

US006228323B1

(12) United States Patent

Asgharian et al.

(10) Patent No.: US 6,228,323 B1

(45) **Date of Patent:** May 8, 2001

(54) MULTI-PURPOSE COMPOSITIONS CONTAINING AN ALKYL-TRYPSIN AND METHODS OF USE IN CONTACT LENS CLEANING AND DISINFECTING

- (75) Inventors: Bahram Asgharian; Bor-Shyue Hong, both of Arlington, TX (US)
- (73) Assignee: **Alcon Laboratories, Inc.**, Fort Worth, TX (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
- (21) Appl. No.: 09/144,673
- (22) Filed: Sep. 1, 1998

Related U.S. Application Data

- (63) Continuation-in-part of application No. PCT/US97/21579, filed on Nov. 24, 1997.
- (60) Provisional application No. 60/032,839, filed on Dec. 13, 1996, now abandoned.

(56) References Cited

U.S. PATENT DOCUMENTS

Re. 32,672		5/1988	Huth et al
3,402,855	*	9/1968	Schroeder et al 222/83
3,613,955	*	10/1971	Wetherell, Jr 222/83
3,731,844	*	5/1973	Baker 222/83 X
3,910,296		10/1975	Karageozian et al
3,924,741	*	12/1975	Kachur et al 206/221
4,407,791		10/1983	Stark .
4,525,346		6/1985	Stark .
4,614,549		9/1986	Ogunbiyi et al
4,758,595		7/1988	Ogunbiyi et al
4,836,986		6/1989	Ogunbiyi et al
5.096.607		3/1992	Mowrey-McKee et al

5,281,277	1/1994	Nakagawa et al
5,409,546	4/1995	Nakagawa et al
5,419,445 *	5/1995	Kaesemeyer 206/220 X
5,421,483 *	6/1995	Parise

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

1 150 907	8/1983	(CA).
0 384 666	8/1990	(EP) .
0 456 467	11/1991	(EP).
0 646 641	4/1995	(EP).
57-24526	5/1982	(JP) .
92-143718	5/1992	ĴΡ).
92-243215	8/1992	(JP) .
92-370197	12/1992	ĴΡ).
WO		` ′
89/111878	12/1989	(WO).
WO 94/06479	3/1994	(WO).
WO 96/40854	12/1996	(WO).
WO 97/18288	5/1997	(WO).
WO 98/25650	6/1998	(WO).

OTHER PUBLICATIONS

Lo, J.; Silverman, H.; and Korb, D.; Studies on cleaning solutions for contact lenses, *Journal of the American Optometric Association*, vol. 40, pp. 1106–1109 (1969).

Means, GE and Feeney, RE. Reductive alkylation of amino groups in proteins, *Biochemistry*, vol. 7, pp. 2192–2201 (1968).

Rice, RH, Means, GE and Brown, WD. Stabilization of bovine trypsin by reductive methylation, *Biochimica et Biophysica Acta*, vol. 492, pp. 316–321 (1977).

Primary Examiner—Krisanne Thornton (74) Attorney, Agent, or Firm—Michael C. Mayo

(57) ABSTRACT

Two-compartment bottle assemblies useful in preparing multi-purpose compositions containing an Al-trypsin and disinfectant, methods of preparing these compositions and methods involving the use of these compositions are disclosed for cleaning and disinfecting of contact lenses.

33 Claims, 7 Drawing Sheets



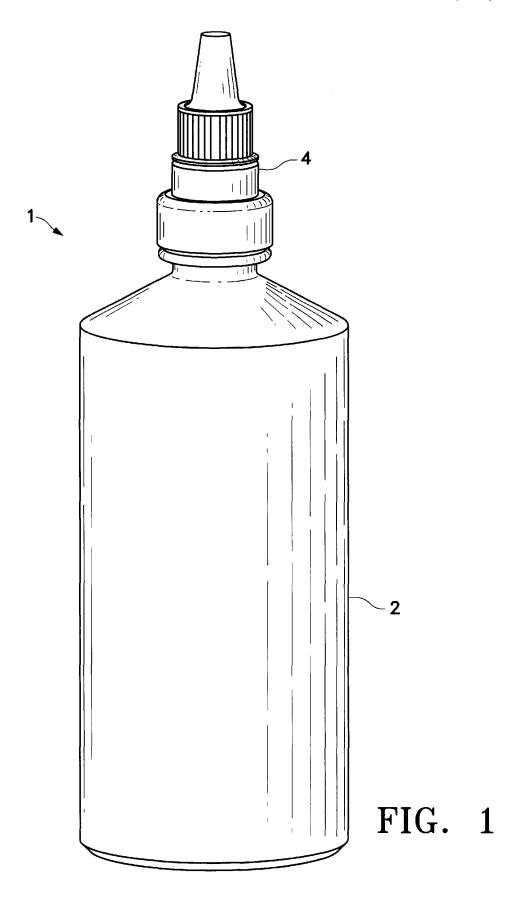
ANCECTOV EY 101/



US 6,228,323 B1 Page 2

J	J.S. PATENT DOCUMENTS		Asgharian et al	
		5,723,421 3/19	98 Chowhan et al	
5,576,278	11/1996 Van Duzee et al	5,785,767 7/19	98 Kimura et al 134/42	
5,604,190	2/1997 Chowhan et al	5,820,696 10/19	98 Kimura et al 134/42	
5,605,661	2/1997 Asgharian et al	-,,	·, ·	
5,672,213	9/1997 Asgharian et al	* cited by examiner		





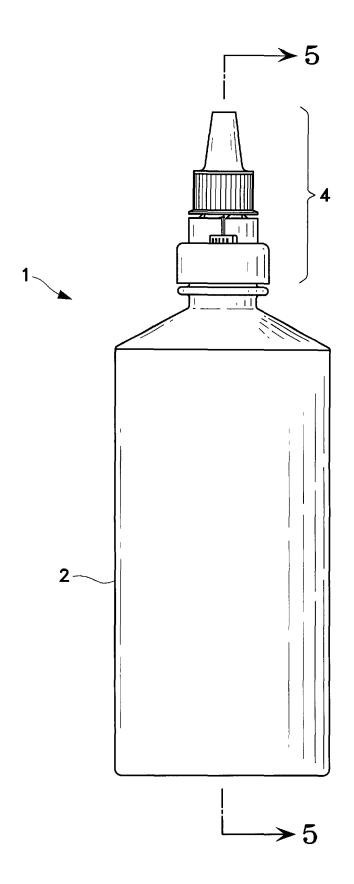
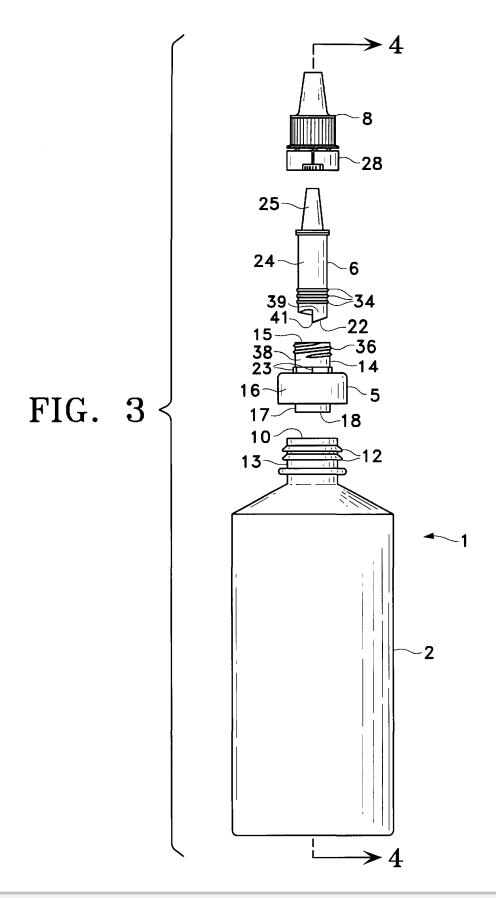


FIG. 2

May 8, 2001



DOCKET A L A R M

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

