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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NICHOLAS P. TRAINER JR.,
THOMAS I. STAFFORD III, and RICHARD J. BIGARI

Appeal 2019-003015
Application 13/888,435
Technology Center 3700

Before: BENJAMIN D. M. WOOD, MICHAEL J. FITZPATRICK, and
WILLIAM A. CAPP, *Administrative Patent Judges*.

CAPP, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ seeks our review under 35 U.S.C. § 134(a) of the final rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies GPCP IP Holdings LLC as the Applicant and real party in interest. Appeal Br. 2.

THE INVENTION

Appellant's invention relates to rolled paper products. Spec. ¶¶ 3–5.
Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A method of converting a plurality of coreless roll products, the method comprising:
 - providing a first support structure;
 - winding a paper product around the first support structure;
 - cutting through the paper product and the first support structure to form a plurality of cut portions of the paper product each wound around a cut portion of the first support structure;
 - and
 - removing the cut portion of the first support structure from each of the cut portions of the paper product to form a plurality of coreless roll products each comprising a center aperture.

THE REJECTIONS

The Examiner relies upon the following as evidence in support of the rejections:

NAME	REFERENCE	DATE
Warczak	US 4,135,677	Jan. 23, 1979
Blom	US 4,977,803	Dec. 18, 1990
Ishizu	US 5,352,319	Oct. 4, 1994
Arash	US 2006/0006089 A1	Jan. 12, 2006
De Luca	US 2007/0095693 A1	May 3, 2007
Anderson	US 2011/0114778 A1	May 19, 2011

The following rejections are before us for review:

1. Claims 1–8, 10, and 11 are rejected under 35 U.S.C. § 103 as being unpatentable over Blom and Ishizu.
2. Claims 9 and 10 are rejected under 35 U.S.C. § 103 as being unpatentable over Blom, Ishizu, and De Luca.

3. Claims 13–17, and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Ishizu, Anderson, and Warczak.

4. Claim 18 is rejected under 35 U.S.C. § 103 as being unpatentable over Ishizu, Anderson, Warczak and Arash.

5. Claim 20 is rejected under 35 U.S.C. § 103 as being unpatentable over Blom, Ishizu, and Anderson.

OPINION

Unpatentability of Claims 1–8, 10, and 11 over Blom and Ishizu

Claim 1

The Examiner finds that Blom discloses the invention substantially as claimed except for removing the cut portion of the support structure from each of the cut portions of the paper product, for which the Examiner relies on Ishizu. Final Action 2–3. The Examiner concludes that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Blom so as to remove the core from each paper product, as taught by Ishizu. *Id.* at 3. According to the Examiner, a person of ordinary skill in the art would have done this to provide a coreless paper product so that the end user would not need to dispose of a core after the paper is used up. *Id.*

Appellant, among other things, challenges the Examiner’s determination that a person of ordinary skill in the art would have combined the teachings of Blom and Ishizu. Appeal Br. 5–10. We agree with Appellant.

Historically, paper rolls, such as toilet paper rolls, are produced with a core of relatively stiff material, such as cardboard. Ishizu ¶ 2. Such paper

rolls are wound into logs approximately 90 inches long and with a diameter of a retail-sized roll. Blom, col. 1, ll. 19–28. The logs are then cut into segments. *Id.* col. 1, 22–24.

The Blom reference is directed to improving the quality of the cut of a trim annulus at the extreme end of each roll. *Id.* col. 1, ll. 27–68. The Examiner, nevertheless, is correct in finding that Blom teaches winding a paper product around a support structure and then cutting through the paper product and support structure to form a plurality of cut portions.

Ishizu differs from Blom in that Ishizu's paper web is slit before it is wound onto cores. Ishizu, col. 3, ll. 46–53. The slit webs are wound around a plurality of cores that are about the same length as the width of the paper that is wound thereon, which cores are supported on a common shaft. *Id.* col. 4, ll. 15–20. A plurality of small perforations are formed throughout the wall of the core. *Id.* col. 4, ll. 10–15. The cores are formed of metal, a synthetic polymer, or wood, which are not damaged upon contact with water and hot air. *Id.* col. 4, ll. 1–4.

In operation, an initial length of Ishizu's paper web is sprayed with water so that a leading portion of the wound web has a wet inner portion adjacent to the core. *Id.* col. 4, ll. 34–39. After winding is complete (including a length of dry paper), the inner shaft is removed from the interior of the cores. *Id.* col. 4, ll. 40–56. The rolled webs and their corresponding cores are then conveyed to drying zone 104, where the wet inner portion is dried using heated airflow. *Id.* col. 4, ll. 56–65; col. 6, ll. 1–6. The aforesaid perforations facilitate air flow in the drying step. *Id.* col. 5, ll. 32–40. Such drying results in an integrally bound, relatively rigid, tubular layer adjacent the core. *Id.* col. 4, ll. 62–65. The cores are then displaced from the interior

of the rolls by a mechanism and method that are described in considerable detail from column 8, line 39 to column 11, line 44.

Having considered the individual teachings of Blom and Ishizu, we are not persuaded that a person of ordinary skill in the art would have combined their respective teachings in the manner proposed by the Examiner. A traditional cardboard core, such as used in Blom, does not lend itself to being removed by the mechanism and method taught by Ishizu. Similarly, we are not persuaded that the cores of Ishizu lend themselves to being joined end-to-end such that they may be cut into shorter, retail sized lengths. Moreover, Ishizu's shaft (col. 3, ll. 25–36), that runs through the interior of the cores, would be damaged or destroyed by Blom's cutting blades.

In view of the foregoing discussion, we determine that the Examiner's findings of fact are not supported by a preponderance of the evidence and further determine that the Examiner's legal conclusion of unpatentability is not well-founded. Accordingly, we do not sustain the Examiner's unpatentability rejection of claim 1.

Claims 2–8, 10, and 11

These claims depend, directly or indirectly, from claim 1. Claims App. The Examiner's rejection of these claims suffers from the same infirmity that was identified above with respect to claim 1. Thus, for essentially the same reason expressed above in connection with claim 1, we do not sustain the rejection of claims 2–8, 10, and 11.

*Unpatentability of Claims 9 and 10
over Blom, Ishizu, and De Luca*

These claims depend from claim 1. Claims App. The Examiner's rejection of these claims suffers from at least the same infirmity that was identified above with respect to claim 1, which infirmity is not cured by any findings based on the De Luca reference. Moreover, among other things, we are not persuaded that Ishizu's winding, wetting, drying, and core removal steps could be satisfactorily performed if De Luca's foam support were substituted for Ishizu's perforated cores and accompanying shaft. Consequently, we do not sustain the rejection of claims 9 and 10.

*Unpatentability of Claims 13–17, and 19
over Ishizu, Anderson, and Warczak*

Claim 13

Claim 13 is an independent claim that is directed to a method for preparing a retail sized paper roll product for storage or shipment. Claims App. The key feature of claim 13 is the use of a balloon in the interior aperture of the roll to prevent the roll from collapsing. *Id.*, ¶ 20, Figs 3A–C.

The Examiner relies on the combined teachings of Anderson and Warczak to teach the balloon support device element of claim 13. Final Action 10–11. Appellant challenges the Examiner's underlying reasoning and analysis as to how and why Anderson and Warczak are combinable to achieve the invention of claim 13. Appellant has the better position.

As explained by Ishizu, one of the primary reasons for making coreless toilet paper rolls is to save the expense associated with a cardboard support tube. Ishizu, col. 1, ll. 8–15. However, one of the problems with coreless paper rolls is that they have a tendency to collapse. Anderson ¶ 3. As explained by Appellant:

[S]ince coreless roll products do not include a supporting tube to provide stability, the coreless roll products are prone to being crushed during shipment or storage. When a coreless roll product is crushed, i.e., when the center aperture of the core less roll is at least partially deformed, the coreless roll product may be difficult to insert onto a spindle for dispensing.

Spec. ¶ 3.

Anderson is directed to providing end plugs for toilet paper rolls that are inserted into the ends of a coreless paper roll and are designed to be compatible with a dispenser. Anderson ¶ 3. Anderson's device has a flange (end plate 2) that lies against a side of the paper roll on which the plug has been inserted. *Id.* ¶ 30. Wing elements protrude into the interior of the roll aperture. *Id.* ¶ 31, Figs 1–16. On the opposite side of the flange is a peg for attachment to a dispenser. *Id.* ¶ 32, Figs. 5, 10, 13, 15.

Warczak is directed to a pneumatic shaft for roll stock. Warczak, Abstract. Warczak is comprised of a relatively complex assembly of components including a center support shaft 2 that is engaged in socket recess 3 in journal end piece 4. *Id.* col. 5, 15–20. Journal 4 features an axial air supply channel 6 that is aligned with channel 7 in shaft 2, which terminates in a T-shaped supply duct 8 that communicates with air space 9. *Id.* col. 5, ll. 20–22. Air is supplied for inflated pressure via check valve 10 in journal recess 11. *Id.* col. 5, ll. 22–25. Tubular bladder 12 is sealed to shaft 2, by sealing ring 13. *Id.* col. 5, ll. 25–26. Overlying the bladder is a first, inner protective and expandable sleeve 17. *Id.* col. 5, ll. 37–38. This inner sleeve has a plurality of slots spaced equally around its circumference and parallel to the center axis of the shaft. *Id.* col. 5, ll. 42–44. Overlying the first, inner sleeve is second, outer slotted sleeve 20 made of steel. *Id.* col. 5, ll. 52–54. Two inner sleeve strips push radially outwardly on each

outer sleeve rib when the bladder is inflated. *Id.* col. 5, ll. 61–63. In operation, Warczak’s air shaft is inserted into the center of roll stock and inflated to 60–120 psi. *Id.* col. 6, ll. 3–7. This causes the bladder and sleeves to expand which, in turn, causes the shaft to grip the inside surface of the roll stock core. *Id.* col. 6, ll. 7–15. A person of ordinary skill in the art reading Warczak would understand that it is designed and intended to facilitate dispensing of a paper product as opposed to merely preventing the paper roll aperture from collapsing during shipment and storage.

We are at a loss to understand, based on the Examiner’s cursory analysis, how Anderson and Warczak would have been modified to achieve the invention of claim 13. Anderson’s flanges appear to be completely incompatible with Warczak’s journal end pieces 4, 5. Yet the Examiner does not explain whether Anderson’s teaching, or Warczak’s teaching, or some combination of the two, are retained for use in the proposed combination.

When contemplating Appellant’s invention, we are mindful that the goal is to provide a simple, cost-effective means for preventing the collapse of a coreless paper roll during shipment and storage. The overall context of providing a paper roll that is “coreless” is to reduce or eliminate the relatively modest cost of a cardboard support tube. Appellant achieves this goal by using a balloon. Claims App., claim 13. We infer from the problem to be solved and the claimed solution that the balloon solution is cheaper than the cardboard tube problem.

“An obviousness determination requires finding that a person of ordinary skill in the art would have been motivated to combine or modify the teachings in the prior art and would have had a reasonable expectation of

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success in doing so.” *Regents of Univ. of Cal. v. Broad Inst., Inc.*, 903 F.3d 1286, 1291 (Fed. Cir. 2018). “The court should consider a range of real-world facts to determine ‘whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.’ ” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1359 (Fed. Cir. 2017) (quoting *Intercontinental Great Brands LLC v. Kellogg N. America Co.*, 869 F.3d 1336, 1344 (Fed. Cir. 2017)).

The Examiner’s rejection looks to two, substantially disparate, relatively complex devices that are used to dispense paper products. We can reasonably deduce that the references provide a solution to Appellant’s problem that is cost prohibitive relative to the cost of a cardboard tube or a simple balloon. Given the real-world context of the problem to be solved, we do not agree with the Examiner that a person of ordinary skill in the art would have looked to Anderson and/or Warczak, whether alone or in combination, to achieve the subject matter of claim 13.

In view of the foregoing discussion, we do not sustain the Examiner’s rejection of claim 13.

Claims 14–17, and 19

These claims depend from claim 13. Claims App. The Examiner’s rejection of these claims suffers from the same infirmity that was identified above with respect to claim 13. Thus, for essentially the same reason expressed above in connection with claim 13, we do not sustain the rejection of claims 14–17 and 19.

*Unpatentability of Claim 18
over Ishizu, Anderson, Warczak and Arash*

Claim 18 depends from claim 13 and adds a limitation directed to an outer wrapping. Claims App. The Examiner relies on Arash for the outer wrapping. Final Action 15–16. Arash does not solve the deficiencies that we noted above with respect to the rejection of claim 13. Accordingly, we do not sustain the Examiner’s unpatentability rejection of claim 18.

*Unpatentability of Claim 20
over Blom, Ishizu, and Anderson*

Claim 20 is an independent method claim that combines elements of independent claims 1 and 13. Claims App. The Examiner’s rejection relies on the same erroneous findings and conclusions that caused us not to sustain the rejection of claim 1 above. Final Action 16–17. Our discussion regarding the combinability of Blom and Ishizu with respect to the rejection of claim 1 applies with equal force to the Examiner’s rejection of claim 20, which is also not sustained.

CONCLUSION

Claims Rejected	§	Reference(s)	Aff’d	Rev’d
1-8, 10, 11	103	Blom, Ishizu		1-8, 10, 11
9, 10	103	Blom, Ishizu, De Luca		9, 10
13-17, 19	103	Ishizu, Anderson, Warczak		13-17, 19
18	103	Ishizu, Anderson, Warczak, Arash		18
20	103	Blom, Ishizu, Anderson		20
Overall Outcome				1–20

REVERSED