



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/308,027	12/07/2018	Jerome FOX	66847- 10912 (C-1073 US)	6872
96610	7590	01/12/2023	EXAMINER	
Ostrolenk Faber LLP 845 THIRD AVENUE 8TH FLOOR New York, NY 10022			RIVERA-CORDERO, ARLYN I	
			ART UNIT	PAPER NUMBER
			1714	
			NOTIFICATION DATE	DELIVERY MODE
			01/12/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pat@ostrolenk.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JEROME FOX and SAEID SAVARMAND

Appeal 2021-004687
Application 16/308,027
Technology Center 1700

Before MERRELL C. CASHION, JR., SHELDON M. McGEE, and
JANE E. INGLESE, *Administrative Patent Judges*.

McGEE, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the
Examiner’s decision to reject claims 1–13. We have jurisdiction.
35 U.S.C. § 6(b).

We reverse.

¹ “Appellant” refers to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Sun Chemical Corporation. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to cleaning solutions, methods of formulating such cleaning solutions, and methods of removing residual inks and coatings from a surface by applying such cleaning solutions. Appeal Br. 25–27 (Claims App.) (Claims 1, 12, and 13).

Claim 1 is illustrative of the claimed subject matter and is reproduced below with the key limitation on appeal italicized:

1. A cleaning solution *comprising one or more solvents selected from the group consisting of acetoacetates, alcohols, glycol ethers, glycol esters, terpenes, and water*; wherein
 - [a)]² the cleaning solution is free of surfactants;
 - [b)] the relative evaporation time (RET) of the solvents is less than or equal to 60 seconds;
 - [c)] a ratio of RET of the solvents to a radius of the sphere of solubility of a resin (R) of an ink or coating to be removed is less than or equal to 6; andwherein the cleaning solution comprises at least one acetoacetate; and wherein the cleaning solution removes residual inks and coatings from a surface.

Appeal Br. 25 (Claims App.).

REFERENCES

The Examiner relies on the following prior art in rejecting the claims:

Name	Reference	Date
Takayanagi	US 5,612,303	March 18, 1997
Vangrasstek	CA 2654120 A1	August 13, 2009
John Durkee, <i>Use of Hansen Solubility Parameters to Identify Cleaning Applications for “Designer” Solvents</i> , 7248_C0 11.fm Hansen Solubility Parameters: A User’s Handbook 203–228 (2006).		

² In the event of further prosecution, Appellant should amend claim 1 to replace limitations d), e), and f) with limitations a), b), and c), respectively.

REJECTIONS

On appeal, the Examiner maintains the following rejections:

I. Claims 1 and 6–9 under 35 U.S.C. § 102(a)(2) as being anticipated by, or in the alternative, obvious under 35 U.S.C. § 103 as being unpatentable over Takayanagi.

II. Claims 2–5, 10, and 11 under 35 U.S.C. § 103 as being unpatentable over Takayanagi.

III. Claim 12 under 35 U.S.C. § 103 as being unpatentable over Takayanagi in view of Vangrasstek.

IV. Claim 13 under 35 U.S.C. § 103 as being unpatentable over Takayanagi in view of Durkee.

OPINION

We begin with claim construction, which is the dispositive issue in this case. Claim 1 requires that the cleaning solution “compris[es] one or more solvents selected from the group consisting of acetoacetates, alcohols, glycol ethers, glycol esters, terpenes, and water.” Appeal Br. 25.

The Examiner finds that claim 1 is open to additional solvents beyond those solvents listed in the “Markush”³ grouping by virtue of the open transitional phrase “comprising” immediately following the preamble recitation of “[a] cleaning solution.” Final Act. 2; Ans. 3–4.

³ “A Markush group is a listing of specified alternatives of a group in a patent claim, typically expressed in the form: a member selected from the group consisting of A, B, and C.” *Abbott Labs v. Baxter Pharm. Products, Inc.*, 334 F.3d 1274, 1280 (Fed. Cir. 2003).

Appellant argues, however, that the claim is closed to additional solvents because the solvent component of the composition appears after the term “consisting of” in a clause in the body of the claim. Appeal Br. 6–7.

“Use of the transitional phrase ‘consisting of’ to set off a patent claim *element* creates a very strong presumption that *that claim element* is ‘closed’ and therefore ‘exclude[s] any elements, steps, or ingredients not specified in the claim.’” *Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1358 (Fed. Cir. 2016) (emphases added). “Thus, if a patent claim recites ‘a member selected from the group consisting of A, B, and C,’ the ‘member’ is presumed to be closed to alternative ingredients D, E, and F.” *Id.* “[T]o overcome the exceptionally strong presumption that a claim term set off with ‘consisting of’ is closed to unrecited elements, the specification and prosecution history must unmistakably manifest an alternative meaning.” *Id.* at 1359. On this record, the Examiner has not rebutted this “exceptionally strong presumption.” *Id.*; Final Act., *generally*; Ans., *generally*.

Rather, the Examiner apparently relies on the claim construction principles set forth in the Federal Circuit’s decision in *In re Crish*.⁴ Adv. Act.⁵ 2; Ans. 4. *Crish*, however, is inapposite to the facts before us. In *Crish*, the claims at issue were directed to “[a] purified oligonucleotide comprising at least a portion of the nucleotide sequence of SEQ ID NO:1, wherein said portion consists of” a specific nucleotide sequence. *Crish*, 393 F.3d at 1254–55. The Federal Circuit affirmed the Board’s claim construction that the claim may encompass a full length involucrin gene, as

⁴ 393 F.3d 1253 (Fed. Cir. 2004).

⁵ Advisory Action dated November 24, 2020.

Appeal 2021-004687
Application 16/308,027

long as it contains the specific sequence expressly recited after the closed transitional phrase “consists of.” *See id.* at 1259 (“the claims necessarily encompass the gene incorporated in the starting material plasmid.”). We find *Crish* distinguishable from the claims on appeal, however, because *Crish* did not involve a Markush grouping of *distinct alternatives* from which to select. Instead, the court in *Crish* “held that the claimed promoter sequence designated as SEQ ID NO:1 was obtained by sequencing the same prior art plasmid . . . which necessarily possessed the *same DNA sequence* as the claimed oligonucleotides.” MPEP §2111.03 II (emphasis added).

We find that the claims on appeal are much closer to the fact pattern set forth in *Multilayer Stretch*, cited *supra*. In *Multilayer Stretch*, the claim recited a Markush group of alternative and distinct resins from which to choose in preparing a thermoplastic stretch wrap. *Multilayer Stretch*, 831 F.3d at 1353. Similarly, the appealed claims recite a Markush group of distinct, alternative solvents. Appeal Br. 25–27.

Under these circumstances, Appellant is correct that the claims on appeal are closed to alternative solvents other than those specifically recited in the Markush group, even though the claimed cleaning solutions are open to containing other non-solvent elements. Appeal Br. 6–7. As such, Takayanagi’s disclosure falls short of anticipating or rendering obvious the subject matter recited in independent claims 1, 12, and 13, because Takayanagi requires the presence of “at least one oxyisobutyric acid ester” solvent, i.e, a solvent that is not recited in the Markush groups of these claims. Takayanagi 3:54–56, 4:13–14.

Because the Examiner applied the incorrect claim construction to the appealed claims as correctly argued by Appellant, we do not sustain the rejections.

CONCLUSION

The Examiner's rejections are reversed.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s) / Basis	Affirmed	Reversed
1, 6-9	102, 103	Takayanagi		1, 6-9
2-5, 10, 11	103	Takayanagi		2-5, 10, 11
12	103	Takayanagi, Vangrasstek		12
13	103	Takayanagi, Durkee		13
Overall Outcome				1-13

REVERSED