative:

1. A kitchen system, comprising:

a storage station comprising:

a storage configured to store a plural number of ingredient containers, wherein each ingredient container is used to contain or hold a food ingredient; and

a container transfer apparatus configured to grip and transfer one of the ingredient containers[,] the container transfer apparatus comprising:

a gripper mechanism comprising a support component and one or more grippers, wherein the gripper mechanism is configured to grip the ingredient container; and

a motion mechanism configured to move the support component of the gripper mechanism, the motion mechanism comprising a motor or other driving mechanism;

a cooking station comprising:

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<sup>1</sup> “App’x” refers to the appendix filed by Mr. He at ECF No. 19.

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a cookware configured to contain or hold a food or a food ingredient;

a motion mechanism configured to move the cookware, the motion mechanism comprising a motor or a driving mechanism; and

a dispensing apparatus configured to move an ingredient container to dispense the food ingredient from one of the ingredient containers to the cookware, the dispensing apparatus comprising:

a gripper mechanism comprising a support component and one or more grippers, wherein the gripper mechanism is configured to grip the ingredient container; and

a motion mechanism configured to move the support component of the gripper mechanism, the motion mechanism comprising a motor or a driving mechanism; and

a vehicle configured to transport one or more of the ingredient containers, wherein the vehicle is configured to stop at the storage station; wherein the vehicle is also configured to stop at the cooking station.

App'x 23.

The examiner rejected claim 1 for obviousness in view of Buehler<sup>2</sup> and He '660.<sup>3</sup> Buehler discloses an automated kitchen system that includes ingredient storage modules, cooking receptacles, and a robotic primary manipulator that retrieves food ingredients and performs cooking tasks. The examiner found that Buehler discloses claim 1, except for: (1) a dispensing apparatus comprising a gripper mechanism and motion mechanism; and (2) a vehicle. For these limitations, the examiner relied on He '660, which discloses an ingredient-cart-unloading apparatus and mini vehicles that stop at storage and cooking stations. The examiner found that a person of ordinary skill in the art would have been motivated to combine these references with a reasonable expectation of success. App'x 156–57.

The Board affirmed the rejection, adopting the findings and rationale provided by the examiner. App'x 4–12. Mr. He timely appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

We review the Board's legal determinations de novo and its underlying factual findings for substantial evidence. *In re Constr. Equip. Co.*, 665 F.3d 1254, 1255 (Fed. Cir. 2011). Whether a skilled artisan would have been motivated to combine references is a question of fact that we review for substantial evidence. *Id.*

On appeal, Mr. He does not dispute that the combined teachings of the references disclose all elements of the claims. Instead, Mr. He argues that substantial evidence does not support the Board's motivation-to-combine finding

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<sup>2</sup> U.S. Patent App. Pub. No. 2005/0193901 (“Buehler”).

<sup>3</sup> U.S. Patent App. Pub. No. 2014/0230660 (“He '660”).

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because the offered motivations, concerning automation, do not apply to Buehler. We disagree.

The Board concluded that the examiner had articulated record-supported reasons for combining Buehler and He '660. App'x 11–12. Those included He '660's explicit disclosures of its automated system “delivering food ingredients . . . in a dependable manner,” and that it “minimizes space required,” “minimizes idle time,” and “reduces labor cost.” App'x 11 (citing He '660 at ¶¶ 2, 4–5). The examiner also explained in his rejection how incorporating He '660's mini vehicles and cart-unloading apparatus into Buehler would automate ingredient movement between storage and cooking stations without having to position the storage and cooking stations in a particular way. App'x 156–57. Doing so would achieve He '660's benefits. *Id.* (citing He '660 at ¶¶ 2, 4–5). This is substantial evidence that supports the Board's motivation-to-combine finding.

Mr. He also argues that He '660's “minimize[] space” rationale depends on locating storage and cooking areas remotely, which contradicts Buehler's teachings of locating its storage and cooking modules adjacent to form a compact unit. However, the examiner found no contradiction. App'x 236–37. Mr. He disagrees with the examiner's fact-finding, but he does not persuasively explain how He '660's benefits, of which “minizimiz[ing] space” is one among many, are exclusive to a particular configuration (i.e., locating a storage module physically distant from the cooking module). Here, the Board agreed with the examiner that incorporating He '660's mini vehicles and unloading system would provide advantages to Buehler's system, as just explained. That finding is supported by substantial evidence and is not contradicted by Buehler's disclosure.

Next, Mr. He argues that the examiner's proposed modification would not work in Buehler because He '660's unloading mechanism requires engagement bars, which would interfere with Buehler's rotating storage shelves.

Mr. He's argument is premised on He '660's engagement-bar mechanism being physically incorporated into Buehler. But as the Board noted, "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference,' but rather 'what the combined teachings of those references would have suggested.'" App'x 9 (quoting *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)). Moreover, the examiner found that "fixing a bar to an ingredient container, as taught by He [660], would not prevent one of ordinary skill in the art from attaching a bar to Buehler's food ingredient containers." App'x 235–36. The Board agreed with the examiner, citing that finding, App'x 16, and determining He '660's unloading apparatus to be "combinable with Buehler's food preparation system," App'x 10. In all, the Board found that Mr. He "ha[d] not sufficiently shown that the combination would be uniquely challenging or difficult," and that the examiner "provided sufficient motivation for modifying Buehler with the teachings of He '660." App'x 12. We see no error in the Board's analysis in this regard.

Finally, Mr. He argues that the Board violated the Administrative Procedure Act ("APA") by failing to meaningfully respond to his arguments that (1) the motivation-to-combine finding is contradicted by Buehler and (2) the proposed modification would not work in Buehler. But the record shows that the Board confronted the substance of Mr. He's contentions and explained why it found them unpersuasive. App'x 10–12 (rejecting Mr. He's contradiction argument because the examiner provided "numerous possible benefits gained from the combination"); App'x 9–12 (rejecting Mr. He's incompatibility argument and explaining the test for obviousness is not bodily incorporation, but what the combined teachings would have suggested to a skilled artisan). Mr. He fails to demonstrate an APA violation on this record.

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CONCLUSION

We have considered Mr. He's remaining arguments and find them unpersuasive. For the foregoing reasons, we affirm the Board's decision.

**AFFIRMED**

COSTS

No costs.