

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

ACCO BRANDS CORPORATION,
Appellant

v.

FELLOWES, INC.,
Appellee

2015-1045

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. 95/001,723.

Decided: February 22, 2016

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represented by WILLIAM P. ATKINS, ROBERT M. FUHRER.

Before NEWMAN, CHEN, and HUGHES, *Circuit Judges*.
CHEN, *Circuit Judge*.

This case arises from an inter partes reexamination that ACCO Brands Corporation (ACCO) sought—and the Patent and Trademark Office instituted—against a patent owned by Fellowes, Inc. (Fellowes). After the examiner rejected four claims on obviousness grounds, Fellowes appealed to the Patent Trial and Appeal Board (Board). The Board reversed the rejections, finding that the examiner had failed to make a prima facie showing of obviousness. We reverse this finding and hold that the examiner made this prima facie showing. We remand the Board’s decision so it may further consider two issues that it did not reach below: (1) whether Fellowes’ rebuttal evidence changes the outcome on obviousness and (2) whether the dependent claims at issue provide independent grounds of nonobviousness.

BACKGROUND

ACCO and Fellowes compete in the paper shredder business. Fellowes obtained U.S. Patent No. 7,963,468, (the ‘468 patent) claiming a shredder that prevents paper jams using a combination of two sensors. One, a presence sensor, detects whether paper is present in the shredder’s feed. The other, a thickness sensor, detects whether the stack of paper in the feed is thick enough to risk exceeding the shredder’s capacity. The patent further claims a controller that turns the shredder motor on only when (1) the presence sensor indicates paper is present in the shredder’s feed and (2) the thickness sensor detects that the paper in the feed does not exceed the shredder’s thickness capacity. Fellowes notes that this set of claim elements results in a shredder that exhibits the desirable behavior of starting only when a user feeds an appropriate amount of paper into the shredder and not turning the motor on when the user has exceeded the shredder’s capacity. Independent claim 11 is representative for our purposes:

A shredding machine for shredding sheet material, the machine comprising:

a feed-aperture;

an electric cutting mechanism, the feed-aperture being configured to receive multiple sheets and direct said sheets in a feeding direction towards the cutting mechanism for shredding;

a controller coupled to the cutting mechanism;

a thickness detector coupled to the controller, the thickness detector having a part extending into the feed-aperture and being moveable such that said part will be engaged by sheet material inserted in the feeding direction into the feed-aperture prior to reaching the cutting mechanism, and moved from a first position to a second position as a result of said engagement, if the sheet material exceeds a predetermined thickness;

said controller being configured to, during insertion of the sheet material into the feed-aperture, permit energization of the cutting mechanism prior to the part of the thickness detector reaching the second position and prevent energization of the cutting mechanism responsive to said part of the thickness detector reaching the second position; and

a maximum thickness indicator for providing a visual or audible indication¹ to a user of the machine that energization of the cutting mechanism is prevented due to the sheet material moving said part of the thickness detector to said second position;

further comprising a presence sensor along the feed-aperture for detecting a presence of the sheet material inserted into the feed-aperture, the controller being coupled to the presence sensor and the maximum thickness indicator,

wherein the controller is configured to start energization of the cutting mechanism only in response to the presence sensor detecting the presence of the sheet material inserted into the feed-aperture and the part of the thickness detector not having been moved to the second position by the sheet material;

wherein the controller is configured to prevent the starting of energization of the cutting mechanism and also actuate the maximum thickness indicator to provide the visual or audible indication in response to the part of the thickness detector moving to the second position.

'468 patent, claim 11.

¹ Fellowes does not contend before us that its claimed “maximum thickness indicator for providing a visual or audible indication” provides an independent basis of nonobviousness. We thus do not consider this limitation.

Both types of sensors as well as a controller that turns the shredder motor on and off were known in the shredder art. One prior-art reference, Japanese Patent No. 57-70445 (JP '445),^{2, 3} discloses a shredder with a thickness sensor. It explains that the shredder cuts power to the motor when the thickness sensor detects that the user has fed too much paper into the shredder. It also describes the prior-art solution to jamming upon which its invention attempts to improve. Prior-art shredders, it explains, contained jam-detection circuitry that monitors the current to the shredder motor for a spike that would indicate a jam has occurred. Upon detecting a jam, a shredder with this circuitry cuts power to the motor, preventing damage to the shredder's mechanical components. JP '445 explains that this prior-art jam-detection circuitry suffers from a significant weakness: it does not shut down the shredder's motor until the paper jam has already occurred. J.A. 1047. JP '445's system offered the distinct advantage of avoiding paper jams by placing a thickness sensor in the shredder's feed. Whenever the thickness sensor detects the user has inserted too much paper into the feed, JP '445's thickness sensor transmits a signal to disconnect the motor's power. JP '445 does not disclose a presence sensor, or, for that matter, any other way to turn on the shredder motor.

² The record before us contains an English translation of this patent, whose accuracy no party challenges. See J.A. 1047–49. We rely on this English translation for JP '445's contents.

³ The applicant cited JP '445 to the examiner during the original prosecution of the application leading to the '468 patent.

A variety of references⁴ show prior-art shredders with presence sensors that turn the shredder motor on when a user feeds paper into the shredder. J.A. 1094–168.

Two of the references showing presence sensors also disclose controllers to turn the motor on and off. J.A. 1102, 1113, 1118, 1125, 1152, 1159–60. These controllers are connected to the presence sensor, and upon receiving a signal from the presence sensor that paper is present, they allow power to flow to the motor. These two references also disclose jam-detection circuitry similar to that described in JP '445. J.A. 1097, 1100, 1101, 1153, 1160. Upon receiving a signal from the jam-detection circuitry indicating that a jam has occurred, the prior-art controllers cut power to the motor.

Because the prior art contains both sensors in Fellowes' claims and a controller, Fellowes bases its position that it invented something nonobvious on its particular combination of these prior-art elements.

The day that the '468 Patent issued, Fellowes sued ACCO for infringement. ACCO then requested—and the Patent and Trademark Office granted—an inter partes reexamination of the patent. The district court stayed Fellowes' infringement suit pending the outcome of this reexamination.

On reexamination, the examiner found a prima facie case that independent claims 9 and 11 would have been an obvious combination of the prior art thickness and presence sensors and the prior art controller in a paper shredder. He similarly found that claims 10 and 12,

⁴ The references in our record including presence sensors are *GBC SHREDMASTER Models 2230S, 2250X Paper Shredders Service Manual* (1997); U.S. Patent No. 6,550,701; U.S. Patent No. 5,775,605; U.S. Patent No. 4,842,205; and U.S. Patent No. 3,724,766.

which depend on claims 9 and 11, respectively, would have been prima facie obvious based on these references and an additional reference. Fellowes presented rebuttal evidence, alleging a long-felt but unmet need. After considering the rebuttal evidence, the examiner maintained the § 103 rejection of claims 9–12.

Fellowes appealed to the Board. The Board agreed with the examiner's findings that the prior art contained the claimed presence sensor, the claimed thickness sensor, and a controller to turn the motor on and off. *See ACCO Brands Corp. v. Fellowes, Inc.*, No. 2013-010043, 2014 WL 492182, at *5, *7–11 (PTAB Feb. 6, 2014) (Board Opinion). It focused, however, on the claims' requirement that the controller be configured to start the motor only when the presence sensor detects paper is present and the thickness sensor detects the paper stack is not too thick. *Id.* The patent owner sees this requirement as central to the patent's inventive concept: the claimed shredder improved upon the prior art, in the patent owner's view, because it would start the shredder only when all conditions for successful shredding were satisfied rather than starting the shredder and then stopping after detecting a jam. The Board determined that, even if an ordinary artisan might have found it obvious to combine the two prior-art sensors and the prior-art controller, he would not have found it obvious to configure this controller as claimed. *Id.* at *14. It therefore found the examiner not to have made out a prima facie case that independent claims 9 and 11 would have been obvious. *Id.* at *14. Based on this finding, it concluded that all four claims at issue would have been nonobvious and that it did not need to consider Fellowes' rebuttal evidence or the examiner's additional evidence that dependent claims 10 and 12 would have been obvious. *Id.*

After the Board denied ACCO's request for rehearing, ACCO appealed to us.

ANALYSIS

We have jurisdiction over final determinations of the Board under 35 U.S.C. § 141(b) and 28 U.S.C. § 1295(a)(4)(A). We review the Board’s legal conclusions de novo and its factual findings under a substantial-evidence standard. *Q.I. Press Controls, B.V. v. Lee*, 752 F.3d 1371, 1378–79 (Fed. Cir. 2014).

A claim is unpatentable “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art . . .” 35 U.S.C. § 103 (2006);⁵ *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). During patent examination and reexamination, the concept of prima facie obviousness establishes the framework for the obviousness determination and the burdens the parties face. *See Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1384 (Fed. Cir. 2015). Under this framework, the patent examiner must first set forth a prima facie case, supported by evidence, showing why the claims at issue would have been obvious in light of the prior art. *In re Sullivan*, 498 F.3d 1345, 1351 (Fed. Cir. 2007). Once the examiner sets out this prima facie case, the burden shifts to the patentee to provide evidence, in the prior art or beyond it, or argument sufficient to rebut the examiner’s evidence. *Id.* The examiner then reaches the final determination on obviousness by weighing the evidence establishing the prima

⁵ Congress amended § 103 in the 2011 America Invents Act to account for the act’s first-inventor-to-file scheme. Given the effective filing date of the patent’s claims, we apply the version of § 103 preceding the America Invents Act’s changes. *See Leahy-Smith America Invents Act*, Pub. L. No. 112–29, § 3(n)(1), 125 Stat. 284, 293 (2011).

facie case with the rebuttal evidence. *See Leo Pharm. Prods. v. Rea*, 726 F.3d 1346, 1357 (Fed. Cir. 2013) (“[C]onsideration of the objective indicia is part of the whole obviousness analysis, not just an after-thought.”) (emphasis omitted). If this weighing shows obviousness by a preponderance of the evidence, then the claims at issue were unpatentable. *Rambus Inc. v. Rea*, 731 F.3d 1248, 1255 (Fed. Cir. 2013).

As Fellowes concedes before us, the Board correctly found that prior-art shredders contained the claimed presence sensor, the claimed thickness sensor, and a controller to turn the motor on and off. *See Board Opinion* at *5–11.

It is unclear from the Board opinion whether the Board would find that it would have been obvious to combine the prior-art presence and thickness sensors and the prior-art controller in a single shredder. Regardless, such a combination would have been obvious for two independent reasons.

First, an ordinary artisan would have found motivation to modify the shredder with the thickness sensor disclosed in JP ’445 to add a presence sensor and controller. JP ’445 does not explicitly disclose any way to turn on the shredder motor, explaining only that its invention involves cutting power to the motor when the thickness sensor detects that too much paper has been fed into the shredder. An ordinary artisan would understand that in order for this shredder to function, the user must have some way to turn the shredder motor on in the first place. The prior art discloses presence sensors and controllers as a common way to turn a shredder motor on. The ordinary artisan would therefore find motivation to modify the invention JP ’445 discloses to include this well-known means to turn the shredder motor on. *See KSR Int’l Co.*, 550 U.S. at 416 (“The combination of familiar elements

according to known methods is likely to be obvious when it does no more than yield predictable results.”).

Second—and alternatively—an ordinary artisan would have been motivated to modify a prior-art shredder containing a presence sensor and controller to add a thickness sensor. The Board correctly found that “the problem of shredder jamming was known as of the filing date of the ’445 patent.” Board Opinion at *4. The inclusion of jam-detection circuitry—an imperfect attempt to solve this same problem—in other prior art shredders further supports this conclusion that the problem was known in the art. This problem would have motivated an ordinary artisan to add a thickness sensor, a solution known in the art, to a shredder, including known shredders, containing a presence sensor and controller. *See KSR Int’l Co.*, 550 U.S. at 419–20 (“One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims.”).

Under either of these scenarios, a skilled artisan would have been motivated to connect the prior-art presence sensor and thickness sensor to the prior-art controller as inputs it would use to determine whether to turn on the shredder motor. Prior-art shredders connected this controller to the presence sensor and to the jam-detection circuitry. In the obvious combinations discussed above, the thickness sensor replaces the jam-detection circuitry as the means to prevent shredder jamming. The examiner thus properly found that it would have been prima facie obvious to replace the controller input from the jam-detection circuitry with an input from the thickness sensor.

Rather than finding that it would have been nonobvious to combine the prior-art sensors and controller, the Board found that an ordinary artisan would not have

found it obvious to configure the controller as claimed: to turn the motor on only when the presence sensor detects paper is present and the thickness sensor detects that the paper stack is not too thick. Board Opinion at *14. Substantial evidence does not support this finding; to the contrary, the evidence compels the opposite conclusion.

The prior art consistently locates the two sensors at issue in the shredder's feed, and no party disputes that an ordinary artisan would have found this the obvious location for the combination of sensors. The ordinary artisan would then be left with two design choices: he could place the thickness sensor either above the presence sensor in the feed, so that the paper contacts the thickness sensor before the presence sensor, or below so that the paper contacts it after. Each of these two design choices is an obvious combination of prior-art elements. *See KSR Int'l Co.*, 550 U.S. at 421 ("When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense."). The first choice, with the thickness sensor above the presence sensor in the feed, necessarily satisfies the claim limitations. In this configuration, the paper would first contact the thickness sensor, and the controller would prevent power from flowing to the motor if the user has inserted too much paper. Then, the paper would contact the presence sensor, and, assuming the thickness sensor did not indicate that the paper was too thick, the controller would turn the motor on. The motor would therefore turn on only when the thickness sensor detects that the paper is not too thick and the presence sensor detects that the paper is present, and it will be off in all other circumstances. Fellowes' counsel acknowledged at oral argument that this particular configuration meets the

limitations of its independent claims. Oral Argument at 22:48–23:50, *ACCO Brands Corp. v. Fellowes, Inc.*, No. 2015-1045 (Fed. Cir., Sept. 8, 2015, available at <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2015-1045.mp3>). Fellowes correctly notes that the other configuration of the two sensors—where the presence sensor is above the thickness sensor—would result in slightly different shredder behavior. Were a user to feed too much paper into that shredder, the controller would briefly turn the motor on as the paper passes by the presence sensor and then turn it off as the too-thick paper stack passes by the thickness sensor.⁶ Fellowes asserts that this behavior falls outside of the claims’ scope. But even if one possible obvious combination falls outside of the claims, it fails to undercut the fact that the other possible obvious combination lies within their scope. The examiner therefore successfully set out a prima facie case that claims 9 and 11 would have been obvious.⁷

CONCLUSION

We reverse the Board’s determination that the examiner did not set forth a prima facie case of obviousness. Based on the Board’s finding of no prima facie case as to claims 9 and 11, it appropriately declined to reach (1) the examiner’s prima facie evidence that claims 10 and 12 are obvious and (2) Fellowes’ rebuttal evidence. We decline to take either category of evidence up for the first time on appeal and instead remand this case to the Board so that it may consider these two issues.

⁶ One might conceivably modify the prior-art controller to eliminate this behavior, but there was no evidence in the record about the obviousness of such a modification.

⁷ Fellowes makes no additional arguments against the examiner’s prima facie case beyond those on which the Board relied.

REVERSED AND REMANDED

No costs.