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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID W. CARR,
DALE E. MUELLER, BASAK OGUZ,
and JON D. STRAIT

Appeal 2019-001846
Application 15/131,682
Technology Center 1700

Before MICHAEL P. COLAIANNI, GEORGE C. BEST, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

BEST, *Administrative Patent Judge*.

DECISION ON APPEAL

The Examiner rejected claims 1–4, 6–13, and 15–22 of Application 15/131,682 under 35 U.S.C. § 103(a) as obvious. Final Act. 3 (March 28, 2018). Claims 5 and 14 have been canceled. Appellant¹ seeks reversal of the rejection pursuant to 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6(b).

For the reasons set forth below, we *reverse*.

¹ 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 Whirlpool Corp. Appeal Br. 2.

I. BACKGROUND

The '682 Application describes an automated washing machine for treating laundry. *See Spec.* ¶¶ 6–7. The '682 Application describes that washing machines may provide improved laundry cleaning by utilizing a clothes mover having a low profile, i.e., an impeller. *Id.* at ¶ 5. According to the Specification, oscillation of the described impeller causes a beneficial inverse toroidal movement of laundry items in reduced wash liquid levels. *Id.* at ¶ 35.

Claim 1 is representative of the '682 Application's claims and is reproduced below from the claims listing in the Claims Appendix to the Appeal Brief:

1. A washing machine for treating laundry according to at least one automatic cycle of operation, comprising:

a basket having a bottom wall and a peripheral side wall extending upwardly from the bottom wall to at least partially define a treating chamber with an open top, with the basket rotatable about a first rotational axis;

an impeller located within the treating chamber, proximate the bottom wall, and having a base with a periphery and a centrally located hub concentric with a second rotational axis about which the impeller reciprocally rotates;

a plurality of non-flexible vanes located on the base in a radial spaced relationship relative to each other and extending away from the hub toward the peripheral side wall and terminating at the periphery; and

flexible vanes having a lower edge continuously mounted to and extending upwardly from the base to terminate in a tip and located only in an outer radial half of the base between the non-flexible vanes.

Appeal Br. (Claims App.) 24 (emphasis added).

II. REJECTION

On appeal, the Examiner maintains the following rejection:

1. Claims 1–4, 6–13, and 15–22 are rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Duncan² and Smith.³ Final Act. 3.

III. DISCUSSION

- A. *Rejection of claims 1–4, 6–13, and 15–22 as unpatentable over the combination of Duncan and Smith.*

Appellant argues for the reversal of the obviousness rejection of claims 1–4, 6–13, and 15–22 on the basis of limitations present in independent claims 1 and 13. Appeal Br. 5–22. We select claim 1 as representative. 37 C.F.R. § 41.37(c)(1)(iv). Appellant also presents a separate argument for the patentability of claims 21 and 22. *Id.* at 22–23. Accordingly, claims 2–4, 6–13, and 15–20 will stand or fall with claim 1, and we will address claims 21 and 22 separately.

- a. *Claims 2–4, 6–13, and 15–20*

In rejecting claim 1, the Examiner found that Duncan’s washing machine describes each component of the claimed automatic washing machine, except that Duncan is silent regarding flexible vanes. Final Act. 3 (citing Duncan Figs. 1, 4). Specifically, the Examiner found that Duncan’s wash plate 124 discloses or suggests the claimed “impeller.” Final Act. 3; *see* Duncan Fig. 1. The Examiner, however, found that Duncan’s alleged impeller does not possess flexible vanes, wherein each flexible vane: (i) has

² US 2007/0101772 A1, published May 10, 2007.

³ US 3,738,130, issued June 12, 1973.

a lower edge continuously mounted to and extending upwardly from the wash plate's base to terminate in a tip and (ii) is only located in an outer radial half of the wash plate's base, between non-flexible vanes 404. Final Act. 3.

Duncan's Figure 4, reproduced below, illustrates a perspective view from above a wash plate:

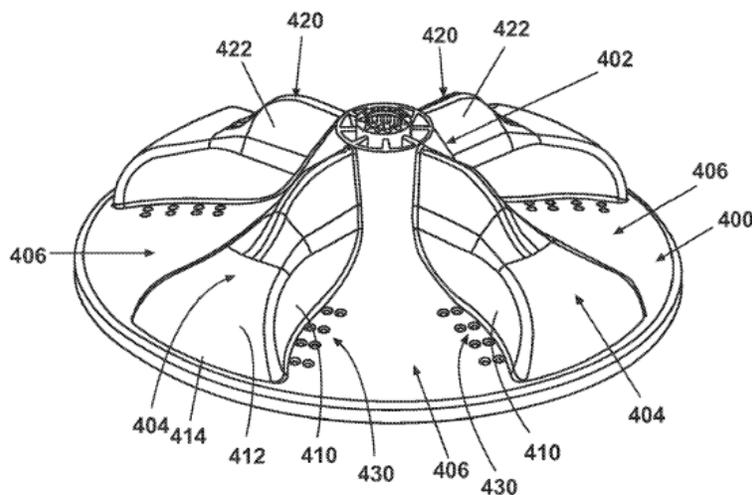
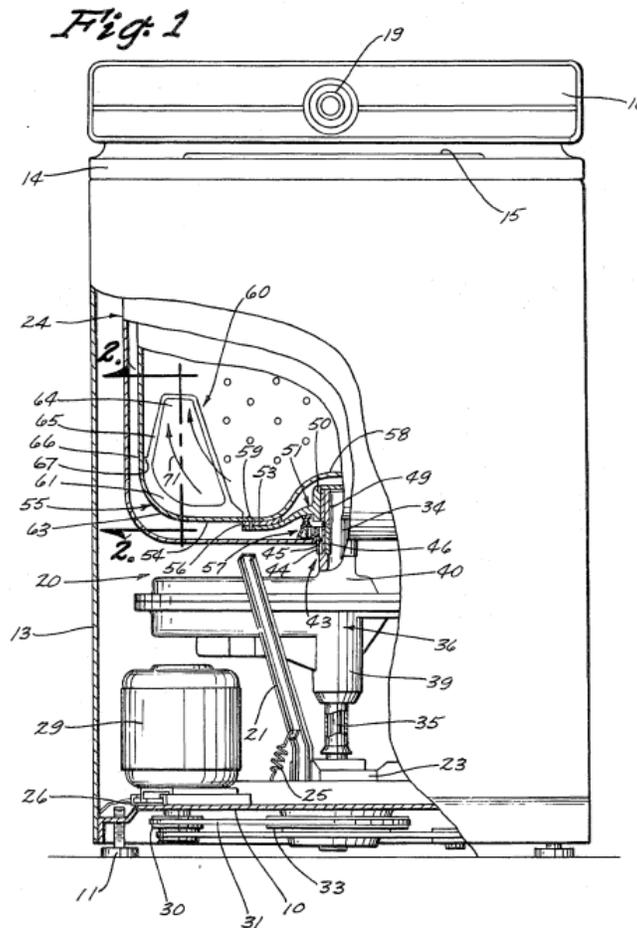


Fig. 4

Duncan's Figure 4 illustrates features of a wash plate, which rises from circular periphery 400 to a raised central hub divided into alternating raised vanes 404 and lower sectors 406. Duncan ¶ 121; Fig. 4.

The Examiner found that Smith teaches a washing machine having flexible vanes 60 which disclose or suggest the limitations missing from Duncan's wash plate. Final Act. 3 (citing Smith Fig. 1). Smith's Figure 1,

reproduced below, illustrates an automatic washer with fragmentary portions removed to show interior components:



Smith's Figure 1 illustrates, *inter alia*, an automatic washer having a chamber, defined by inner tub 55, wherein at least one fixed agitating blade 60 moves laundry items in washing liquid. Smith 3:26-31; Fig. 5.

The Examiner found that Smith describes flexible vanes 60 that provide "side-to-side movement that enhances agitation and improves the movement of articles within washing fluid." Final Act. 4 (citing Smith 4:9-17). The Examiner determined that it would have been obvious to one of ordinary skill in the art at the time of the invention to include Smith's flexible vanes 60 between Duncan's non-flexible vanes 404. Final Act. 3-4. According to the Examiner, the ordinarily skilled artisan would have been

motivated to modify Duncan's wash plate accordingly "in order to realize the benefits and advantages of both Duncan and Smith." *Id.* at 4.

Appellant argues, *inter alia*, that the Examiner's proposed modification would have frustrated the purpose of Duncan's wash plate 124 to provide toroidal movement of laundry items at the basket's outer edges. Appeal Br. 17. Appellant further argues that the Examiner reversibly erred because the proposed "combination of Duncan and Smith would [have] destroy[ed] the benefits of both Duncan and Smith." *Id.*

Appellant's arguments are persuasive.

Based on Duncan's teachings, we agree with Appellant that modifying Duncan's wash plate 124 so that Smith's flexible vanes 60 are placed between Duncan's raised non-flexible vanes 404 would have frustrated the purpose of side surfaces 410. Duncan explicitly discloses that, as a result of wash plate 124's oscillation, side surfaces 410 drag laundry items inward towards the central hub and, thereafter, upward to initiate inverse toroidal rollover. Duncan ¶¶ 120, 126–27; Fig. 4. Duncan further discloses that wash plate 124's oscillation induces radially outward water flow. *Id.* at ¶ 126. Thus, laundry items that have been moved toward the raised central hub and upwardly away from side surfaces 410 are subsequently moved radially outward to continue inverse toroidal rollover. *See id.* at Fig. 4.

Figure 5 of the Specification, reproduced below, illustrates inverse toroidal rollover, which results from an exemplary impeller's movements:

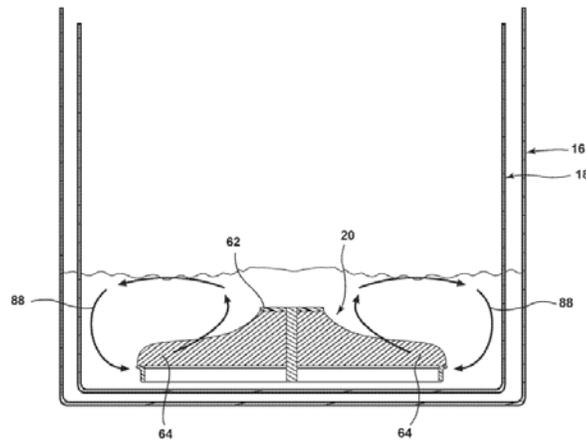


FIG. 5

Figure 5 of the Specification illustrates inverse toroidal movement 88 taken by items of laundry (not shown) relative to impeller 20 during oscillation of impeller 20. Specification ¶ 35; Fig. 5. Inverse toroidal rollover, as described in Duncan and the Specification, involves *a downward force* on the laundry items and washing fluid near the outer radial half of an impeller's base. *See, e.g., Spec. Fig. 5.*

On the other hand, Smith explicitly discloses that the net result of the oscillation of the blades [60] and the back and forth flexing of the blade tip is *an upward force* on the articles and the washing fluid adjacent the blades so that there is *a generally upward circulation of the washing fluid and fabrics* at the agitator blades 60 *as indicated by the arrows 71.*

Smith 4:53–58 (emphasis added); Fig. 1. We, therefore, are persuaded by Appellant that Smith's flexible vanes 60 would have destroyed the *downward force* sought by Duncan on the laundry items and washing fluid in the outer radial half of the impeller's base.⁴ *See In re Ratti*, 270 F.2d 810,

⁴ The '682 Application describes that washing machines may provide improved laundry cleaning by utilizing an impeller, as opposed to using a vertical axis agitator with a tall profile. Spec. ¶ 5. We note that Smith's

813 (CCPA 1959) (holding that “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious”).

The Examiner responds to Appellant’s argument by asserting that “Appellant did not explain how *its* flexible vanes do not frustrate its own purpose to impart inverse toroidal movement.” Answer 6. The Examiner, however, bears the initial burden of establishing a *prima facie* case. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). On these findings, the Examiner has not established that a person of ordinary skill in the art would have recognized that the teachings of Duncan and Smith can be combined to provide inverse toroidal rollover. *See KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 420 (2007).

In view of the foregoing, we determine that the Examiner reversibly erred in rejecting claim 1 as unpatentable over the combination of Duncan and Smith. Accordingly, we also affirm the rejection of independent claim 13; claims 2–4 and 6–12, which depend from claim 1; and claims 15–20, which depend from claim 13.

b. Claims 21 and 22

Because we conclude that the Examiner has not established a *prima facie* case of obviousness for independent claims 1 and 13, we reverse the rejection of claims 21 and 22—which depend from claims 1 and 13, respectively—without need to consider Appellant’s arguments specific to claims 21 and 22.

blade 60 appears to be such a vertical axis agitator having a tall profile. *See* Smith 4:53–58; Fig. 1.

IV. CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-4, 6-13, 15-22	103(a)	Duncan, Smith		1-4, 6-13, 15-22

REVERSED