

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AQ TEXTILES, LLC,
Petitioner,

v.

ARUN AGARWAL,
Patent Owner.

Case PGR2017-00042
Patent 9,493,892 B1

Before BART A. GERSTENBLITH, CARL M. DEFRANCO,
KEVIN W. CHERRY, *Administrative Patent Judges.*

CHERRY, *Administrative Patent Judge.*

DECISION
Institution of Post-Grant Review
37 C.F.R. § 42.208

I. INTRODUCTION

AQ Textiles, LLC (“Petitioner”) filed a Petition (Paper 2, “Pet.”) for post-grant review of claims 1–23 of U.S. Patent No. 9,493,892 B1 (Ex. 1001, “the ’892 patent”). Arun Agarwal (“Patent Owner”) filed a Preliminary Response (Paper 9, “Prelim. Resp.”). Under 35 U.S.C. § 324, a post-grant review may be instituted only if “the information presented in the petition . . . demonstrate[s] that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” We determine that the information presented in the Petition demonstrates that it is more likely than not that Petitioner would prevail in showing that the challenged claims are unpatentable. Pursuant to 35 U.S.C. § 324, we institute a post-grant review as to claims 1–23 of the ’892 patent.

A. Related Proceedings

Pending before us is another post-grant review proceeding, PGR2017-00041, which involves the same parties and a related patent, U.S. Patent No. 9,481,950 B2. We are not aware of any related litigation involving the ’892 patent. Pet. 83; Paper 7, 1.

B. The ’892 Patent

The ’892 patent, titled “Proliferated Thread Count of a Woven Textile by Simultaneous Insertion within a Single Pick Insertion Event of a Loom Apparatus Multiple Adjacent Parallel Yarns Drawn from a Multi-Pick Yarn Package,” issued November 15, 2016, from U.S. Application No. 15/060,595, filed March 3, 2016. Ex. 1001, at [54], [10], [21], [22]. The ’892 patent is a continuation-in-part of U.S. Application No. 14/801,859 (“the ’859 application”), filed July 17, 2015, which is a continuation of U.S. Application No. 14/185,942 (“the ’942 application”), filed February 21,

2014, which issued as U.S. Patent No. 9,131,790 B1 (“the ’790 patent”). *Id.* at [63]. The ’892 patent claims the benefit of U.S. Provisional Application No. 61/866,047, filed August 15, 2013.¹ *Id.* at 1:33–36.²

The ’892 patent explains that consumer textiles have to balance comfort and durability. *Id.* at 1:50–59. Cotton yarns can provide increased comfort, but may not be robust when placed in an environment with heavy machine laundering. *Id.* at 1:60–66. “To increase durability while retaining the feel and absorbency of cotton, the cotton yarns may be woven in combination with synthetic fibers such as polyester.” *Id.* at 1:66–2:3. Another technique to increase comfort described in the ’892 patent is to construct the textile using yarns with a smaller denier. *Id.* at 2:4–5. According to the ’892 patent, “[u]sing these relatively fine yarns may yield a higher ‘thread count,’” where “[a] thread count of a textile may be calculated by counting the total weft yarns and warp yarns in along two adjacent edges of a square of fabric that is one-inch by one-inch.” *Id.* at 2:5–9. “The thread count may be a commonly recognized indication of the quality of the textile, and the thread count may also be a measure that consumers associate with tactile satisfaction and opulence.” *Id.* at 2:9–12.

¹ The cover sheet of the ’892 patent states that the provisional application was filed on August 15, 2012 (*see* Ex. 1001, at [60]), but that conflicts with the statement in the Specification and our review of the file history indicating that the provisional was filed on August 15, 2013 (*see id.* at 1:36–37).

² Because the earliest possible effective filing date for the ’892 patent is after March 16, 2013 (the effective date for the first inventor to file provisions of the America Invents Act), and this petition was filed within 9 months of its issue date, the ’892 patent is eligible for post-grant review. *See* 35 U.S.C. § 321(c).

The '892 patent explains that a problem with fine synthetic weft yarns, such as polyester, is that they may break when fed into a loom apparatus. *Id.* at 2:13–14. Thus, cotton-polyester hybrid weaves may therefore be limited to larger-denier synthetic yarns that the loom apparatus may effectively use, which limits thread count. *Id.* at 2:14–18.

The '892 patent purports to solve this alleged problem of limited thread count with cotton-polyester hybrid weaves by disclosing a method, device, and system of “proliferated thread count of a woven textile by simultaneous insertion within a single pick insertion event of a loom apparatus multiple adjacent parallel yarns drawn from a multi-pick yarn package.” *Id.* at 2:38–42. According to the '892 patent, this method/device/system can result in a blended cotton polyester textile with an increased thread count. *Id.* at 22:1–13.

C. Illustrative Claim

Claims 1, 10, and 18 are the independent claims of the '892 patent. Claims 1 and 10 are directed to a “woven textile fabric,” and claim 18 is directed to a “method of woven textile fabric.” Claim 1 is illustrative and is reproduced below:

1. A woven textile fabric comprising:
from 90 to 235 ends per inch warp yarns; and
from 100 to 965 picks per inch multi-filament polyester weft yarns;
wherein the picks are woven into the textile fabric in groups of at least two multi-filament polyester weft yarns running in a parallel form to one another,
wherein the multi-filament polyester weft yarns are wound in a substantially parallel form to one

another and substantially adjacent to one another on a multi-pick yarn package to enable the simultaneous inserting of the multi-filament polyester weft yarns during a single pick insertion event of a pick insertion apparatus of a loom apparatus,

wherein the number of the multi-filament polyester weft yarns wound on the weft yarn package using the single pick insertion and in a substantially parallel form to one another and substantially adjacent to one another is at least two,

wherein the number of the multi-filament polyester weft yarns conveyed by the pick insertion apparatus across a warp shed of the loom apparatus through a set of warp yarns in the single pick insertion event of the pick insertion apparatus of the loom apparatus is between two and eight,

wherein the pick insertion apparatus of the loom apparatus is at least one of an air jet pick insertion apparatus and a rapier pick insertion apparatus, and

wherein the multi-filament polyester weft yarns are wound on the multi-pick yarn package at an angle of between 5 and 25 degrees to enable the simultaneous inserting of the multi-filament polyester weft yarns during the single pick insertion event of the pick insertion apparatus of the loom apparatus.

Id. at 22:28–61.

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