

UNITED STATES INTERNATIONAL TRADE COMMISSION

COMMISSIONERS

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United States International Trade Commission
Washington, DC 20436

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C. 20436

In the matter of:

CERTAIN CHEMILUMINESCENT
COMPOSITIONS AND COMPONENTS
THEREOF AND METHODS OF USING,
AND PRODUCTS INCORPORATING,
THE SAME

Investigation No. 337-TA-285

NOTICE OF MODIFICATION OF GENERAL EXCLUSION ORDER

AGENCY: U.S. International Trade Commission

ACTION: Notice

SUMMARY: Notice is given that, pursuant to Commission interim rule 210.61 (53 Fed. Reg. 33073, Aug. 29, 1988), the Commission has modified paragraph 4 of the general exclusion order issued on August 17, 1989, in the above-captioned investigation.

ADDRESSES: Copies of the Commission's order modifying the general exclusion order are available for inspection during official business hours (8:45 am to 5:15 pm) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C., 20436, telephone (202)-252-1000. Hearing-impaired individuals are advised that information on this matter may be obtained by contacting the Commission's TDD terminal on (202)-252-1810.

FOR FURTHER INFORMATION CONTACT: William T. Kane, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202)-252-1116.

SUPPLEMENTARY INFORMATION: The general exclusion order issued in this investigation provides that articles that infringe certain specified patent claims, and/or packaging and related literature that infringe two registered trademarks, are excluded from entry. (See 54 Fed. Reg. 35087-8, August 23, 1989.) On August 31, 1989, complainant American Cyanamid Company filed a petition for reconsideration requesting that the Commission modify paragraph 4 of the general exclusion order. Paragraph 4 provides an exception to the exclusion of products bearing complainant's trademark for "Cyalume," Registration Nos. 925,341, or 1,141,455.

The authority for this action is conferred by section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and by Commission interim rule 210.61 (53 Fed. Reg. 33073, Aug. 29, 1988).

By order of the Commission.

Kenneth R. Mason

Secretary

Issued: October 11, 1989.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C. 20436

In the Matter of:

CERTAIN CHEMILUMINESCENT
COMPOSITIONS AND COMPONENTS

THEREOF AND METHODS OF USING, AND PRODUCTS INCORPORATING, THE SAME Investigation No. 337-TA-285

MODIFICATION OF EXCLUSION ORDER

Upon consideration of a petition for reconsideration filed by complainant American Cyanamid Company in the above-captioned investigation, the Commission has determined pursuant to interim rule 210.61 (53 Fed. Reg. 33073, Aug. 29, 1988) to modify the general exclusion order issued on August 17, 1989. Paragraph 4 is modified to provide as follows:

- 4. Packaging or literature that would otherwise be excluded under paragraph 2 of this Order shall be allowed entry only if:
 - (a) the packaging or literature accompanies articles for which a certification has been provided in accordance with paragraph 3 of this Order; and
 - (b) the word "CYALUME" is only used in the following phrase:

***	has produced this product using chemicals
obtained	from CYALUME(TM) products of American Cyanamid
Company.	American Cyanamid Company is wholly separate from
	and is not responsible for this product."

with the word "CYALUME" not emphasized by being in a larger type, of a different color, or the like; and

(c) if the chemiluminescent chemicals in the product are a mixture of (i) chemicals extracted from CYALUME(TM) products; and (ii) other chemicals, the following phrase is added immediately following the phrase in (b):

"___% chemicals extracted from CYALUME(TM) products (by volume); ____% other chemicals."

By order of the Commission.

Kenneth R. Mason

Secretary

Issued: October 11, 1989

CERTAIN CHEMILUMINESCENT COMPOSITIONS AND COMPONENTS THEREOF AND METHODS OF USING, AND PRODUCTS, INCORPORATING, THE SAME.

CERTIFICATE OF SERVICE

I, Kenneth R. Mason, hereby certify that the attached NOTICE OF MODIFICATION OF GENERAL EXCLEUSION ORDER, was sered upon Jeffery R. Whieldon, Esq., and upon the following parties via first class mail, and air mail where necessary, in October 11, 1989.

Kenneth R. Mason, Secretary

U.S. Internation Trade Commission

500 "E" Street, S.W.

Washington, D.C. 20436

FOR COMPLAINANT: AMERICAN CYANAMID COMPANY

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Government Agencies:

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C. 20436

In the matter of:

CERTAIN CHEMILUMINESCENT COMPOSITIONS AND COMPONENTS THEREOF AND METHODS OF USING, AND PRODUCTS INCORPORATING, THE SAME 9 AUG IT PIZ: 56

Investigation No. 337-TA-285

NOTICE OF ISSUANCE OF GENERAL EXCLUSION ORDER

AGENCY: United States International Trade Commission

ACTION: Notice

SUMMARY: Notice is given that the Commission has issued a general exclusion order in the above-captioned investigation. The order prohibits the unlicensed importation from any country of certain chemiluminescent compositions, components thereof, products incorporating the same, and certain packaging and literature pertaining to such articles.

FOR FURTHER INFORMATION CONTACT: William T. Kane, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202)-252-1116. Copies of the Commission's order, the nonconfidential version of the opinion issued therewith, and all other nonconfidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 am to 5:15 pm) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C., 20436, telephone (202)-252-1000. Hearing-impaired individuals are advised that information on this matter may be obtained by contacting the Commission's TDD terminal on (202)-252-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation upon the filing of a complaint on July 21, 1988, by American Cyanamid Company (Cyanamid), of Wayne, N.J. The complaint alleged violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), in the importation and sale of certain chemiluminescent compositions and components thereof by reason of infringement of three registered trademarks and various claims of seven U.S. patents. Respondents named in the notice of investigation were Societe Prolufab of Seresnes, France (Prolufab) and Mr. Luc Noel of Los Angeles, CA (53 Fed. Reg. 32476-77, August 25, 1988).

The notice of investigation was amended to conform to the August 1988 amendments to section 337 (53 Fed. Reg. 43276, October 26, 1988), and was also amended to include within the scope of the investigation products incorporating chemiluminescent compositions (54 Fed. Reg. 11822, March 22, 1989).

On January 6, 1989, the presiding administrative law judge (ALJ) issued an initial determination (ID) finding respondent Prolufab to be in default. The Commission determined not to review the ID, thereby allowing it to become the determination of the Commission (54 Fed. Reg. 6181, February 8, 1989). The ID provided that Prolufab had waived its right to appear in the investigation, to contest the allegations at issue, and to be served with documents. On March 14, 1989, the Commission determined not to review an ID terminating the investigation as to one of the two respondents—Luc Noel—on the basis of a consent order (54 Fed. Reg. 11822, March 22, 1989).

On March 22, 1989, the ALJ issued an ID granting complainant's motion for summary determination regarding violation of section 337. The ID found that respondent Prolufab had violated section 337 with regard to infringement of the following:

claims 1-5 and 7-10 of U.S. Letters Patent 3,749,679; claims 1, 2, 4, 6, and 8 of U.S. Letters Patent 3,775,336; claims 1-6 of U.S. Letters Patent 3,888,786; claims 1, 4, and 5 of U.S. Letters Patent 4,313,843; claims 1, 2, 4, 6, and 7 of U.S. Letters Patent 3,729,426; claims 1 and 3 of U.S. Letters Patent 4,076,645; Registered Trademark Number 925,341; and Registered Trademark Number 1,141,455.

The Commission decided to review only that portion of the ID relating to contributory infringement of the two registered trademarks listed above, thereby allowing the ALJ's findings with regard to all other issues in the ID, including patent infringement, to become the determination of the Commission (54 Fed. Reg. 19250, May 4, 1989). The Commission invited submissions from the parties, government agencies, and the public on the issues of remedy, public interest, and bonding during the period of Presidential review. The Commission received comments from complainant, from the Commission investigative attorney, and from former respondent Luc Noel. No agency comments were received. Having considered these submissions, the Commission made its determination regarding the issue under review, remedy, public interest, and bonding.

The authority for this action is conferred by section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and by Commission interim rules 210.56 and 210.58 (53 Fed. Reg. 33071-72, Aug. 29, 1988).

By order of the Commission.

Kenneth R. Mason

Secretary

Issued: August 17, 1989

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C. 20436

In the matter of:

CERTAIN CHEMILUMINESCENT COMPOSITIONS AND COMPONENTS THEREOF AND METHODS OF USING, AND PRODUCTS INCORPORATING, THE SAME

Investigation No. 337-TA-285

ORDER

The Commission, having reviewed a portion of the initial determination issued herein on March 22, 1989, and having considered the issues of remedy, the public interest, and bonding,

It is DETERMINED:

- (1) The finding of the administrative law judge, that respondent Prolufab has contributorily infringed Registered Trademark Nos. 925,341 and 1,141,455, is affirmed. However, certain additional and different findings, as set forth in a separate opinion, are necessary.
- (2) The public interest factors enumerated in section 337(d) of the Tariff Act of 1930, as amended, do not preclude the issuance of the remedy ordered in this investigation.

It is ORDERED:

- 1. Chemiluminescent compositions, components thereof, and products incorporating the same that—
 - (a) infringe-claims 1, 2, 4, or 6 of U.S. Letters Patent 3,775,336;
 claims 1, 2, 3, 4, 5, 7, 8, 9, or 10 of U.S. Letters
 Patent 3,749,679;
 - claims 1, 2, 3, 4, 5, or 6 of U.S. Letters Patent 3,888,786; or
 - claims 1, 4, or 5 of U.S. Letters Patent 4,313,843; or

(b) contributorily infringe or induce infringement ofclaim 8 of U.S. Letters Patent 3,775,336; claims 1 or 3 of U.S. Letters Patent 4,076,645; or claims 1, 2, 4, 6, or 7 of U.S. Letters Patent 3,729,426;

are excluded from entry into the United States for the remaining terms of the respective patents, except as provided in paragraphs 3 or 5 of this Order or if importation is licensed by the patent owner;

- Packaging (whether or not such packaging contains chemiluminescent compositions, components thereof, or products incorporating the same) and literature relating to chemiluminescent compositions, components thereof, or products incorporating the same, that bear U.S. Trademark Registration Nos. 925,341 or 1,141,455 for "CYALUME" or colorable imitations thereof, are excluded from entry into the United States, except as provided in paragraphs 4 or 5 of this Order or if licensed by the trademark owner;
- 3. Chemiluminescent compositions, components thereof, or products incorporating the same that would otherwise be excluded from entry under paragraph 1 of this Order shall be permitted entry if the importer provides a certification to accompany the commercial invoice stating:
 - certifies that the chemiluminescent compositions or components thereof that accompany this invoice and that are described in paragraph 1 of Order of the U.S. International Trade Commission issued on August 17, 1989, have been extracted from CYALUME(TM) products of American Cyanamid Company."
- 4. Packaging or literature that would otherwise be excluded under paragraph 2 of this Order shall be allowed entry only if:
 - (a) the packaging or literature accompanies articles for which a certification has been provided in accordance with paragraph 3 of this Order; and
 - (b) the word "CYALUME" or the colorable imitation thereof is only used in the following phrase:

11	<u> </u>	ced this	product using
chemicals obtai	ned from CYA	LUME (TM)	products of
American Cyanam	id Company.	Americar	Cyanamid
Company is whol	ly separate	from	
and is not resp	onsible for	this prod	iuct."

with the word "CYALUME" not emphasized by being in a larger type, of a different color, or the like; and

(c) if the CYALUME(TM) chemicals in the product are not in pure, undiluted form, the following phrase is added immediately following the phrase in (b):

"____% CYALUME(TM) chemicals (by volume); ____% other chemicals."

- 5. The articles ordered to be excluded from entry into the United States according to this Order shall be entitled to entry under bond in the amount of 69 percent of the entered value of the imported articles, for the period starting on the day after this Order is received by the President pursuant to subsection (j) of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337(j)), until such time as the President notifies the Commission that he approves or disapproves this Action, but in any event, not later than 60 days after receipt of this Order by the President:
- of record in this investigation and upon the Department of Health and Human Services, the Department of Justice, the Federal Trade Commission, and the U.S. Customs Service.
- 7. Notice of this Order shall be published in the <u>Federal</u> <u>Register</u>.

By order of the Commission.

Kenneth R. Mason

Secretary

Issued: August 17, 1989.

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UNITED STATES INTERNATIONAL TRADE COMMISSION Washington, D.C. 20436

In the matter of:

CERTAIN CHEMILUMINESCENT
COMPOSITIONS AND COMPONENTS
THEREOF AND METHODS OF USING,
AND PRODUCTS INCORPORATING,
THE SAME

Investigation No. 337-TA-285

COMMISSION OPINION ON REGISTERED TRADEMARK INFRINGEMENT, REMEDY, THE PUBLIC INTEREST, AND BONDING

I. Procedural background.

The Commission instituted this investigation upon the filing of a complaint on July 21, 1988, by American Cyanamid Company (Cyanamid), of Wayne, N.J. The complaint alleged the violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), in the importation and sale of certain chemiluminescent compositions and components thereof by reason of infringement of three registered trademarks and various claims of seven U.S. patents owned by Cyanamid. Respondents named in the notice of investigation were Societé Prolufab of Seresnes, France (Prolufab) and Mr. Luc Noel of Los Angeles, CA (53 Fed. Reg. 32476-77, August 25. 1988).

The notice of investigation was later amended (53 Fed. Reg. 43276, October 26, 1988) to conform to the August 1988 amendments to section 337 contained in the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418) and to include within the scope of

the investigation products incorporating chemiluminescent compositions (54 Fed. Reg. 11822, March 22, 1989).

On January 6, 1989, the presiding administrative law judge (ALJ) issued an initial determination (ID) finding respondent Prolufab to be in default. The Commission determined not to review the ID, thereby allowing it to become the determination of the Commission (54 Fed. Reg. 6181, February 8, 1989). The ID provided that Prolufab had waived its right to appear in the investigation, to contest the allegations at issue, and to be served with documents. On March 14, 1989, the Commission determined not to review an ID terminating the investigation as to the other respondent—Luc Noel—on the basis of a consent order (54 Fed. Reg. 11822, March 22, 1989).

On March 22, 1989, the ALJ issued an ID (Order No. 25) granting complainant's motion for summary determination regarding violation of section 337. The ID found that respondent Prolufab had violated section 337 with regard to infringement of the following:

claims 1-5 and 7-10 of U.S. Letters Patent 3,749,679; claims 1, 2, 4, 6, and 8 of U.S. Letters Patent 3,775,336; claims 1-6 of U.S. Letters Patent 3,888,786; claims 1, 4, and 5 of U.S. Letters Patent 4,313,843; claims 1, 2, 4, 6, and 7 of U.S. Letters Patent 3,729,426; claims 1 and 3 of U.S. Letters Patent 4,076,645; Registered Trademark Number 925,341 (the '341 mark); and Registered Trademark Number 1,141,455 (the '455 mark),

The Commission decided to review only that portion of the ID relating to contributory infringement of the two registered trademarks listed above, thereby allowing the ALJ's findings with regard to all other issues in the ID, including patent

infringement, to become the determination of the Commission (54 Fed. Reg. 19250, May 4, 1989). The Commission invited submissions from the parties, government agencies, and the public on the issues of remedy, public interest, and bonding during the period of Presidential review. The Commission received comments from complainant, from the Commission investigative attorney, and from former respondent Luc Noel. No agency comments were received.

II. Contributory trademark infringement.

The Commission's <u>Federal Register</u> notice provided that the Commission would review:

whether respondent Societe Prolufab has contributorily infringed Registered Trademark Nos. 925,341 or 1,141,455. 1

A manufacturer or distributor contributorily infringes a trademark by intentionally inducing another to directly infringe the trademark or by continuing to supply a product to one whom it knows or should know is directly infringing the trademark. 2/
Here, Prolufab (falsely) told its importer and distributor that its

The 1971 registration for the '341 mark depicts the word "CYALUME" in plain block letters, for use with "chemiluminescent materials for lighting purposes, such as lightsticks, light wands, light panels, etc." The 1980 registration for the '455 mark depicts the word "Cyalume" in stylized, curved letters. The "L" in "Cyalume" is taller than the other letters, and a teardrop is placed between the vertical bars of the "U". The registration states that the '455 mark is for use with a "chemical lightstick which, when activated, produces light."

^{2/} Inwood Laboratories, Inc. v. Ives Laboratories, Inc., 456 U.S. 844 (1982); William R. Warner & Company v. Eli Lilly & Company, 265 U.S. 526 (1924); McCarthy, Trademarks and Unfair Competition, 2d Ed. (1984) § 25:2.

products contained genuine Cyalume chemicals manufactured by complainant Cyanamid. From this, one can infer that Prolufab intended that its distributor advertise or represent to the public that the chemicals in the products it was selling were from Cyalume products. At a minimum, Prolufab should have known that its U.S. distributor Nite Lite Novelty, Inc., was engaged in such advertising. 3/

Although Prolufab's contributory role in any infringement seems clear, it still remains to determine whether Nite Lite's actions constitute direct trademark infringement, because contributory trademark infringement depends upon a finding of direct infringement. The touchstone of direct trademark infringement is the notion of "likelihood of confusion." 4/ More

 $[\]frac{3}{4}$ Among Nite Lite's uses of "Cyalume" were the following:

⁽¹⁾ an advertisement for Prolufab products in an amusement periodical stating:

Made with CYALUME(\hat{R}). A product of American Cyanamid Company.*

^{*}This Product should not be confused with the Lite Rope(R) a product of American Cyanamid Company.

(ID at 88).

⁽²⁾ a flyer in a package of Prolufab necklaces sold by Nite Lite containing the following:

Although our product is not to be confused with Lite Rope(R), please note that all of our glow products are made with the glow juice CYALUME(R) which is extracted from the GLOW STICK(R) made by American Cyanamid Company.

(ID at 87).

^{4/} Although the ALJ determined that Nite Lite had directly infringed the "Cyalume" trademark, he did not use the test of likelihood of confusion. Rather, the ALJ found that Nite Lite had directly infringed the "Cyalume" trademark through "false and (continued...)

specifically, the test for trademark infringement is whether the alleged infringer's use of the mark is so similar to complainant's mark as to create the likelihood of confusion among an appreciable number of members of the public as to the source or sponsorship of the product. $\frac{5}{}$ The test is the same for common law trademarks and for actions brought under the Lanham Act for infringement of registered trademarks. Likelihood of confusion is a question of fact. $\frac{6}{}$

In determining whether there is likelihood of confusion, the Commission has traditionally examined the following factors:

- (a) the degree of similarity between the designation and the trademark or trade name in
 - (i) appearance;
 - (ii) pronunciation of the words used;
 - (iii)verbal translation of the pictures or designs involved;
 - (iv) suggestion; //
- (b) the intent of the actor in adopting the designation;
- (c) the relation in use and manner of marketing between the goods and services marketed by the actor and those marketed by the other;
- (d) the degree of care likely to be exercised by

^{4/(...}continued)
misleading use" of the mark in its advertisement and flyer. (ID at
44) The ALJ also found that the use was a "misrepresentation of
the source of those chemicals." (Id.) The scope of the
investigation was limited to patent and trademark infringement, and
did not include claims of passing off or misrepresentation of the
source of the compositions at issue. 53 Fed. Reg. 32476-7.

^{5/} Certain Reclosable Plastic Bags and Tubing (Reclosable Bags), Inv. No. 337-TA-266, USITC Pub. 2171 (March 1989), Unreviewed ID at 44; McCarthy, supra, at § 23:1, and cases cited therein.

^{6/} McCarthy, <u>supra</u>, § 23:22.

The factors in (a) have been referred to as "sight, sound, and meaning." Id., § 23:4.

purchasers. 8/

We believe that application of these factors leads to a conclusion that there is a likelihood of confusion between Nite Lite's use of "Cyalume," and Cyanamid's use of "Cyalume" under the '341 and '455 marks.

All of the factors either point toward a finding of likelihood of confusion or appear to be inapplicable to this case and, hence, neutral. With regard to appearance, Cyanamid uses "Cyalume" with curved letters, whereas Nite Lite's use was in plain, printed type (see note 3, supra). However, since both uses contain the word "Cyalume." we believe Nite Lite's use of "Cyalume" is largely similar in appearance to Cyanamid's. The pronunciation of "Cyalume" is of course the same for complainant's and Nite Lite's use. Verbal translation and suggestion appear to be inapplicable factors in this case. The intent of Nite Lite in using the mark "Cyalume" clearly appears to have been to make purchasers believe that the chemicals in its goods originated with complainant Cyanamid, because that is precisely what Nite Lite claims in its advertising and flyers. Moreover, the mark was used by Nite Lite on the exact same kind of goods as are sold by Cyanamid, which are presumably sold to the same kinds of customers. The degree of care of purchasers (both distributors and end-users) appears only

^{8/} Certain Coin-Operated Audio-Visual Games and Components Thereof, Inv. No. 337-TA-87 (1981), at 9 (factors drawn from Restatement of Torts § 729); Reclosable Bags, USITC Pub. 2058 (Jan. 1988), Unreviewed ID at 41; Certain Heavy-Duty Staple Gun Tackers, Inv. No. 337-TA-137, USITC Pub. 1506 (March 1984), Unreviewed ID at 52; Vacuum Bottles and Components Thereof, Inv. No. 337-TA-108, USITC Pub. 1305 (November 1982), Commission Opinion at 25.

marginally relevant to likelihood of confusion here, in that careful examination of the mark would not allow a purchaser to better ascertain that the chemicals do not originate with Cyanamid. In sum, the factors strongly indicating a likelihood of confusion are: pronunciation, intent, similarity of goods, and appearance. Neutral factors are: translation, suggestion, and degree of care by purchasers.

We find that Nite Lite's use of "Cyalume" has created a likelihood of confusion as to the source of its chemiluminescent products, and thus amounts to direct infringement of complainant's trademark. Therefore, on the basis of respondent Prolufab's representations to Nite Lite, we determine that Prolufab has contributorily infringed complainant's "Cyalume" trademark. The Commission therefore affirms the ALJ's determination with regard to contributory trademark infringement.

III. Remedy.

Both complainant and the IA have urged the Commission to issue a general exclusion order. 9/ In deciding whether to issue a general as opposed to a limited exclusion order, the Commission has considered a complainant's (and the Commission's) interest in avoiding repeated section 337 complaints each time a new infringing party is discovered. Against this interest, the Commission has

^{2/} Complainant's Brief on the Issues of Remedy, the Public Interest and Bonding at 9-23; Brief of the Commission Investigative Staff on Remedy, Bonding, and the Public Interest (IA's Brief) at 7-13.

balanced the public interest in avoiding the disruption of legitimate trade that a general exclusion order might cause. 10/

In balancing these concerns, the Commission has issued a general exclusion order if the intellectual property at issue "is of a sort which might readily be infringed by foreign manufacturers who are not parties to the Commission's investigation." Certain Airless Paint Spray Pumps and Components Thereof (Spray Pumps), Inv. No. 337-TA-90, USITC Pub. 1199 (Nov. 1981) at 17. The Commission has required a showing of "[1] a widespread pattern of unauthorized use of [the] patented invention and [2] certain business conditions from which one might reasonably infer that foreign manufacturers other than the respondents to the investigation may attempt to enter the U.S. market with infringing articles." Id. at 18.

Spray Pumps provided that evidence of the first element above might include:

- (1) a Commission determination of unauthorized importation into the United States of infringing articles by numerous foreign manufacturers; or
- (2) the pendency of foreign infringement suits based upon foreign patents which correspond to the domestic patent in issue: or
- (3) other evidence which demonstrates a history of unauthorized foreign use of the patented invention.

<u>Spray Pumps</u> provided that evidence of the second "business conditions" element might include:

^{10/} Certain Dynamic Random Access Memories, Components Thereof and Products Containing Same (<u>DRAMs</u>), Inv. No. 337-TA-242, USITC Pub. 2034 (November 1987) Commission Opinion on Violation, Remedy, Bonding, and Public Interest at 84.

- (1) an established demand for the patented product in the U.S. market and conditions of the world market;
- (2) the availability of marketing and distribution networks in the United States for potential foreign manufacturers;
- (3) the cost to foreign entrepreneurs of building a facility capable of producing the patented article;
- (4) the number of foreign manufacturers whose facilities could be retooled to produce the patented article; or
- (5) the cost to foreign manufacturers of retooling their facility to produce the patented articles. $\frac{11}{2}$

There is some evidence adduced in this investigation with regard to a widespread pattern of unauthorized use. Although the

In addition to the authority of the Commission to issue a general exclusion from entry of articles when a respondent appears to contest an investigation concerning a violation of the provisions of this section, a general exclusion from entry of articles ... may be issued if --

- (A) no person appears to contest an investigation concerning a violation of the provisions of this section. and
- (B) such a violation is established by substantial, reliable, and probative evidence.

In response, the IA argued that examination of the <u>Spray Pumps</u> factors is required even under subsection (g)(2), because the provision provides that the Commission <u>may</u> issue a general exclusion order following default, not that it <u>must</u> do so. Reply Brief of the Commission Investigative Staff on Remedy, Bonding, and the Public Interest at 3.

We believe that "may" indicates that the Commission retains some discretion over issuance of a general exclusion order under the provision. This being the case, and because the same legal and policy considerations apply in the issuance of a general exclusion order in both contested and default cases, we see no reason not to apply the <u>Spray Pumps</u> test in a default case.

^{11/} Id. at 18-19. Complainant also argued that subsection (g)(2) of section 337, added by section 1342 of the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418), provides an additional basis for a general exclusion order, one that does not require examination of the Spray Pumps factors. Complainant's Brief at 7-8. The provision reads:

ALJ's ID considered infringement with regard to only a single respondent, during the remedy phase complainant submitted affidavits of additional instances of unauthorized foreign use and U.S. imports. 12/ On the basis of these affidavits, it appears that several additional products manufactured in Japan, Korea, Taiwan, and Belgium may be covered by the patent claims at issue and yet are not derived from chemiluminescent compositions contained in Cyanamid's own glow sticks (i.e., are "unauthorized"). 13/
However, we are hesitant to determine that the evidence establishes the existence of additional unauthorized infringing use, without the benefit of an ALJ finding (which was not made because the evidence concerned non-respondents) and without any other independent verification, such as a finding of infringement in another judicial proceeding. 14/

By contrast, the second "business conditions" prong of the Spray Pumps test militates strongly in favor of a general exclusion

^{12/} The Commission may make additional findings of fact during the remedy phase, on the basis of information already in the record or information submitted for the purpose of the remedy phase. Certain Erasable Programmable Read-Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memories, Inv. No. 337-TA-276, USITC Pub. 2196 (May 1989) at 118.

 $[\]frac{13}{}$ Complainant's Exhibit (CX)-X at 4-5; CX-Y at 4, 7-9; CX-AB at 3-6.

^{14/} The Commission is also concerned about placing emphasis on this additional evidence because the firms to which it pertains, as non-respondents, have had no opportunity to appear in the investigation to challenge complainant's allegations. See Spray Pumps at 18, n.1 (Category (1) under first prong of Spray Pumps test-viz., a Commission determination of unauthorized importation of infringing articles by numerous foreign producers-was added in part to encourage complainants to name as respondents all those believed to be violating section 337.).

order in this investigation. U.S. demand for chemiluminescent products is substantial. 15/ Because the technology is well known and the manufacturing process is relatively simple, costs of starting production from scratch are minimal. 16/ Furthermore, there is no evidence of any other barriers to entry into the business or into the U.S. market. Because of the low cost of production, numerous foreign manufacturers could produce chemiluminescent products. In addition, U.S. distribution channels for such products already exist. 17/

Based on our consideration of the <u>Spray Pumps</u> factors of a widespread pattern of unauthorized use, and business conditions conducive to further importation of infringing articles into the United States (to which we accord primary significance in this investigation), we determine that a general exclusion order is appropriate.

The general exclusion order provides that articles that infringe the relevant claims of the six patents at issue, and packaging and related literature that infringe the two registered trademarks, are excluded from entry. The order contains a provision by which an importer may enter articles covered by the patent claims by certifying that the articles were made using chemicals extracted from complainant's Cyalume products (and thus

 $[\]frac{15}{ID}$, Finding of Fact (FF) 16.

¹⁶/ CX-B at 29-30; CX-G at 23; CX-O at 54.

 $[\]frac{17}{}$ IA's Brief at 13.

are non-infringing). 18/ The order also takes into account that it is not trademark infringement to repackage or rebottle goods and use the trademark of the original goods on the repackaged goods in a limited manner designed to truthfully inform the public of the nature and source of the goods. 19/

IV. Public interest.

Section 337(d) (19 U.S.C. § 1337(d)) provides that the Commission is to exclude infringing articles --

unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that the articles should not be excluded from entry. 20/

Complainant and the IA argued that the public interest is not implicated by the sale of chemiluminescent compositions and products. 21/ Settled respondent Luc Noel argued that U.S.

^{18/} The Commission has included certification provisions in several prior exclusions orders. See, e.g., Certain Minoxidil Powder, Salts and Compositions for Use in Hair Treatment (Minoxidil), Inv. No. 337-TA-267 (1988), General Exclusion Order, paragraph 2; Certain Indomethacin, Inv. No. 337-TA-183 (1986), Order, paragraphs 2,3.

^{19/} Prestonettes, Inc. v. Coty, 264 U.S. 359 (1924); McCarthy, supra, § 25:8; see also, Bandag, Inc. v. Al Bolser's Tire Stores, 750 F.2d 903, 911 (Fed. Cir. 1984).

^{20/} In only three prior investigations has the Commission found that the public interest precluded relief. See Certain Automatic Crankpin Grinders, Inv. No. 337-TA-60, USITC Pub. 1022 (Dec. 1979); Certain Inclined-Field Acceleration Tubes and Components Thereof, Inv. No. 337-TA-67, USITC Pub. 1119 (1980); Certain Fluidized Supporting Apparatus, Inv. No. 337-TA-182/188, USITC Pub. 1667 (1984). Those investigations are easily distinguished from the present investigation.

^{21/} Complainant's Brief at 29-30; IA's Brief at 15-16.

consumers and the competitive conditions in the U.S. economy would be harmed by an exclusion order because the order would give Cyanamid a monopoly over production and sale of the products in the United States. $\frac{22}{}$

We believe that chemiluminescent products used for novelty purposes do not raise issues of public health and welfare. As complainant admits, however, products manufactured under the same patent claims have uses that could conceivably raise public interest concerns. Articles made under these patent claims may be used for sea rescues and appear to have other (mostly unspecified) military, industrial, and consumer safety applications. 23/
However, the record contains sparse evidence concerning the nature of such articles and almost no evidence concerning any importation of articles having these additional uses. The public interest exception in the statute provides that an order should issue unless it is found that the public interest precludes the order. 24/ We do not believe that this can be said on the basis of the information in the record of this investigation.

With regard to the argument of Luc Noel, the Commission has rejected arguments for denial of relief that are based solely on the fact that a second supplier would be shut out of the market by

^{22/} Written Submissions by [Former] Respondent Luc Noel on the Issues of Remedy, the Public Interest, and Bounding [sic] at 3-4.

 $[\]frac{23}{}$ CX-P at 14-16; CX-A at 35-37; CX-G at 13.

 $[\]frac{24}{\text{See}}$, Minoxidil, Commission Opinion at 9, n.5. ("Once the Commission has found a violation and selected a remedial order, that order will issue unless <u>precluded</u> by consideration of the public interest factors.")(emphasis in original)

an exclusion order. In <u>Certain Aramid Fiber</u>, Inv. No. 337-TA-194, USITC Pub. 1824 (1986) at 16, the Commission stated:

[C]ustomers' preference for a second source of a patented product does not provide generally a basis for denying relief under section 337. Although the Commission has recognized public interest exceptions to this rule, it has limited those exceptions to instances where the public as a whole suffered from the lack of availability of a patented article or complainant's product was an insufficient substitute for the imported product. (footnotes omitted)

Here there is no evidence that complainant cannot supply the entire U.S. market for chemiluminescent goods. With regard to whether the domestic article is a sufficient substitute for the imports, the record shows, if anything, that the domestic product is superior to Prolufab's imports. $\frac{25}{}$ Thus, we determine that the public interest factors do not preclude issuance of a remedy in this investigation.

V. Bonding.

Section 337(j)(3) provides that during the 60-day Presidential review period, infringing articles shall be entitled to entry under bond determined by the Commission. The legislative history to the provision states that --

In determining the amount of the bond, the Commission shall determine, to the extent possible, the amount which would offset any competitive advantage resulting from the unfair method of competition or unfair act enjoyed by

^{25/} FF 124; CX-O at 39. See also, Certain High Intensity Retroreflective Sheeting (Retroreflective Sheeting), Inv. No. 337-TA-268, USITC Pub 2121 (September 1988), Commission Opinion on Remedy, Public Interest, and Bonding at 10 (Commission rejected argument under public interest factors based on potential price increase from an exclusion order.).

persons benefiting from the importation of the article. $\frac{26}{}$

Complainant urged a bond of between 81.5 percent and 123 percent of entered value, based in part upon an estimate of the price Prolufab charges to its distributors. 27/ The IA argued for a bond in the amount of 69 percent of entered value. 28/

Determining the amount that would truly offset the competitive advantage accruing to Prolufab and its importers and distributors by reason of infringement in this case would be very difficult if not impossible. $\frac{29}{}$ If price data are available, the Commission has generally sought to impose a bond that would equalize the price of the infringing product with the price of complainant's product. $\frac{30}{}$

^{26/} S. Rep. 1298, 93d Cong., 2d Sess. 198 (1974).

^{27/} Complainant's Brief at 32-35.

^{28/} IA's Brief at 14-15.

Offsetting the competitive advantage would require determining how much would be charged if Prolufab and its importers and distributors sold a product in a way that did not infringe the patents and trademark. This could occur in at least two different ways. First, Prolufab could acquire Cyalume light-sticks, drain them, refill them, and resell them. Although there is evidence in the record that this has actually been done by some persons (CX-O at 7-17; FF 85), there is no evidence of the costs of such an operation or the prices at which the final products are sold. Second, Prolufab could buy Cyalume sticks and resell them to distributors as is. The resulting price for the product under this scenario is difficult to ascertain, although presumably the price would be higher than that at which Cyanamid's distributors sell its products, because the process would entail adding another middleman.

^{30/} See, e.g., Reclosable Bags, USITC Pub. 2171 (March 1989), Commission Opinion at 5; Retroreflective Sheeting at 12. If price data are not available, the Commission has used other data, such as (continued...)

In this investigation, there is some information regarding the prices charged by distributors for complainant's and respondent's products. 31/ Because the IA's recommended bond is derived from evidence of actual prices, whereas complainant's bonds are based upon a price estimate, the IA's figure appears to be more appropriate. Thus we have determined that the bond during the Presidential review period should be set at 69 percent of the entered value of the imported products in question.

^{30/(...}continued) royalty payments in settlement agreements. <u>See DRAMs</u> at 94-95. Here the agreement between Luc Noel and Cyanamid does not contain any provision for royalty payments.

^{31/} CX-O at 38-40; CX-B, Exhibit 2. The price information is somewhat suspect because it is not substantial, it is over one and a half years old, and because the products are not entirely comparable. See CX-O at 39. However, for lack of a preferable alternative we base the bond upon this pricing information.

CERTAIN CHEMILUMINESCENT COMPOSITIONS AND COMPONENTS THEREOF AND METHODS OF USING, AND PRODUCTS, INCORPORATING, THE SAME.

CERTIFICATE OF SERVICE

I, Kenneth R. Mason, hereby certify that the attached NOTICE OF ISSUANCE OF GENERAL EXCLUSION ORDER, was served upon Jeffrey R. Whieldon, Esq., and upon the following parties via first class mail, and air mail where necessary, in August 17, 1989.

Kenneth R. Mason, Secretary

U.S. Internation Trade Commission

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CS AFR 12 72: 5

In the Matter of

CERTAIN CHEMILUMINESCENT)
COMPOSITIONS AND COMPONENTS)
THEREOF AND METHODS OF USING)
THE SAME)

Investigation No. 337-TA-285

Order No. 25: Initial Determination Granting Complainant's Motion No. 285-9 for Summary Determination of Violation

Pursuant to Commission rule 210.50 and the Notice of Investigation, which was published in the Federal Register on August 25, 1988 (53 Fed. Reg. No. 165 32476-77) and thereafter amended, the administrative law judge on complainant's Motion No. 285-9 determines, as a matter of law, that there has been a violation of 19 U.S.C. sections 337(a)(1)(B)(i) and (a)(1)(C) by respondent Societe Prolufab (Prolufab) in the sale for importation to the United States of certain chemiluminescent glow necklaces. In view of this summary determination further proceedings in this investigation, including a hearing on the matter of violation is unnecessary.

<u>-</u>		

Appearances

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Introduction

On January 6, 1989, complainant American Cyanamid Company (Cyanamid) pursuant to 19 C.F.R. sections 210.24 and 210.50, moved for a summary determination of violation in its favor as a matter of law, contending that the pleadings and supporting exhibits demonstrate that there is no genuine issue as to any material fact respecting any of the issues to be determined, and that a trial would thus be unnecessary. (Motion Docket No. 285-9). 1/

The staff on January 18, 1989 submitted a response in support of complainant's Motion No. 285-9, in which it agreed that there is no genuine issue of material fact respecting any of the issues to be determined in this proceeding.

No other response to complainant's Motion No. 285-9 was received. Hence, Motion No. 285-9 is uncontested.

Complainant's Motion No. 285-9 relies on three volumes of exhibits containing sworn witness statements and exhibits thereto, as well as certain designated exhibits to the complaint. The staff's supporting response attaches the confidential version of the complaint, as an exhibit, and a tabular appendix indicating which claims it contends are infringed by respondent Societe Prolufab's product.

^{1/} On February 17, 1989 complainant filed "Complainant's Second Motion and Supporting Memorandum For A Summary Determination of Violation of §337 (19 U.S.C. §1337), As Amended" (Motion Docket No. 285-12). Order No. 24 which issued on March 22, denied Motion No. 285-12.

Procedural History

The Commission on August 19, 1988 instituted this investigation on whether there is a violation of section 337, naming as complainant Cyanamid of Wayne, New Jersey, and naming as respondents Societe Prolufab (Prolufab) of Suresnes, France and Mr. Luc Noel (Noel) of Los Angeles, California.

The complaint, which was filed on July 21, 1988 and supplemented thereafter, alleged violation of section 337 in the importation and sale of certain chemiluminescent compositions and components thereof, including glow necklaces, which allegedly directly infringe four U.S. patents, and which allegedly contributorily infringe, and induce infringement of, two other U.S. patents. The complaint also alleged violation of section 337 through contributory and induced infringement of the registered trademark CYALUME, by allegedly false representations that the imported chemiluminescent glow necklaces contain genuine CYALUME chemiluminescent materials extracted from Cyanamid's CYALUME products. (Complaint at paragraphs 30-40).

The Notice of Investigation published on August 25, 1988 was amended by initial determination (Order No. 3, which issued on September 19) to conform the scope of the investigation to the provisions of the Omnibus Trade and Competitiveness Act of 1988. As amended, the scope of this investigation was to determine whether there is a violation of sections 337 (a)(1)(B)(i) and (a)(1)(C) in the unlawful importation into the United States, sale for importation, or sale within the United States after importation, of certain chemiluminescent compositions and components thereof. by reason of alleged direct infringement of claims 1-5 or 7-10 of

U.S. Patent No. 3,749,679 (the '679 patent), claims 1,2, 4-6 or 8 of U.S. Patent No. 3,775,336 (the '336 patent), claims 1-6 or 10 of U.S. Patent No. 3,888,786 (the '786 patent), claims 1, 4 or 5 of U.S. Patent No. 4,313,843 (the '843 patent), and alleged contributory or induced infringement of claims 1-2, 4, 6 or 7 of U.S. Patent No. 3,729,426 (the '426 patent), claims 1, 3 or 4 of U.S. Patent No. 4,076,645 (the '645 patent), and U.S. Registered Trademark Nos. 925,341 (the '341 trademmark), 1,133,583 (the '583 trademark) and 1,141,455 (the '455 trademark); and whether there exists an industry in the United States as required by subsection (a)(2) of section 337.

A preliminary conference was held on October 4, 1988 at which counsel for complainant and the staff appeared. The two respondents Prolufab and Noel did not attend the conference.

No responses to the complaint and notice of investigation, as required under Commission rule 210.24, was filed in this investigation.

A letter request dated October 8, 1988 from Continental
Photostructures (Continental) of Brussels, Belgium, requested its
intervention in the investigation. That request stated that one of
Continental's customers is Prolufab who fills its necklaces and other
products with liquids manufactured by Continental. The requested
intervention was denied in Order No. 7 which issued on October 31, 1988,
particularly in view of Continental's statements that it had never exported
its liquids to the United States and does not intend to do so until the end
of the validity of the involved patents. 2/

²/ Complainant argued that, accepting Continental's statements as true, it is clear that Continental had not committed a violation of section 337 and that there would be no jurisdiction over Continental, as a party

Respondent Prolufab was ordered in Order No. 10, which issued on December 6, 1988, to show cause by December 28 why it should not be found in default under the Commission rules for its failure to respond to the complaint and notice of investigation, pursuant to Commission rules, and for its failure to respond properly to the discovery requests of complainant and the staff by answer or objection. The show cause order noted the correspondence received from Mr. Paul Noel of Prolufab and found that that correspondence did not meet the requirements of Commission rule 210.21 for a verified response, nor did it contain the economic information affirmatively required by said rule. Among its various difficultly phrased and unverified contentions, Prolufab stated its intent to export to the United States necklaces containing genuine CYALUME brand chemiluminescent material extracted from Cyanamid's CYALUME lightsticks.

No response to the show cause order was received from Prolufab, despite the fact that a verified response to the complaint was more than three months overdue under Commission rules. Consequently, Prolufab was found in default for its failure to properly participate in the investigation under the Commission rules in Order No. 13 which issued on January 6, 1989. Because of the finding of default the administrative law judge found that Prolufab had waived its rights to contest the allegations at issue, to appear in the investigation, and to be served with documents. On January 31, 1989, the Commission issued a notice of its determination not to review the initial determination finding Prolufab in default.

respondent, and that Continental is in no different position than any of the other suppliers of chemiluminescent liquids to respondent Prolufab whose businesses may be affected by an exclusion order, but lawfully so, if their customers are found in violation of section 337.

Complainant and the remaining respondent Noel filed a joint motion for entry of a consent order against, and termination of the investigation as to, Noel. In the consent order agreement signed by Noel and complainant's representatives, Noel admitted infringement of the intellectual property in issue by importing or selling imported chemiluminescent products.

Following modification to clarify the scope of the proposed consent order, the administrative law judge issued Order No. 11 on December 12, 1988 granting the motion. The Commission on January 13, 1989 issued a notice of its determination to review and remand the initial determination granting the joint motion. On January 30, the staff filed a petition for reconsideration of the Commission's determination which on February 15 was denied by the Commission.

On January 6, 1989 Cyanamid filed its Motion No. 285-9 for summary determination to which this initial determination relates.

Following Cyanamid's filing of Motion No. 285-9, Cyanamid on January 17, 1989, pursuant to 19 C.F.R. section 210.24, filed a motion to enter into the record evidence of non-respondent third party activities (Motion Docket No. 285-10). The staff opposed Motion No. 285-10. Order No. 20, which issued on February 8, denied Motion No. 285-10. Thereafter on February 17, 1989 Cyanamid in its Motion No. 285-12 moved that the record pertaining to a UFO Ball/Minilit product and a Magic Light product, which were referenced in Motion No. 285-10, "be reviewed and determined summarily" as establishing additional violations of section 337. Motion No. 285-12 was denied on March 22 in Order No. 24.

On January 19, 1989, pursuant to 19 C.F.R. sections 210.22 and 210.24, Cyanamid filed a motion for leave to amend the notice of investigation such

that its scope pertains not only to "certain chemiluminescent compositions and components thereof" but also to "products incorporating the same" (Motion No. 285-8). The staff did not oppose Cyanamid's Motion No. 285-8, but recommended that it would be more appropriate to hold in abeyance any ruling on the motion for at least two weeks, pending a decision on the staff's petition to the Commission for reconsideration of Order No. 11. On February 15 an initial determination issued (Order No. 22) amending the notice of investigation and recertifying Order No. 11 to the Commission. On March 15 the Commission determined not to review the initial determinations amending the notice of investigation and terminating respondent Luc Noel from the investigation on the basis of the consent order agreement.

Issues Presented

Pursuant to Motion No. 285-9, Cyanamid put in issue the following:

- 1. Whether there has been importation, sales for importation or sale in the United States of articles, specifically in this case self-activated, glow-in-the dark necklaces, which contain chemiluminescent compositions and components which infringe the claims of Cyanamid's valid and enforceable patents and registered trademarks set forth in the Notice of Investigation;
- 2. Whether respondent Prolufab and others have imported, sold for importation or sold in the United States the aforesaid necklaces containing chemiluminescent compositions and components which infringe:
 - (a) claims 1-5 or 7-10 of the '679 patent;

- (b) claims 1, 2, 4-6 or 8 of the '336 patent;
- (c) claims 1-6 or 10 of the '786 patent;
- (d) claims 1, 4 or 5 of the '843 patent;
- 3. Whether Prolufab and others have induced infringement or contributed to the infringement of:
 - (a) claims 1, 2, 4, 6 or 7 of the '426 patent;
 - (b) claims 1, 3 or 4 of the '645 patent;
- 4. Whether Prolufab and others have induced or contributed to infringement of Cyanamid's registered '341, '583 or '455 trademarks:
- 5. Whether a domestic industry exists relating to chemiluminescent compositions and components thereof and processes utilizing the same protected by the aforesaid patents and trademarks.

Complainant represented in Motion No. 285-9 that the above issues constituted all of the issues to be determined in this investigation regarding whether there has been a violation of section 337 of the Tariff Act of 1930, as amended. However, since filing Motion No. 285-9, complainant filed Motion No. 285-12. On March 22, 1989 Motion No. 285-12 was denied (Order No. 24).

Background Technology

Cyanamid's CYALUME chemiluminescent or chemical light products under investigation contain solutions of chemical compounds which upon their mixture "luminesce", i.e. produce light without an external source of

energy, for a certain finite period of time (Barretz CX-A at 7-30; Essenfeld CX-D at 7-8; Granzow CX-F at 8-10, 20; Ware CX-P at 5-6, 11-12).

The CYALUME products as sold contain two component chemical solutions which are kept isolated to prevent their intermixture and reaction, until light production is desired. In the chemical light products the first solution is contained in an inner thin-walled sealed glass ampule and the second solution is contained within an outer flexible translucent plastic casing. The sealed glass ampule is placed inside the flexible plastic casing. A bending of the plastic casing sufficient to cause breakage of the thin walled glass ampule causes an intermixture of the two solutions which have been otherwise kept separate, and commences the chemiluminescence. (Id.)

The second solution contained in the outer container of all of CYALUME light products contains a critical key energy generating compound labeled CPPO and a fluorescer with solvent, and has been called the oxalate solution due to the presence of the CPPO. The first solution contained in the sealed glass ampule of all of CYALUME light products contains hydrogen peroxide and solvents and is called the activator or peroxide solution.

The critical energy generating compound labeled CPPO in the oxalate solution is an ester of oxalic acid, and is structurally represented and

chemically named as follows:

Bis(2,4,5-trichloro-6-carbopentoxyphenyl) oxalate ester

(<u>Id</u>.)

The fluorescer in the oxalate solution is the compound which by excitation emits a glowing colored light. The particular color light emitted depends on the particular fluorescer compound used. (Id.)

The chemical compound labeled

(<u>Id</u>.)

In the actual use of the CYALUME products when the first and second solutions are mixed, a chemical reaction of the hydrogen peroxide with the CPPO commences. This reaction oxidizes the oxalate ester, forming: (1) a

intermediate and (2) the by-product

The intermediate thereupon transfers its energy to the fluorescer, so that the fluorescer is chemiexcited momentarily into an excited state. When the excited fluorescer returns to its stable or ground state, it gives up energy by emitting a photon of light. In the process of the continuing reaction of CPPO and hydrogen peroxide, the fluorescer reverts from the stable to the excited states and back again to the stable state many times. The fluorescer oscillates into those states without the fluorescer compound being consumed or used up. In contrast, as the chemical reaction. When all of the CPPO has been consumed in the chemical light device, the chemicuminescent production of light ends. (Id.)

The oxalate component process schematic and combinations with fluorescers for Cyanamid's finished chemiluminescent novelty products is represented as follows:

In the above schematic diagram,

Patents and Trademarks In Issue

The '426 patent claims certain methods or processes for obtaining chemiluminescent light emission the improvement of which is the use of a particular type of organic fluorescer compound (FF 1). Claims 1, 2, 4, 6 and 7 in issue read as follows:

- 1. In a method for obtaining chemiluminescent light emission, by reaction of a hydroperoxide with a composition having the ingredients, a chemiluminescent compound selected from the group consisting of anhydrides, amides, O-acylhydroxy amines and esters of polycarbonyl acids, an organic fluorescent compound, and an organic solvent for said ingredients and said hydroperoxide, all of said ingredients and hydroperoxide being in such ratios as to provide chemiluminescent light upon reaction, the improvement which comprises the use of phenylethynyl substituted aromatic hydrocarbons as the organic fluorescent compound.
- 2. A chemiluminescent method according to claim 1 wherein said phenylethynyl substituted hydrocarbon is an acene compound.
- 4. A chemiluminescent method according to claim 2, wherein said acene-type compound is 9,10-bis(phenylethynyl)anthracene.
- 6. A process according to claim 1, wherein the chemiluminescent compound is a bis-ester of oxalic acid and an alcohol characterized by an acid ionization constant in water greater than 1.3×10^{-1} .

7. A process according to claim 1 in which said ester is a bis(substituted-phenyl)oxalate, and in which said solvent comprises a dialkyl phthalate in which the alkyl substituents thereof contain from one to about eight carbon atoms. [Emphasis added]

The 9,10-bis(phenylethynyl) anthracene of claim 4 is the fluorescer BPEA (see "Background Technology" above)

The CPPO is a

species of the corresponding chemiluminescent compound recitation in claims 1, 6 and 7.

The '336 patent claims a chemiluminescent light emission composition having a bisaryl oxalate ester, an organic fluorescent compound and an organic solvent for said ingredients, the improvement of which comprises the presence of a particular type of catalyst. It also claims a process for producing a highly intense chemiluminescent light from a reaction of (1) a bis aryl oxalate ester, (2) hydrogen peroxide, (3) an organic fluorescent compound, and (4) an organic solvent for said ingredients, the improvement of which calls for the step of adding to said reaction the particular type of catalyst recited in claim 1 (FF 3). Claims 1, 2, 4, 5, 6 and 8 in issue read:

- 1. In a composition for reaction with hydrogen peroxide to produce a high intensity chemiluminescent light emission having the ingredients a bisaryl oxalate ester, an organic fluorescent compound, and an organic solvent for said ingredients, the improvement which comprises a catalyst which is a weakly basic salt of an acid having a log of the pKa value in water of 1 to 6, said catalyst being effective to provide a more uniform light output.
- 2. The composition of claim 1 wherein said oxalate ester is a substituted aryl oxalate ester.
- 4. The composition of claim 1 wherein said organic compound is 9,10-bis(phenylethynyl)anthracene.

- 5. The composition of claim 1 wherein said organic fluorescent compound is 9,10-diphenyl-anthracene.
- 6. The composition of claim 1 wherein said weakly basic salt is sodium salicylate.
- 8. In a process for producing a highly intense chemiluminescent light from a reaction of the ingredients comprising: (1) a bis aryl oxalate ester, (2) hydrogen peroxide, (3) an organic fluorescent compound, and (4) and organic solvent for said ingredients, the step of adding to said reaction of a catalyst which is weakly basic salt of an acid having a long of the pKa value in water of 1 to 6.

The 9,10-bis(phenylethynyl) anthracene of claim 4 is the fluorescer BPEA while the 9,10-diphenyl-anthracene of claim 5 is the fluorescer DPHA. CPPO is a species of the corresponding oxalate ester recitation in claims 1, 2 and 8.

The '843 patent claims a composition, useful as a component for a chemical light device, said composition comprising at least a specific concentration of hydrogen peroxide in a tertiary alcohol solvent and a particular type of catalyst (FF 5). Claims 1, 4 and 5 in issue read:

- 1. A composition, useful as component for a chemical light device, said composition comprising at least 0.01 M hydrogen peroxide in a tertiary alcohol solvent and a catalyst in the concentration range from 10^{-4} to 10^{-2} M selected from the group consisting of sodium salicylate and tetrabutylammonium salicylate.
- 4. The composition defined by claim 1 wherein said tertiary alcohol is tert-butyl alcohol.
- 5. The composition defined by claim 1 wherein said catalyst is sodium salicylate.

The '679 patent claims a composition to be reacted with hydrogen peroxide in the presence of an organic solvent, said composition containing a particular compound and an organic fluorescer compound (FF 7). Claims 1, 2, 3, 4, 5, 7, 8, 9 and 10 in issue read:

1. A composition intended to be reacted with hydrogen peroxide in the presence of an organic solvent, said composition containing the ingredients, a compound of the formula:

where:

X represents electronegative substituents;

Y represents a carbalkoxy group;

Z represents a member selected from the group consisting of hydrogen, alkyl, branched alkyl and alkoxy alkyl,

m, n and q are integers such that the combined Hammett sigma constant value of the X, Y and Z substituents on each phenyl group is between about 1.4 and 2.7, each of said m and n being always at least one; and p is an integer of a least 1, and an organic fluorescent compound, in effective amounts.

- 2. A composition as in claim 1 wherein said compound is a bis(phenyl)oxalate ester derivative wherein p is one.
- 3. A composition as in claim 1 wherein said compound is a bis(2,4,5-trichloro-6-carboalkoxypheny1)oxalate.
- 4. A composition as in claim 1 including, additionally, a basic catalyst.
- 5. A composition as in claim 3 wherein said compound is selected from the group consisting of bis(2,4,5-trichloro-6-carbobutoxyphenyl)oxalate and bis(2,4,5-trichloro-6-carbopentoxyphenyl)oxalate.
- 7. The composition of claim 1 comprising, additionally, an organic solvent.
- 8. A composition as in claim 7 wherein said solvent comprises a major proportion of a solvent selected from the group consisting of esters, aromatic hydrocarbons and chlorinated hydrocarbons.
- 9. The composition of claim 8 wherein said solvent is a dialkylphthalate, said alkyl groups having from 1 to about 12 carbon atoms.
- 10. A composition as in claim 1 wherein said flourescer is selected from the group consisting of 9,10-bis(phenylethynyl)anthracene; 1 methoxy-9,10-bis(phenylthynyl)anthracene; 9,10-diphenylanthracene.

One of the specific compounds recited in claim 5 is CPPO. The CPPO is a species of the corresponding compounds recitation in claims 1, 2 and 3. The first and third recited compounds respectively in claim 10 are the fluorescer BPEA and the fluorescer DPHA.

The '786 patent claims a chemiluminescent composition for reaction with a hydroperoxide to obtain chemiluminescent light, said composition comprising a certain ester compound, a certain anthracene substituted fluorescer and an organic solvent (FF 9). Claims 1, 2, 3, 4, 5, 6 and 10 in issue read:

1. A chemiluminescent composition for reaction with hydroperoxide to obtain chemiluminescent light, said composition comprising (1) an ester of the formula:

where A and B represented aliphatic or aromatic ester groups, and n is an integer at least one, (2) a fluorescer comprising a bis(phenylethynyl)anthracene substituted by chloro, fluoro or lower alkyl, and (3) an organic solvent, said ingredients being present in sufficient concentration to obtain chemiluminescence when reacted with hydrogen peroxide.

- 2. A composition according to claim 1, in which said chemiluminescent compound is a bis-ester of oxalic acid.
- 3. A composition according to claim 2 in which said ester comprises an ester formed from oxalic acid and a phenol, said phenol characterized by an ionization constant in water greater than 1.3×10^{-10} .
- 4. A composition according to claim 3 in which said bis(substituted-phenyl)oxalate comprises bis(2,4,5-trichloro-6-carbopentoxyphenyl)oxalate.
- 5. A composition according to claim 2 wherein said bis-phenyl ester is substituted with carbalkoxy groups.
- 6. A composition according to claim 2 wherein said fluorescer is

a monochloro or a dichloro derivative of 9,10-bis(phenylethynyl)anthracene.

10. A composition according to claim 3 wherein said fluorescer is 2-chloro-9,10-bis(phenylethynyl)anthracene.

The CPPO is recited in claim 4 and the corresponding compound recitation in claims 1. 2. 3 and 5 is generic to CPPO.

The '645 patent claims a process for generating chemiluminescence, the improvement of which comprise reacting a particular oxalate with a peroxide component in suitable diluent in the presence of anthracene, the improvement of which comprises carrying out the reaction in sufficient diluent to provide a certain initial concentration of said oxalate (FF 11). Claims 1, 3 and 4 in issue read:

- 1. In a process for generating chemiluminescence comprising reacting bis(6-carbopentoxy-2,4,5 trichloropheny1) oxalate with a peroxide component in a suitable diluent in the presence of a 9,10-bis(phenylethyny1)anthracene the improvement which comprises carrying out the reaction in sufficient diluent to provide an initial concentration of bis(6-carbopentoxy-2,4,5-trichloropheny1)oxalate of about 0.05 to about 0.09 mole per liter of reaction mixture.
- 3. The improved process of claim 1 wherein the 9,10-bis(phenylethynyl)anthracene is 9,10-bis(phenylethynyl) anthracene.
- 4. The improved process of claim 1 wherein the 9,10-bis (phenylethynyl)anthracene is 2-chloro-9,10bis-(-phenylethynyl)anthracene.

The specific compound recited in claim 3 is the fluorescer BPEA while the corresponding compound recitation in claim 1 is generic to the fluorescer BPEA. CPPO is recited in claim 1.

The three federal trademark registrations in issue are for the trademark CYALUME for certain specified chemiluminescent articles, with two

of the three registrations covering the mark in its special stylized form (FF 12-14).

Appropriateness of Summary Judgment

Summary judgement is as appropriate in a patent case as in any other case when it is shown that no genuine issue of material fact remains for decision and that the movant is entitled to judgement as a matter of law.

D.M.I. Inc. v. Deere & Co.. 755 F.2d 1573, 225 USPQ 236, 238 (Fed. Cir. 1985).

In this investigation in which the complainant is requesting a general exclusion order $\frac{3}{}$ and in which no respondent appeared in the investigation, as required by Commission rule 210.24, to contest the allegations of violation, the fact of violation is not presumed and must be established by substantial, reliable, and probative evidence pursuant to section 337 (g)(2). Commission rule 210.25(c) requires prima facie evidence of a violation to support a determination of a section 337

^{3/} The complaint as supplemented at 30 reads in part:

That after a full investigation, the United States International Trade Commission make findings in accordance with the Tariff Act of 1930, as amended, and

^{* * *}

⁽b) issue a general exclusion order permanently forbidding the entry of any chemiluminescent composition, component or product which infringes or contributes to the infringement of any claim of any of Cyanamid's aforesaid patents and its CYALUM trademark; (Emphasis added)

violation. Commission rule 210.50(b) provides that summary determination sought by a movant shall be rendered if the pleadings and any depositions, admissions on file, and affidavits show that there is no genuine issue of material fact and that the moving party is entitled to a summary determination as a matter of law. Affidavits in support of a summary determination must, under Commission rule 210.50(c), set forth such facts as would be admissible in evidence and shall show affirmatively that the affiant is competent to testify to the matters stated therein.

Validity and Enforceability of the Patents and Registered Trademarks

Complainant argued that there is a presumption of validity that attaches to the patents in issue which duly issued to Cyanamid as assignee. It further argues that the validity and enforceability of the patents have not been contested and hence that the patents are valid and enforceable. Complainant argued similarly that it is the owner of the three valid and subsisting federal trademark registrations in issue; that it has continuously used its CYALUME trademark since 1970, expending considerable sums for advertising and promotion of its chemiluminescent products bearing the CYALUME mark; and that while the validity of trademark registrations is not presumed in the manner that issued patents are presumed valid, two of the three registrations were incontestable. (Memorandum at 33-35).

The staff argued that the validity and enforceability of the patents in issue have not been disputed, and that accordingly there is no material issue of fact respecting their validity and enforceability. The staff also argued that the three federal trademark registrations are <u>prima facie</u> evidence of the registrant's exclusive right to use the marks; and that

since no party has challenged the validity or enforceability of the CYALUME marks, there is no genuine issue of material fact with respect to their validity or enforceability. (Staff Response at 12-13).

No defenses have been effectively asserted in this investigation as to the validity and enforceability of the six patents and three federal trademark registrations under investigation, and certificates submitted by complainant properly attest to complainant ownership. No proper response to the complaint and notice of investigation was filed which asserted defenses to validity and enforceability.

In the case of Lannom Manufacturing Co. Inc. v. U.S. International
Trade Commission, 799 Fed. 2d 1572, 231 USPQ 32, 35-38 (Fed. Cir. 1986),
the Federal Circuit reversed a Commission determination of invalidity for
obviousness and indefiniteness in an investigation in which no defense of
invalidity had been raised by the parties as to the patent there in issue.
The Federal Circuit pointed out that section 337 expressly provides that
"all legal and equitable defenses may be presented in all cases," and
reasoned that the statutory intent behind section 337 was to entertain
legal defenses raised by the parties to the same extent as in the courts,
but with patents retaining their statutory presumption of validity before
the Commission, pursuant to 35 U.S.C. section 282.

In the investigation of <u>Certain Reclosable Plastic Bags and Tubing</u>, Inv. No. 337-TA-266 (unreviewed initial determination 1988), it was held

^{4/} The Lannom opinion noted that the staff has the rights of an independent party in a section 337 investigation, pursuant to Commission regulation. The Court also discussed and distinguished prior Commission investigations in which the staff had raised defenses of invalidity. Id., 779 F.2d at 1574, 231 USPQ at 35, 37. The staff in this investigation supported, rather than opposed, a summary determination that the asserted patents and trademarks are valid and enforceable.

that the legal principle set forth in Lannom applies not only to unchallenged patents, but also to unchallenged federal trademark registrations. Moreover, although a patent enjoys a presumption of validity under 35 U.S.C. section 282 that can be overcome only by clear and convincing evidence, a federal trademark registration $\frac{5}{}$ does still enjoy a prima facie presumption of validity and ownership. The Trademark Act of 1946, as amended (the "Lanham Act") provides that:

Any registration...of a mark registered on the principal register provided by this Act and owned by a party to an action shall be admissible in evidence and shall be prima facie evidence of the validity of the registered mark and of the registration of the mark, of the registrant's ownership of the mark, and of the registrant's exclusive right to use the registered mark in commerce on or in connection with the goods or services stated in the registration..., but shall not preclude a party from proving any legal or equitable defense or defect, including those set forth in section (b), which might have been asserted if such mark had not been registered. 15 U.S.C. §1115a [as amended by the Trademark Law Revision Act of 1988, P.L. 100-667].

Thus even though a federal trademark registration provides a more easily disproven presumption than a patent, the registration does provide a statutory presumption of validity that is in effect in the absence of a challenge by "a party...proving any legal or equitable defense or defect." Consequently, the presumption remains in force unless a party comes forward to challenge presumption. Absent a party's challenge it is found that a federal trademark registration is sufficient evidence of the ownership, validity and enforceability of a mark without further evaluation.

^{5/} Federal trademark registrations on the principal register established by the Lanham Act enjoy the presumption of validity while marks registered on the supplemental register established by that Act enjoy no presumption of validity. The three registrations in issue are on the principal register.

Two of the three federal registrations in issue are the subject of incontestable rights of exclusive use pursuant to sections 15 and 33b of the Lanham Act, 15 U.S.C. sections 1065, 1115b. The statute provides a stronger presumption of validity for the incontestably registered mark:

[T]he registration shall be conclusive evidence of the validity of the registered mark and of the registration of the mark, of the registrant's ownership of the mark, and of the registrant's exclusive right to use the registered mark in commerce. Such conclusive evidence shall relate to the exclusive right to use the mark on or in connection with the goods or services specified in the affidavit filed under the provisions of section 15, or in the renewal application filed under the provisions of section 9...Such conclusive evidence of the right to use the registered mark shall be subject to proof of infringement as defined in section 32, and shall be subject to the following defenses or defects [list of defenses omitted]. Id., §1115b [as amended by Trademark Law Revision Act of 1988, P.L. 100-667].

In summary, as no legal or equitable defenses to the patents and trademarks in issue have been asserted by any party in the investigation, the presumptions of validity attaching to all the intellectual property under investigation are found to remain in force. Consequently, there is no genuine issue as to the validity and enforceability of the intellectual property under investigation, and summary determination of validity and enforceability of the patents and registered trademarks is appropriate for violation under section 337(a)(i)(B)(i) and (C).

Perestic Industry

With respect to the domestic industry there are two underlying issues, viz. the sufficiency of the domestic operations of the asserted industry, and whether the domestic operations exploit the intellectual property in issue.

Sufficiency of the Domestic Operations

Complainant Cyanamid argued that there is a substantial domestic industry in the United States consisting of that portion of Cyanamid's business devoted to the manufacture and sale of chemiluminescent compositions, components thereof and products incorporating the same and made under the claims of the patents in issue. It argued that Cyanamid is the owner of the patents in issue and that it markets a variety of consumer products, e.g., novelty products, under its federally registered trademark CYALUME in the United States. Complainant cited its investments in advertising and promotion of such products, and relied on its response to the staff's interrogatory no. 8. Complainant also cited the information of Cyanamid's raw material sourcing, chemical production, toll manufacturing operations, and distribution and quality control functions, including Cyanamid's domestic manufacture of the components which are used as the oxalate ester and fluorescent solution in its chemiluminescent products. (Memorandum at 7,-8, 10-13, 36).

The staff argued that there is a sufficient domestic industry with respect to the patents and trademarks in issue, principally relying on the allegations of the complaint and the statement of Cyanamid's Ware reaffirming those allegations. The staff argued that although the complaint did not refer to any foreign toll manufacturers which manufactured for the U.S. market, complainant's Motion No. 285-9 makes clear that one of Cyanamid's three toll manufacturers is located in Japan. Nevertheless it argued that given the new domestic industry criteria in amended section 337 and the evidence respecting domestic investment in plant and equipment and the employment of domestic labor and capital with

regard to production of the patented products at issue, there appeared to be no material issue of fact concerning the existence of a domestic industry under section 337(a)(3) notwithstanding said foreign toll manufacturer. (Response at 20-23).

The administrative law judge determines that the attested portions of the complaint (see paragraphs 2-11), specifically reaffirmed by Cyanamid's Ware in his sworn statement (CX-P, Tr. at 37), are uncontested probative evidence which may be relied on to support the sufficiency of the domestic operations of the involved industry pursuant to Commission rule 210.50(c). 6/ Mr. Ware testified that he is the general manager for the Chemical Light Department of Cyanamid (complaint at 32 (Ware Affidavit)) and hence such statements of detailed information on Cyanamid's own operations are within his area of competence. 7/

Accordingly, the administrative law judge determines that there is no genuine material issue of fact and that Cyanamid's operations relating to its CYALUME novelty products are sufficiently domestic in character under section 337(a)(3) (FF 16 to 32).

^{6/} Under analogous FRCP 56(e) a verified complaint can constitute an evidentiary substitute for an affidavit in support of summary determination, once competent and admissible information is shown. 28 Federal Procedure, L. Ed. section 62:606.

Z/ Complainant has also relied upon its response to the staff's interrogatory No. 8 (CX-S). However that response was verified merely "according to information and belief." Statements made according to information and belief are not sufficient to support a summary determination. Cable Electric Products. Inc. v. Genmark. Inc., 770 F.2d 1015, 226 USPQ 881, 888 (Fed. Cir. 1985).

Exploitation of the Intellectual Property by the Domestic Industry

Complainant cited the statements of Drs. Bruce Baretz and Amy P. Essenfeld in support of its contentions that Cyanamid's CYALUME novelty chemiluminescent products correlate with the claims of the patents in issue. Cyanamid argued that the evidence establishes beyond doubt that there is a substantial domestic industry involved in the manufacture and sale of novelty chemiluminescent products which contain compositions and components that utilize the patents and which are marketed under Cyanamid's registered CYALUME trademark. (Memorandum at 13-15).

The staff relied on Dr. Essenfeld's statement as demonstrating that Cyanamid's CYALUME chemiluminescent compositions and components are covered by claims of the patents in issue. The staff also argued that, while the Essenfeld analysis discloses that not every claim of the six patents in issue is currently practiced by Cyanamid, a complainant need only demonstrate that it practices one or more claims of each patent in issue for purposes of establishing a domestic industry with respect to the involved patent. (Response at 23)

Based on the uncontroverted testimony of Dr. Essenfeld, a Cyanamid research chemist who works on chemiluminescent products and who has a doctorate in organic chemistry (FF 36), the administrative law judge determines the following with respect to the identified intellectual property in issue.

The '426 Patent

The use of Cyanamid's CYALUME novelty products that contain practices the method of obtaining chemiluminescent light emission of generic method or process claims 1, 2, 6 and 7 of the '426 patent, with

claim 4 specifically reciting (FF 37-42).

The '679 Patent

All the CYALUME novelty chemiluminescent product mixtures contain CPPO which is intended to be reacted with hydrogen peroxide, and also contain an organic fluorescer and solvent, in amounts sufficient to cause chemiluminescence, thus coming under the generic compositions of claims 1, 2, 3, 4, 7, 8 and 9 of the '679 patent (FF 43-46, 48-50). The CPPO is specifically recited in claim 5. CYALUME products are covered by claim 10 of the '679 patent which specifically (FF 47-51).

The '336 Patent

All the CYALUME novelty chemiluminescent product mixtures contain a composition for reaction with hydrogen peroxide to produce chemiluminescent light emission with the ingredients covered by generic claims 1, 2 and 6 of the '336 patent. Because claim 4 is limited to BPEA,

CYALUME product is covered by claim (FF 52-55).

8/ All the CYALUME products, in use, practice a process for producing a highly intense chemiluminescent light from a reaction of ingredients according to the generic process claimed by claim 8 (FF 56).

^{8/}

The '786 Patent

All the CYALUME products that contain are covered by the generic recitation for the fluorescer in claims 1 and dependent claims 2 to 6 of the '786 patent (FF 57-62).

cPPO is included in the generic recitation of the ester in claims 1, 2, 3 and 5 as well as dependent claim 6 and is specifically recited in claim 4 (FF 63).

The '645 Patent

All of the CYALUME products that contain are covered by the generic recitation for the anthracene in claim 1 of the '645 patent.

Claim 3, which is limited to BPEA, CYALUME product

(FF 64-65).

The '843 Patent

Claim 1 of the '843 patent describes a composition useful as a component for a chemical light device comprising hydrogen peroxide in a tertiary alcohol solvent of at least a certain minimum concentration, and a catalyst, viz. sodium salicylate or tetrabutylammonium salicylate, in a certain minimum concentration range. CYALUME products contain hydrogen peroxide in excess of .01M in a teritiary alcohol solvent, specifically tertiary butyl alchole. Thus complainant's Dr. Essenfeld, as one skilled in the art, testified that the molar concentration of the sodium salicylate catalyst in CYALUME products was within the stated concentration range in claim 1 for the catalyst when taking the whole

chemiluminescent system of activator solution and oxalate system together (FF 67).

Claim 4 of the '843 patent depends from claim 1 and further specifies that the solvent is tertiary butyl alcohol, which is contained in CYALUME products (FF 68). Claim 5 of the '843 patent also depends from claim 1 and specifies that the catalyst is sodium salicylate, which is catalyst in CYALUME products (FF 67, 69).

Registration No. 925,341

Cyanamid does use CYALUME as a trademark on the packaging for its novelty materials containing chemiluminescent compositions and components, specifically its lightstick products (FF 70).

Registration No. 1.141.455

Cyanamid does use CYALUME as a trademark on the packaging for its novelty chemiluminescent chemical lightsticks which when activated produce light. The uses of CYALUME submitted appear substantially identical to the stylized lettering of the mark in the special form as depicted on Reg. No. 1,141,455, despite the minor differences that such uses do not contain the stylized drop or flame design element within the U of CYALUME, and do not contain the raised L extending vertically above the remaining letters, as shown in the registration (FF 71). Thus, the mark is used materially as registered. See, Ex parte The Hanna Paint Co., 103 USPQ 217 (Commr. Pat. 1954); Trademark Manual of Examining Procedure \$1603.09.

Registration No. 1,133,583

The motion for summary determination of violation, the memorandum thereon, and the response thereto do not specifically point out evidence that the mark CYALUME is in use by Cyanamid specifically with a "lantern

like housing, sold separately, for use with a chemical lightstick," which is the specified subject matter of Federal Reg. No. 1,133,583 and the administrative law judge can find no such evidence.

One <u>Industry</u>

The above exploited intellectual property overlap in terms of the chemiluminescent novelty products in, and with, which they are used.

Consequently, they constitute one industry for purposes of analysis under section 337. See, Certain DRAMs, Inv. No. 337-TA-242 (Comm. Opin. Nov. 5, 1987 at 62-67).

Summary

There is a domestic industry under section 337(a)(2) with respect to Cyanamid's novelty chemiluminescent compositions and components and products incorporating the same which are protected by the following claims of the patents and trademarks in issue: claims 1, 2, 4, 6 and 8 of the '336 patent; claims 1, 2, 4, 6 and 7 of the '426 patent; claims 1-5 and 7-10 of the '679 patent; claims 1-6 of the '786 patent; claims 1 and 3 of the '645 patent; claims 1, 4 and 5 of the '843 patent; and registered trademark Nos. 925, 341 and 1,141,455. Claims of the '786 patent and of the '645 patent as well as trademark Federal Reg. No. 1,133,583 have not been shown to be practiced by the domestic industry.

Importation and Sale

Complainant argued that the evidence of record establishes that respondent Prolufab has imported, sold for importation and sold within the United States glow necklaces which it manufactured in France. Cyanamid cited declarations of Poulin, Renard and Schrimmer as demonstrating that

Renard admits having been approached by Prolufab with respect to assisting Prolufab in importing such necklaces; and that Renard organized Crazy Light Inc. (Crazy Light) and began importing the Prolufab product on November 11, 1987, thereafter selling them to Nite Lite Novelties Inc. (Nite Lite) which was operated by Poulin for Schrimmer, for distribution in the United States. Cyanamid argued that this pattern of importation and distribution is confirmed by Poulin's March 10, 1988 letter from Poulin to Cyanamid, which letter admits that the imported glow necklaces are manufactured by Prolufab and imported by Crazy Light; and that a Mr. purchased 100 unit quantities of each of the four colors of the chemiluminescent necklaces imported from Prolufab and sent them to Cyanamid's Dr. Schmitt for evaluation. Thus, Cyanamid concluded that uncontroverted evidence of "importation, sale for importation or [sic] sale" within the United States after importation has been adduced (Memorandum at 37-38).

The staff argued that there is sufficient uncontroverted evidence of importation, sale for importation and sale within the United States after importation so that there is no genuine issue of material fact; that Nite Lite was established for the sole purpose of selling Prolufab's imported glow necklaces, and that such imported products were sold in the United States; that it is not aware of any evidence which would refute Cyanamid's assertion that necklaces containing chemiluminescent compositions and components thereof were manufactured by respondent Prolufab and imported into the United States by Crazy Light, which in turn sold them to Nite Lite both California corporations; and that it is not aware of any evidence, despite Prolufab's assertion in a letter dated August 11, 1988, which would refute Cyanamid's assertion that the tubes of necklaces purchased from Nite

Lite, and later tested by Cyanamid, originated with Prolufab. The staff further contended that the sworn statements of Poulin, Renard and Schrimmer disclose that after importation the necklaces were sold by Crazy Light to Nite Lite for further distribution to customers in the United States.

(Staff Response at 9-11).

The administrative law judge finds that the uncontroverted and documented evidence of record establishes without any genuine factual issue that the French manufacturer respondent Prolufab has sold its chemiluminescent glow necklaces for importation to the United States, that the necklaces were sold by Prolufab to the domestic importer Crazy Light, which thereafter resold the necklaces to another California company Nite Lite, for the purposes of subsequent distribution to U.S. customers (FF 72-85). The sworn statements of Nite Lite's Poulin and Schrimmer, Crazy Light's Renard, and Luc Noel all establish the importation and sale. Id. Prolufab even admitted exportation of its necklaces to the United States in its August 11, 1988 letter, page 1 to the Commission's Secretary written by Mr. Paul Noel:

The fact that we export chemiluminescent necklaces towards the U S A through the cited persons is of course exact. [See, attachments to Order No. 4]

In conclusion, summary determination is appropriate that respondent Prolufab has sold chemiluminescent necklaces for importation to the United States, and that there has been subsequent importation of such necklaces into, and sale of such necklaces within, the United States.

Patent Infringement

Complainant Cyanamid argued that it obtained samples of Prolufab's pink, blue, green and orange color-emitting glow necklaces, through a Mr.

on April 29, 1988, which were subjected to analysis by various tests conducted by Cyanamid under the supervision of Drs. van der Poll and Granzow. Cyanamid cites their sworn statements and written reports for the results of those analyses.

Accordingly.

Cyanamid contended that direct literal infringement of the claims in issue of the '679, '336, '786 and '843 patents has been established. (Memorandum at 20-24).

Additionally, Cyanamid contended that contributory infringement of '426 and '645 process patents is established by the proofs that the Prolufab products contain each of the components of the claims in issue of those patents, thus causing consumers to directly infringe such claimed processes by carrying out the steps thereof at the time of activation to initiate the chemiluminescent processes defined therein. Cyanamid cited the testimony of its Dr. Baretz as verifying that the compositions in both Cyanamid's and Prolufab's products are expensive, specialty chemicals which

have no other use but as components of chemiluminescent compositions, and are therefore not staple articles of commerce having substantial non-infringing uses under 35 U.S.C. section 271(c). Thus, Cyanamid concluded that Prolufab both contributed to infringement of the '426 and '645 process patents and induced infringement of said patents (Memorandum at 24-25).

Complainant, in its supporting memorandum, also presented a refutation of the allegations stated in "informal letters" of Prolufab $\frac{9}{}$ to the Commission, stating that the evidence proved the falsity of Prolufab's allegation that its imported necklaces contain genuine Cyanamid chemicals;

The staff argued that there is no genuine issue of material fact with respect to the direct infringement of the '679, '336, '786, and '843 patents, nor with respect to induced or contributory infringement of the '426 and '645 patents, by Prolufab's accused products. The staff cites its depositions of Drs. Granzow and Essenfeld as demonstrating the great care taken in conducting the well-documented tests of Cyanamid on respondent Prolufab's product. The staff argued that it is aware of no evidence which

^{9/} See August 11, 1989, September 9, 1989 and September 15, 1989 letters of Prolufab which were respectively Exh. 1 to the staff's response to Motion No. 285-4 and Exhs. A and C to Motion No. 285-4.

refutes the conclusions of the tests put forward by Cyanamid; that the testimony on the tests establishes that the Prolufab samples did not contain genuine CYALUME chemicals, despite Prolufab's unsubstantiated assertions in its informal letters to the Commission that its necklaces merely contained chemicals drained from genuine CYALUME lightsticks; that the deposition testimony of Dr. Essenfeld demonstrates that the method of use claims of the '426 and '645 patents would be directly infringed by at least one of Prolufab's samples when said samples are used to generate chemiluminescence (Staff Response at 13-18).

The administrative law judge finds that the record establishes that Cyanamid in April 1988 received samples of the Prolufab made and imported glow necklaces in green, blue, pink and orange colors, from Nite Lite, and thereafter Cyanamid subjected the necklaces to extensive scientific analysis. The samples obtained were accompanied by a purchase order in the name of Nite Lite and a flyer for glow necklaces. (FF 86-88).

After consultation between Cyanamid's scientists over appropriate tests for analysis, Cyanamid conducted the following documented tests on the Prolufab manufactured samples:

The supervisor Dr. Granzow as well as Drs. van der Poll and Essenfeld and Ms. Elliott testified as to the conduct and documented results of these tests. <u>Id</u>. This uncontroverted testimony establishes, without any genuine factual issue, the contents of the Prolufab samples.

The tested necklace samples were long and thin diameter tubes containing an oxalate solution and an activator solution which were

separated from each other by a sealed glass ampule within the tubing.

The

different necklaces were labelled as emitting one of four chemiluminescent colors--pink, blue, green and orange--and those were labelled as samples A through D, respectively.

10/

Upon activation of the sample necklace products by flexing and shaking the two solutions, the Prolufab necklaces exhibited chemiluminescence (FF 88).

Based on the results of those tests Dr. Essenfeld, a holder of a doctorate in organic chemistry from M.I.T. and a Cyanamid research chemist on chemical light, applied the claims of the patents in issue to the Prolufab sample necklace in deposition testimony (FF 36, 89). No contrary evidence was received.

The '679 Patent

Claim 1 of the '679 patent covers the chemical compositions in all four imported necklace samples tested, since the necklaces contain the compound CPPO for reaction with hydrogen peroxide in the presence of a solvent, as well as organic fluorescent compounds (FF 91).

Claim 2 of the '679 patent which depends from claim 1 further specifies a bis(phenyl)oxalate ester, which generically describes the CPPO in the imported necklace samples tested (FF 92).

Claim 3 of the '679 patent which also depends from claim 1 further specifies that the compound is a bis(2,4,5-trichloro-6-carboalkoxyphenyl)oxalate which generically describes the CPPO in the Prolufab necklaces tested (FF 91).

Claim 4 of the '679 patent also depends from claim 1 and further specifies that the composition includes additionally a basic catalyst, which the sampled necklaces all contain in the form of sodium salicylate (FF 93).

The Prolufab sample necklaces all contain CPPO specifically recited as one of the compounds in claim 5 of the '679 patent (FF 94).

Claim 7, depending from claim 1, also applies to the Prolufab necklace samples due to the fact that they contain organic solvents in the oxalate solution (FF 95).

Claim 8, which depends from claim 7, applies to the Prolufab sample necklaces and the solvents in the samples because they contain as a solvent an ester and/or aromatic hydrocarbon (FF 96).

Claim 9, which depends from claim 8, also applies to the imported necklaces since the organic solvents in the sampled necklaces are solvents described as dialkylphthalate wherein the alkyl group can have from 1 to about 12 carbon atoms (FF 97).

Claim 10, which depends from claim 1, further describes a limitation of the fluorescer as one of a group of three structures which includes DPHA

and BPEA. The pink necklace tested contains the DPHA fluorescer, $\frac{11}{}$ and the orange necklace sample contain the BPEA fluorescer (FF 98).

The '336 Patent

The imported necklace samples contained a chemiluminescent composition having the catalyst sodium salicylate which is a weakly basic salt as described in claim 1 of the '336 patent. The samples also contain CPPO which is a bisaryl oxalate ester recited in claim 1 and an organic fluorescent compound also recited in claim 1. Such ingredients in the necklace samples react with hydrogen peroxide to produce a high intensity chemiluminescent light emission, as the preamble of claim 1 states (FF 99).

Claim 2 of the '336 patent depends from claim 1 and further requires that the oxalate ester be a substituted aryl oxalate ester, which applies generically to CPPO found in all the sampled necklaces (FF 100).

Claim 4 of the '336 patent also depends from claim 1 and further requires that the organic fluorescent compound be the BPEA fluorescer which is in the imported necklace (FF 101).

Claim 5 of the '336 patent which also depends from claim 1 requires that the organic fluorescent compound be the DPHA fluorescer which is in the imported necklaces samples (FF 102).

Claim 6 of the '336 patent, which also depends from claim 1, requires that the weakly basic salt catalyst be sodium salicylate, which is contained in all the imported necklaces sampled (FF 103).

Independent claim 8 describes a process for producing chemiluminescent light from a reaction of ingredients comprising a bis aryl oxalate ester, hydrogen peroxide, an organic fluorescent compound and an organic solvent

for said ingredients. The claim further specifies the step of adding to the reaction a certain weakly basic salt catalyst. Such a chemiluminescent reaction occurs upon the activation of the sampled imported necklaces which contain compounds that are species of the generic compounds recited in claim 8 (FF 104). $\frac{12}{}$

The '786 Patent

The imported necklace samples contain an oxalate solution for reaction with hydrogen peroxide to obtain chemiluminescent light, and specifically the oxalate solution composition contains a as well as CPPO and an organic solvent, said ingredients being present in sufficient amounts to obtain chemiluminescence when reacted with hydrogenperoxide, which is called for by the generic recitation of claim 1 of the '786 patent (FF 105).

Claim 2 of the '786 patent depends from claim 1 and it further requires that the chemiluminescent composition contain a bis-ester of oxalic acid, which is generic to the CPFO in the imported green and orange necklaces (FF 106).

^{12/} Since claim 8 of the '336 patent claims a process for generating chemiluminescent light from a reaction, this claim is not directly infringed by the importation of the chemiluminescent compositions, components and necklace products incorporating the same. Instead, infringement results from the method of use of the necklaces to produce chemiluminescence by reaction. Consequently, importation and sale of the necklaces constitute contributory and induced infringement of claim 8. While the complaint and notice of investigation state direct infringement as to claim 8, pursuant to Commission rule 210.22(c) they are hereby amended by this initial determination to conform to the evidence presented. This issue was reasonably within the scope of the pleadings and the notice, as claim 8 was there specifically identified with the patent included as an exhibit to the complaint, and allegations of infringement as to other patents at issue analogously cover a method of use to produce chemiluminescent reaction.

Claim 3 of the '786 patent depends from claim 2, further limiting the ester to an ester formed from oxalic acid and a phenol having more than a certain minimum ionization constant. This further limitation is generic to the CPPO in the imported green and orange necklaces (FF 107).

Claim 4 of the '786 patent is dependent upon claim 3 and specifies that the CPPO in the green and orange necklaces sampled (FF 108).

Claim 5 of the '786 patent depends from claim 2 and further limits the bis-phenyl ester to one substituted with carbalkoxy groups, which is generic to the CPPO in the Prolufab green and orange necklaces (FF 109).

Claim 6 of the '786 patent depends from claim 2 and further specifies that the fluorescer may be a monochloro or a dichloro derivative of BPEA.

This further claim limitation applies to the necklaces samples since they contain a (FF 110).

The '843 Patent

Claim 1 of the '843 patent describes a composition useful as a component for a chemical light device, comprising at least 0.01 M hydrogen peroxide in a tertiary alcohol solvent, and as a catalyst, either sodium salicylate or tetrabutylammonium salicylate, in a certain minimum concentration range. The Prolufab necklaces sampled each contained hydrogen peroxide in excess of .01M in a tertiary alcohol solvent, specifically tertiary butyl alcohol (FF 112).

Complainant's Dr. Essenfeld gave uncontradicted testimony that the molar concentration of the sodium salicylate catalyst was within the

claimed concentration range when taking the whole chemiluminescent system of activator solution and oxalate system together, rather than the two components separately, and as one skilled in the art has so interpreted the claim. <u>Id</u>. The administrative law judge finds support for such an interpretation in the specification at col. 25, 1. 25-50.

Claim 4 of the '843 patent depends from claim 1 and further specifies that the solvent is tertiary butyl alcohol, which is contained in the Prolufab necklaces sampled (FF 113).

Claim 5 of the '843 patent also depends from claim 1 and further specifies that the catalyst is sodium salicylate, which is the catalyst in the Prolufab necklaces sampled (FF 114).

The '426 Patent

Claim 1 of the '426 patent claims a method for obtaining chemiluminescent light emission by the reaction of a hydroperoxide with a composition having the following ingredients: an organic fluorescent compound which is a phenylethynyl substituted aromatic hydrocarbon, a chemiluminescent compound which can include esters of polycarbonyl acids, and an organic solvent for said ingredients and said hydroperoxide. The

Prolufab made necklaces samples have CPPO which is an ester of a polycarbonyl acid, which is a phenylethynyl substituted aromatic hydrocarbon, hydrogen peroxide, and organic solvents therefor (FF 115). Thus, when the necklace products are used a chemiluminescent reaction process occurs as a result of reaction of the hydroperoxide with the organic fluorescer.

Claim 2 of the '426 patent depends from claim 1 and further specifies that the fluorescer phenylethynyl substituted hydrocarbon is an acene

compound, which is generic to the fluorescers in the imported necklace samples (FF 116).

Claim 4 depends from claim 2 and further specifies that the acene-type fluorescer is BPEA which the imported necklace sample contains (FF 117).

Claim 6 depends from claim 1 and further requires that the chemiluminescent compound be a bis-ester of oxalic acid and an alcohol characterized by at least a certain ionization constant value. This further limitation is generic to the CPPO contained in the green and orange samples tested (FF 118).

Claim 7 of the '426 patent, which depends from claim 1, further limits the ester to a bis(substituted-phenyl) oxalate, and states that the solvent comprises a dialkyl phthalate in which the alkyl substituents have from 1 to about 8 carbon atoms. The imported green and orange sampled necklaces contain a dialkyl phthalate and also contain CPPO which is specific to the ester recited in the claim (FF 119).

The '645 Patent

Claim 1 of the '645 patent claims a process for generating chemiluminescence comprising reacting CPPO with a peroxide component in a suitable diluent in the presence of "a 9-10-bis(phenylethynyl) anthracene" which reads on and as the improvement providing a sufficient initial concentration of CPPO of about 0.05 to about 0.09 mole per liter of reaction mixture. The imported necklace samples correspondingly contain hydrogen peroxide, a diluent dibutylphthalate, and CPPO which in the green and orange necklaces sampled is in an initial unactivated concentration of a range of about

moles per liter concentration in the reaction mixture,

The claim 3 of the '645 patent depends from claim 1 and recites that the fluorescer is BPEA. The imported necklace has BPEA in accordance with the claim 3 (FF 121).

Summary

The imported blue, pink, orange and/or green Prolufab necklaces sampled (as they were specifically identified above with specific claims in issue) directly infringe claims 1-5, and 7-10 of the '679 patent, claims 1, 2, 4, and 6 of the '336 patent, claims 1-6 and 10 of the '786 patent, and claims 1, 4 and 5 of the '843 patent and contributorily infringe and induce infringement of method of use claim 8 of the '336 patent, claims 1, 2, 4, 6, and 7 of the '426 patent; and claims 1, 3, of the '645 patent.

Gontributory and Induced Trademark Infringement

Complainant argued that the Prolufab glow necklace samples obtained by Mr. from Nite Lite included a promotional flier representing that the glow products "are made with the glow juice CYALUME which is extracted from the GLOW STICK made by American Cyanamid Company"; that the testimony of Nite Lite's Schrimmer and Poulin, and the testimony of the importer Renard, establish that Prolufab falsely assured them that the glow

necklaces contained such genuine CYALUME chemicals; and that those false assurances induced and contributed to infringement of Cyanamid's CYALUME trademark in this country. Complainant further argued that the false representations are flagrant violations of Cyanamid's rights in that they falsely represent that Cyanamid is the source of the chemicals, falsely imply a sponsorship or approval by Cyanamid, pass off the chemicals as being the same as those symbolized by the CYALUME trademark, dilute Cyanamid's rights in the trademark, and misappropriate the goodwill and reputation of Cyanamid in both the trademark and the high quality novelty products symbolized thereby (Memorandum at 28-30, 40-42).

Complainant also argued that not only did Prolufab's false assurances induce and contribute to trademark infringement, but that the violations were exacerbated by linking inferior quality necklaces to the excellent goodwill and reputation enjoyed by Cyanamid under its CYALUME trademark. Cyanamid cited the sworn statement of Ms. Elliott concerning tests showing the lower light outputs from the activated Prolufab necklaces as compared to the CYALUME necklaces. (Memorandum at 30-31).

The staff argued that there is no genuine issue of material fact that Prolufab's false assurances constituted contributory infringement of Cyanamid's trademark, and that the testing done by Cyanamid's scientists demonstrates that the imported necklace samples did not contain Cyanamid's chemicals. The staff further argued that the only non-patent unfair acts alleged in the complaint are direct, contributory and induced trademark infringement and that the only recognized cause of action against one who induces trademark infringement is "contributory infringement", unlike the

patent statute's distinction for induced and contributory patent infringement. (Staff Response at 18-20).

It is found that the evidence of record establishes sales of chemiluminescent necklaces within the United States. In connection with those sales, the domestic distributor Nite Lite, acting on the assurances of respondent Prolufab, falsely advertised and promoted the necklaces as containing CYALUME chemicals extracted from Cyanamid's CYALUME night sticks, with resultant misrepresentation of the source of those chemicals (FF 126-132). This representation of the use of genuine extracted CYALUME chemicals by Nite Lite has been proven false by the chemical analysis evidence of record which demonstrates that the Frolufab made necklaces contain chemicals

Accordingly, it is established that there has been direct trademark infringement under 15 U.S.C. section 1114(1) in the false and misleading use of the registered trademark CYALUME in connection with the sale, offering for sale, and advertising of related chemiluminescent necklace articles. The administrative law judge agrees with the contentions of complainant and the staff that the manufacturer of those necklaces, Prolufab, has contributorily infringed by virtue of its false assurances which induced and foreseeably resulted in such direct trademark infringement in the advertisement and sale and offer for sale of the imported product within the United States.

In support of the conclusion that there has been contributory infringement, the U.S. Supreme Court first held in a case, known as the "Coco-Quinine" case, that a manufacturer is liable for contributory

infringement of another's trademark when it aids, induces or enables its distributors to infringe that trademark in connection with the subsequent distributors' resale of the manufacturer produced goods. William R. Warner & Co. v. Eli Lilly & Co., 265 U.S. 526 (1924); see also, Inwood Laboratories Inc. v. Ives Laboratories Inc., 456 U.S. 844 (1982).

In addition, the pertinent subsection of the statute, <u>viz.</u>

337(a)(1)(C), as added by the Omnibus Trade and Competitiveness Act of 1988 specifically covers registered trademarks. Thus it reads:

The importation into the United States, the sale for importation, or the sale within the United States after importation, by the owner, importer, or consignee of articles that infringe a valid and enforceable United States trademark registered under the Trademark Act of 1946.

This subsection clearly applies to Prolufab's contributory infringement by its sale for importation of the necklace articles in conjunction with its false representations about the genuine CYALUME character of the chemicals contained within the necklace articles, and the subsequent direct infringement and infringing sales in connection with false and directly infringing references to genuine CYALUME chemicals, within the United States, after importation of the necklaces.

The administrative law judge finds that the record does not establish that the Prolufab manufactured chemiluminescent necklace articles, as they were marked and sold by respondent Prolufab for importation to the United States, did at the time of such sale or importation themselves directly infringe the registered trademark CYALUME. However, such direct infringement within the United States was induced by Prolufab's sales for importation of the necklace articles in conjunction with its false representations concerning the contents of the necklace articles sold, and

which subsequently were the subject of directly infringing sales within the United States. This establishes the unlawful character of such sales for importation of the necklace articles, and the contributory infringement presented thereby which induced the subsequent directly infringing sales of the necklaces within the United States within the scope of subsection 337(a)(1)(C). $\frac{13}{2}$

The administrative law judge notes that new subsection 337(a)(1)(c), although it refers to "articles which infringe", is not by its terms confined to a certain type of registered trademarks, such as one in the configuration of an article. Instead, the subsection applies to marks registered under the Lanham Act of 1946, which by the terms of that Act also includes marks of different subject matter— word, design or other symbol marks, or combinations thereof. A narrow interpretation of the scope of the subsection, which refers in part to articles that infringe a registered trademark, would be inconsistent with the statute's legislative history which indicates a broad intent to more effectively remedy acts of registered trademark infringement in connection with such imports. See, Omnibus Trade and Competitiveness Act of 1988 §1341; Conf. Rpt on H.R. 3, Rpt. No. 100-576 at 633; Senate Committee on Finance Report No. 100-71 at 127-130 (June 12, 1987); Report on S. 490 (April 20, 1988); H. Rpt. No. 100-40 at 153-156 (April 6, 1987).

In addition, a narrow interpretation of the subsection that focused only on the infringing character at the moment of importation would also ignore the fact that the Customs Service itself already has the statutory authority to deny entry to goods which bear marks infringing registered trademarks. E.g., 15 U.S.C. 1124; 19 CFR Part 133. If the scope of subsection 337(a)(1)(C) were limited only to products bearing infringing marks at the time of importation, it would needlessly authorize the Commission in its section 337 remedies to direct the Customs Service to do what Customs, without any adversary proceedings, already has the authority to do. Such a narrow focus exclusively on the infringing character of the articles at the time of importation would ignore the fact that the new §337 subsection in the alternative expressly applies not only to the moment of importation, but also to the sales for importation, and sales after importation within the United States; the alternative provision establishes that the directly infringing character of the sale of the articles under investigation may be established subsequent to their importation.

Findings of Fact

The Intellectual Property at Issue

- 1. U.S. Patent No. 3,729,426 (the '426 patent) entitled
 Chemiluminescent Fluorescer Substituted Organic Compounds issued to Zweig
 and Maulding on April 24, 1973 based on an application Ser. No. 712,922
 filed on April 20, 1970, which application was "divided" from an "original
 application" filed on March 14, 1968. The '426 patent was assigned to
 American Cyanamid Company. (Complaint, Exs. B, B1.)
- 2. The asserted claims of the '426 patent at issue, all method or process claims for obtaining chemiluminescent light, are claims 1-2, 4, 6-7. Claim 1 is the sole independent claim. The asserted claims are all written in Jepson form and claim as an improvement the use of a particular type of organic fluorescer compound. The claims read as follows:
 - 1. In a method for obtaining chemiluminescent light emission, by reaction of a hydroperoxide with a composition having the ingredients, a chemiluminescent compound selected from the group consisting of anhydrides, amides, O-acylhydroxy amines and esters of polycarbonyl acids, an organic fluorescent compound, and an organic solvent for said ingredients and said hydroperoxide, all of said ingredients and hydroperoxide being in such ratios as to provide chemiluminescent light upon reaction, the improvement which comprises the use of phenylethynyl substituted aromatic hydrocarbons as the organic fluorescent compound.
 - 2. A chemiluminescent method according to claim 1 wherein said phenylethynly substituted hydrocarbon is an acene compound.
 - 4. A chemiluminescent method according to claim 2, wherein said acene-type compound is 9,10-bis(phenylethynyl)anthracene.
 - 6. A process according to claim 1, wherein the chemiluminescent compound is a bis-ester of oxalic acid and an alcohol characterized by an acid ionization constant in water greater than 1.3×10^{-1} .
 - 7. A process according to claim 1 in which said ester is a bis(substituted-phenyl)oxalate, and in which said solvent

comprises a dialkyl phthalate in which the alkyl substituents thereof contain from one to about eight carbon atoms.

- 3. U.S. Patent No. 3,775,336 (the '336 patent) entitled High Intensity Chemiluminescent System with Weakly Basic Salt-Type Catalyst issued to Bollyky on November 27, 1973 based on an application filed on September 7, 1971, which was a continuation of an abandoned application Ser. No. 813, 864 filed on April 7, 1969. The '336 patent was assigned to American Cyanamid Company. (Complaint, Exs. D, D1.)
- 4. The claims of the '336 patent under investigation are claims 1-2, 4-6 and 8. Claim 8 is an independent claim written in Jepson form to a process for producing a highly intense chemiluminescent light from a reaction, with the improvement of using a particular type of catalyst. The remaining asserted claims are each to a composition, with the sole independent claim 1 in Jepson format claiming an improvement using a particular type of catalyst. The asserted claims read as follows:
 - 1. In a composition for reaction with hydrogen peroxide to produce a high intensity chemiluminescent light emission having the ingredients a bisaryl oxalate ester, an organic fluorescent compound, and an organic solvent for said ingredients, the improvement which comprises a catalyst which is a weakly basic salt of an acid having a log of the pKa value in water of 1 to 6, said catalyst being effective to provide a more uniform light output.
 - 2. The composition of claim 1 wherein said oxalate ester is a substituted aryl oxalate ester.
 - 4. The composition of claim 1 wherein said organic compound is 9,10-bis(phenylethyn1)anthracene.
 - 5. The composition of claim 1 wherein said organic fluorescent compound is 9,10-diphenyl-anthracene.
 - 6. The composition of claim 1 wherein said weakly basic salt is sodium salicylate.

- 8. In a process for producing a highly intense chemiluminescent light from a reaction of the ingredients comprising: (1) a bis aryl oxalate ester, (2) hydrogen peroxide, (3) an organic fluorescent compound, and (4) and organic solvent for said ingredients, the step of adding to said reaction of a catalyst which is weakly basic salt of an acid having a long of the pKa value in water of 1 to 6.
- 5. U.S. Patent No. 4,313,843 (the '843 patent) entitled Superior Oxalate Ester Chemical Lighting System issued to Bollyky and Rauhut on February 2, 1982 based on an application Ser. No. 721,920 filed on September 9, 1976, that application was a division of abandoned application Ser. No. 464,285 filed on April 26, 1974, which in turn was a continuation-in-part of abandoned application Ser. No. 205,747 filed on December 7, 1971, which in turn was a continuation-in-part of abandoned application Ser. No. 813,973 filed on April 7, 1969. The '843 patent was assigned to American Cyanamid Company. (Complaint, Exs. G, G1.)
- 6. The claims of the '843 patent under investigation are claims 1, 4-5 which claim a specific concentration of hydrogen peroxide in a tertiary alcohol solvent and a particular catalyst. Claim 1 is an independent claim to a composition, and claims 4-5 depend from claim 1. The asserted claims read as follows:
 - 1. A composition, useful as component for a chemical light device, said composition comprising at least 0.01 M hydrogen peroxide in a tertiary alcohol solvent and a catalyst in the concentration range from 10^{-4} to 10^{-2} M selected from the group consisting of sodium salicylate and tetrabutylammonium salicylate.
 - 4. The composition defined by claim 1 wherein said tertiary alcohol is tert-butyl alcohol.
 - 5. The composition defined by claim 1 wherein said catalyst is sodium salicylate.

- 7. U.S. Patent No. 3,749,679 (the '679 patent) entitled Carboalkoxy Substituted Bis-Phenyl Oxalates as Superior Chemiluminescent Materials issued to Rauhut based on an application Ser. No. 124,142 filed on March 15, 1971, which was a continuation-in-part of Ser. No. 842,134 filed on July 16, 1969. The '679 patent was assigned to American Cyanamid Company. (Complaint Exs. C. C1.)
- 8. The claims of the '679 patent under investigation are claims 1-5 and 7-10, which each claim a composition. The sole independent claim is claim 1 which claims a particular composition to be reacted with hydrogen peroxide and a fluorescer. The asserted claims read as follows:
 - 1. A composition intended to be reacted with hydrogen peroxide in the presence of an organic solvent, said composition containing the ingredients, a compound of the formula:

where:

X represents electronegative substituents;

Y represents a carbalkoxy group;

Z represents a member selected from the group consisting of hydrogen, alkyl, branched alkyl and alkoxy alkyl,

m, n and q are integers such that the combined Hammett sigma constant value of the X, Y and Z substituents on each phenyl group is between about 1.4 and 2.7, each of said m and n being always at least one; and p is an integer of a least 1, and an organic fluorescent compound, in effective amounts.

- 2. A composition as in claim 1 wherein said compound is a bis(phenyl)oxalate ester derivative wherein p is one.
- 3. A composition as in claim 1 wherein said compound is a bis(2,4,5-trichloro-6-carboalkoxypheny1)oxalate.
- 4. A composition as in claim 1 including, additionally, a basic catalyst.
- 5. A composition as in claim 3 wherein said compound is selected from the group consisting of bis(2,4,5-trichloro-6-

carbobutoxyphenyl)oxalate and bis(2,4,5-trichloro 6-carbopentoxyphenyl)oxalate.

- 7. The composition of claim 1 comprising, additionally, an organic solvent.
- 8. A composition as in claim 7 wherein said solvent comprises a major proportion of a solvent selected from the group consisting of esters, aromatic hydrocarbons and chlorinated hydrocarbons.
- 9. The composition of claim 8 wherein said solvent is a dialkylphthalate, said alkyl groups having from 1 to about 12 carbon atoms.
- 10. A composition as in claim 1 wherein said flourescer is selected from the group consisting of 9,10-bis(phenylethynyl)anthracene; 1 methoxy-9,10-bis(phenylethynyl)anthracene; 9,10-diphenylanthracene.
- 9. U.S. Patent No. 3,888,786 (the '786 patent) entitled Chlorinated Bis(Phenylethynyl)Anthracenes As Fluorescers In Chemiluminescent Systems issued to Maulding on June 10, 1975 based on an application Ser. No. 418,493 filed on November 23, 1973, which in turn was a continuation of abandoned application Ser. No. 261,888 filed on June 12, 1972. The '786 patent was assigned to American Cyanamid Company. (Complaint Exs. E, El.)
- 10. The claims of the '786 patent under investigation are claims 1-6 and 10, which each claim a composition. Claim 1 is the sole asserted independent claim which claims a chemiluminescent composition comprising a certain ester compound, a certain anthrace substituted fluorescer and an organic solvent. The asserted claims read as follows:

A chemiluminescent composition for reaction with hydroperoxide to obtain chemiluminescent light, said composition comprising (1) an ester of the formula:

where A and B represented aliphatic or aromatic ester groups, and n is an integer at least one, (2) a fluorescer comprising a bis(phenylethynyl)anthracene substituted by chloro, fluoro or lower alkyl, and (3) an organic solvent, said ingredients being

present in sufficient concentration to obtain chemiluminescence when reacted with hydrogen peroxide.

- 2. A composition according to claim 1, in which said chemiluminescent compound is a bis-ester of oxalic acid.
- 3. A composition according to claim 2 in which said ester comprises an ester formed from oxalic acid and a phenol, said phenol characterized by an ionization constant in water greater than 1.3 \times 10⁻¹⁰
- 4. A composition according to claim 3 in which said bis(substituted-phenyl)oxalate comprises bis(2,4,5-trichloro-6-carbopentoxyphenyl)oxalate.
- 5. A composition according to claim 2 wherein said bis-phenyl ester is substituted with carbalkoxy groups.
 - 6. A composition according to claim 2 wherein said fluorescer is a monochloro or a dichloro derivative of 9,10-bis(phenylethynyl)anthracene.
 - 10. A composition according to claim 3 wherein said fluorescer is 2-chloro-9,10-bis(phenylethynyl)anthracene.
- 11. U.S. Patent No. 4,076,645 (the '645 patent) entitled Chemical Lighting Process and Composition issued to Vega on February 28, 1978 based on an application Ser. No. 758,253 filed on January 10, 1977. The '645 patent was assigned to American Cyanamid Company. (Complaint, Exs. F, F1).
- 12. The claims to the '645 patent under investigation are claims 1 and 3-4, which each claim a process for generating chemiluminescence.

 Claim 1 is written in Jepson format and claims the improvement of carrying out a particular oxalate and peroxide reaction in sufficient diluent to provide a certain initial concentration of such oxalate. Claim 1 is the sole asserted independent claim from which claims 3-4 depend. The asserted claims read as follows:
 - 1. In a process for generating chemiluminescence comprising reacting bis(6-carbopentoxy-2,4,5 trichloropheny1) oxalate with a peroxide component in a suitable diluent in the presence of a 9,10-bis(phenylethyny1)anthracene the improvement which comprises

carrying out the reaction in sufficient diluent to provide an initial concentration of bis(6-carbopentoxy-2,4,5-trichloropheny1)oxalate of about 0.05 to about 0.09 mole per liter of reaction mixture.

- 3. The improved process of claim 1 wherein the 9,10-bis(phenylethynyl)anthracene is 9,10-bis(phenylethynyl)anthracene.
- 4. The improved process of claim 1 wherein the 9,10-bisphenylethynyl)anthracene is 2-chloro-9,10bis(phenylethynyl)anthracene.
- 13. Federally registered trademark No. 925,341 for the mark Cyalume (in block lettering- no special format) was registered on December 14, 1971 as owned by American Cyanamid Company. The registration states the specified goods with which the mark is used as follows: "chemiluminescent materials for lighting purposes, such as lightsticks, light wands, light panels, etc." The certificate of registration indicates that a combined Section 8 and 15 affidavit has been filed and accepted for this subsisting registration. (Complaint, Ex. I.)
- 14. Federally registered trademark No. 1,133,583 for the mark CYALUME (stylized) was registered on April 22, 1980 as owned by American Cyanamid Company. The registration states the specified goods with which the mark is used as follows: "lantern like housing, sold separately, for use with a chemical lightstick which, when activated, produces light." The certificate of registration indicates that a combined Section 8 and 15 affidavit has been filed and accepted for this subsisting registration. (Complaint, Ex. J.)
- 15. Federally registered trademark No. 1,141,455 for the mark CYALUME (stylized) was registered on November 18, 1980 as owned by American Cyanamid Company. The registration states the specified goods with which

the mark is used as follows: "chemical lightstick which, when activated, produces light." The certificate of registration indicates that the required Section 8 affidavit has been filed and accepted for this subsisting registration. (Complaint, Ex. K.; CX-U.)

Domestic Industry

Domestic Operations

16. Cyanamid's sales of chemiluminescent compositions and components (in chemical light products)

Following are Cyanamid's annual production, sales and inventory of its chemiluminescent products in total, as well as for its novelty chemiluminescent products, based on an allocation of novelty sales to total chemiluminescent sales:

17. Cyanamid's profit from its chemiluminescent novelty products operations and its overall profit from all chemiluminescent products are as follows:

18. Cyanamid has domestic facilities for its operations relating to chemiluminescent compositions and components at

Additionally, Cyanamid

- 19. Current Cyanamid expenditures for chemiluminescent research and development are in excess of

 Along with other research, Cyanamid's chemiluminescent research and development is conducted in its Chemical Research Center in Stamford Connecticut which contains a total of 400 thousand square feet of usable space. (Complaint at 5).
- 20. Cyanamid has a total of devoting substantially all of their work time to the manufacture, sales, marketing, research and development, quality control, and inventory of

chemiluminescent compositions, components and products. Cyanamid's annual payroll and fringe benefits for such employees is over

who devote substantially all of their time to operations related to the manufacture of chemiluminescent products. Annual payroll and fringe benefits for

21. Cyanamid's chemiluminescent products contain chemiluminescent compositions and components, generally an oxalate ester, a fluorescer, an activator and a catalyst, which when mixed together emit chemiluminescence or "chemical light" for a finite duration. Finished chemiluminescent products comprise a sealed flexible plastic envelope which contains within it a liquid solution of the oxalate ester, and also contains a sealed glass tube containing a liquid solution of other components. At the time of use, the plastic envelope is flexed in order to break the inner glass tube and mix its contents with the other solution, thus initiating the reaction and chemiluminescence. Novelty consumer products incorporating chemiluminescent compositions and components are used for recreational and entertainment purposes in the form of "glow in the dark" light sticks, necklaces, bracelets, rings, earrings, bowties, eyeglass frames, footballs, among others. (Complaint at 2-3.)

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33. The specific organic compounds used in Cyanamid's novelty chemiluminescent products, and particularly those used in its oxalate solution and synthesized by Cyanamid were identified by Cyanamid's Dr. Baretz. CPPO, namely, Bis(2,4,5-trichloro-6-carbopentozyphenyl)oxalate ester, is the same oxalate ester compound used in all of Cyanamid's CYALUME products.

Cyanamid

makes CYALUME chemical light products in a variety of colors. All such products use one of the following fluorescers to emit light of a certain color:

When the above flurorescers are put in clear casing the chemical light seen by the user will be the color of the fluorescer. However, by absorptive effects and color interference the color viewed can be changed by putting a certain colored fluorescer pigment into the molded plastic casing;

In the CYALUME light products one solution contains the oxalate ester and a fluorescer with solvent and a second solution which is isolated from the first contains the hydrogen peroxide, the catalyst and solvents. (Dr. Baretz CX-A at 7-35, 58-59).

Exploitation of the Intellectual Property by the Domestic Products

36. In a sworn statement Cyanamid's Dr. Amy Essenfeld testified that she was familiar with the chemical compounds shown on Baretz Ex. 1, CX-A, Ex. 1, and used in Cyanamid's chemical light products, and that she recognized the various combinations of CPPO [oxalate ester] with the fluorescers shown in Baretz Ex. 2, CX-A, Ex. 2, as being the chemicals used in Cyanamid's chemical light novelty products. Dr. Essenfeld stated that she has a doctorate in organic chemistry from M.I.T., and that she has been employed with American Cyanamid since 1985 as a research chemist working on new improvements and new colors in the area of chemiluminescence specifically related to the CYALUME product line. She stated that American Cyanamid is and it has been for a considerable period of time currently engaged in commercially manufacturing and selling the novelty chemical light products diagrammed on Baretz Ex. 2, and that that activity involves using the claims of the patents at issue which she applied in her testimony. (CX-E at 33; CX-E at 3-5; CX-D at 6-7, 11).

The '426 Patent

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The '679 Patent

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The '336 Patent

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The '786 Patent

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The '645 Patent

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The '843 Patent

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Registration No. 925,341

70. Cyanamid does use CYALUME as a trademark on the packaging for its novelty products containing chemiluminescent compositions and components, specifically its lightstick products. (CX-X).

Registration No. 1,141,455

71. Cyanamid does use CYALUME as a trademark on the packaging for its novelty products, specifically being chemiluminescent chemical lightsticks which when activated produce light. The uses of CYALUME submitted are substantially identical to the stylized lettering of the mark in special form as depicted on Reg. No. 1,141,455, although such uses do not contain the stylized drop design within the u of CYALUME, and do not contain the raised L extending vertically above the remaining letters. (CX-X).

Importation and Sale

72. Mr. Michael Schrimmer, president of Chemical Light Inc. of Illinois, testified in his deposition concerning the importation and sale of glow necklaces manufactured by Prolufab. Chemical Light Inc. is a company whose prime business is to purchase and distribute to CYALUME Novelty glow products manufactured by Cyanamid. He testified that a salesman employed by Chemical Light and previously employed by Liquid Light, Ed Poulin, was involved with him in setting up a company, Nite Lite Novelty, Inc. to sell glow necklaces manufactured by Prolufab and to be imported by a company called Crazy Light whose principal was Jerome Renard, also formerly of Liquid Light, and thereafter the necklaces to be resold to Nite Lite. (CX-M at 5-13.)

- 73. The sale of these necklaces originally began in 1987 through Mr. Poulin in the name of Chemical Light, and after being advised by Cyanamid of its patent on the activation method for the glow in the dark device, in August 1987 Mr. Schrimmer advised Cyanamid by letter that he would cease selling the French necklaces, according to his testimony. Thereafter in September 1987 Mr. Schrimmer participated in discussions with Mr. Poulin, and with Mr. Renard concerning importation of the French necklace through Crazy Light and sale by Nite Lite, and Mr. Schrimmer lent money for Nite Lite's purchase of glow necklaces for importation for subsequent sale in the U.S. under the name of Nite Lite. According to Mr. Schrimmer's deposition testimony, a mutual decision was made to start Nite Lite Novelty in order to legally import a necklace into the country. Mr. Schrimmer received payments from the sales of such necklaces by Poulin and Poulin was to receive a fixed price per necklace, according to Schrimmer's testimony. (CX-M at 12-19.)
- 74. A leaflet was printed by Cyanamid to beware of imitations and Mr. Schrimmer understood this to be directed to the imported French necklaces. Upon the instructions of Mr. Schrimmer, in March 1988 Mr. Poulin sent a letter to Cyanamid's Mr. Ware stating that there was no intent to infringe the patents or trademarks of Cyanamid, requesting advice on any information confirming infringement and representing that Prolufab was manufacturing the French necklaces and selling them to Crazy Light who thereafter imported them and resold them to Nite Lite. (CX-M at 29; Complaint Ex. K1.)
- 75. Upon Mr. Poulin's being served with process in a district court infringement suit based on the glow necklaces, Mr. Schrimmer stated that he

instructed Mr. Poulin to cease sales of such necklaces, and thereafter Mr. Schrimmer fired him from Chemical Light for his failure to cease such sales. Nite Lite imported the necklaces and another product, a bracelet combination cocktail stirrer product from Prolufab. (CX-M at 29-35.)

- 76. Mr. Edward Poulin testified in a sworn declaration that he joined Chemical Light Company as a sales representative in May-June 1987 for selling CYALUME luminescent light sticks and similar products, after working as a sales rep. for Liquid Light Company and its sales of chemiluminescent light sticks and necklaces. (CX-I at 2.)
- 77. In October 1987 the company Nite Lite Novelties, Inc. was formed with Mr. Schrimmer's authorization for the purpose of acting as a distributor selling an imported French glow necklace which he had previously been imported, according to Mr. Poulin's declaration. Mr. Poulin was named president of this company although he continued to sell CYALUME light sticks as a representative of Chemical Light. The product was actually imported by Jerome Renard of Crazy Light Company who would place orders on behalf of Nite Lite Novelty directly with the French supplier and manufacturer which was Societe Prolufab of Suresnes, France. Mr. Poulin would place orders with Crazy Light, and Mr. Renard of Crazy Light would then wire funds to pay for the product which would be shipped by air freight to Los Angeles, where the product would be kept in Mr. Poulin's home as inventory from which customer orders were shipped by Nite Lite. (CX-I at 2-5.)
- 78. At some point, Mr. Poulin stated, Cyanamid became aware of the imported glow necklaces and made a complaint to its distributors that it was not a genuine CYALUME product. In March 1988 Mr. Schrimmer sent Mr.

Poulin a letter with instructions that it be retyped on Poulin's stationary and sent to Mr. Ware of Cyanamid, and Mr. Schrimmer did so about four weeks later. (CX-I at 5-6).

- 79. From November 1987 until the initiation of Cyanamid's lawsuit against him in June 1988, Mr. Poulin attested that Nite Lite Novelty Inc. sold approximately 200-250 thousand imported necklaces. Poulin attested to payments to himself, Messrs. Schrimmer, Renard, and to Luc Noel for his consulting services in assistance relating to the importation of this -product. (CX-7-9.)
- 80. Mr. Jerome Renard, a French citizen residing in Los Angeles, testified in a sworn declaration that he was previously employed from 1983-84 until 1986 as an operations manager of Liquid Light Company in the novelty chemiluminescent business, coordinating production of necklaces and bracelets. In late 1984 Liquid Light became a distributor for Cyanamid novelty chemical light products, such as necklaces, bracelets, and four-inch light sticks. Since Prolufab was a part owner of Liquid Light, as part of his employment he would stop and visit the French company on his travels to France. After he left Liquid Light, Mr. Renard attested, Prolufab approached him in 1987 about assisting in the importation of Prolufab glow necklaces into the U.S., and he agreed to participate and in April or May 1987 formed a company called Crazy Light Company for this purpose. His agreement with Prolufab was basically that he would purchase the French necklaces from Prolufab and sell them to a U.S. distributor, according to Renard's declaration. (CX-J at 1-3.)
- 81. Mr. Renard then approached Mr. Schrimmer, who is the largest U.S. distributor of novelty chemical light products, and they verbally agreed on

distribution, with Mr. Renard importing the French necklaces and selling them to Mr. Schrimmer's company, as Mr. Renard attested. Starting in May 1987 until July of that year when Cyanamid objected to the dealing with those necklaces on the grounds that they infringed Cyanamid's then unexpired device patent and covered the light sticks generally, regardless of the chemical contents. (CX-J at 3.)

- 82. Thereafter Nite Lite Novelty Inc. was organized for the purpose of importing the French necklaces after November 11, 1987, the scheduled expiration date for the device patent, as Mr. Renard declared. After November 11, 1987 Mr. Renard began purchasing quantities of the French necklaces from Prolufab and having them air-freighted into Los Angeles for delivery to Mr. Poulin who was operating Nite Lite Novelty Inc. The funds for the purchases were first received from Nite Lite and then Mr. Renard would bank-wire the funds to Prolufab's account in Paris in payment for the necklaces, as Mr. Renard declared. Mr. Renard attested to the payments made to himself and Mr. Luc Noel, who provided consulting services in order to assist in the fulfillment and shipments of the orders made for the French necklaces, and who is a son of Paul Noel. (CX-J at 3-4.)
- 83. Mr. Renard imported and sold to Nite Lite Novelty from November 1987 until early June of 1988 approximately 200-250 thousand necklaces, as Mr. Renard declared. (CX-J at 4.)
- 84. Invoices/purchase orders expressly from Nite Lite Novelties Inc. of record evidence sales of green, blue, pink, and orange necklaces to domestic customers. Those invoices state:

OUR NECKLACES ARE NOT A PRODUCT OF AMERICAN CYANAMID CO. BUT ARE MADE FROM THE "GLOW JUICE" EXTRACTED FROM THE CYANAMID GLOW STICK.

(CX-B, Ex. 2; CX-L, Ex. 4).

85. Judith Walden and Harlen Dismuke of Liquid Light Inc. of California gave sworn declarations

Mr. Luc Noel

worked at Liquid Light until February 1987. As Ms. Walden and Mr. Dismuke testified, during this time Mr. Luc Noel repeatedly proposed that Liquid Light import chemiluminescent products which Prolufab makes using chemicals made by European chemical manufacturers, or import such chemicals from Prolufab, but that Walden and Dismuke refused to do so because of its relationship with Cyanamid and Cyanamid's chemical patents. Before leaving Liquid Light Mr. Luc Noel had himself brought back from France some finished necklaces his father had been making at Prolufab and some jars of chemicals to prove to Walden and Dismuke the ability to so manufacture and import. Messrs. Renard and Poulin left Liquid Light at about the same time that Luc Noel also left the company. Small diameter chemiluminescent necklaces can economically be made from chemicals extracted from the wide diameter CYALUME six inch light sticks, with from 10-12 necklaces made from a single CYALUME light stick. However, European bulk chemicals are cheaper

than such extracted chemicals, according to Ms. Walden's testimony, and use of bulk chemicals avoids the awkwardness and scrap material involved in extraction. (Dismuke CX-B at 8-13, 19-20; Walden CX-O at 1-6, 13-47, Ex. 2.)

Patent Infringement

86. In April 1988 Cyanamid's then director of scientific services Dr. Schmitt received numerous samples of the Prolufab made and imported glow necklaces in green, blue, pink and orange colors, from Nite Lite Novelty, through Mr.

The samples obtained on April 28, 1988 marked 88419A-D were accompanied by a purchase order in the name of NiteLite Novelties Inc. and a flyer for Glow Necklaces. Part of scientific services at Cyanamid is the pilot plant support group, and this group regularly analyzes all the materials

(Dr. Schmitt CX-L at 5-18,

Exs. 1-4.)

87. Cyanamid's Dr. Schmitt discussed the analysis tests for such sample necklaces with the group leader of scientific services for the pilot plant, Dr. Granzow, as well as Dr. van der Poll, a research chemist with that group. Upon consultation, it was decided to conduct the following tests, which were stated to be accepted in the field and validated in Cyanamid's experience, to analyze the contents of the necklace samples:

These

analytical procedures were conducted by the group under the supervision of

Dr. Granzow who provided a detailed statement and report as to the test results.

The group does a large volume of testing and performed samples on the competitor samples which were marked with an evidence number 8841A through D (hereafter A-D) as designating the samples pink, blue, green and orange necklaces, respectively. Dr. van der Poll received the samples from Dr. Schmitt and distributed them to others in the group for further tests. Cyanamid's Ms. Elliott also testified as to the conduct and documented results of the tests she conducted on the chemiluminescent output and intensity of the activated sample necklaces versus the comparable Lite Ropes of Cyanamid. Dr. Granzow attested that the identification of the sampled chemicals is positive and certain. (Dr. Schmitt CX-L at 11-13, 17-19, Exs. 2, 5; Dr. Granzow CX-F at 6, 8, 10-31, Ex. 1; Dr. van der Poll CX-N at 5-41, Exs. 1-2; Ms. Elliott CX-C at 3-25, Exs. 1-5.)

88. The attested results of these Cyanamid tests indicate that the tested necklace samples were long and thin diameter tubes containing an oxalate solution and an activator solution which were separated from each other by a sealed glass ampule within the tubing. The tested necklace samples contained an oxalate solution composed of CPPO, one or more fluorescers, and dibutyl phthalate. The necklace activator solutions contained hydrogen peroxide, sodium salicylate, and tertiary butanol. The different necklaces were labelled as emitting one of four chemiluminescent colors—pink, blue, green and orange—and these were labelled as samples A

Upon activation of the sample necklace products by flexing and shaking the two solutions, the Prolufab necklaces exhibit chemiluminescence. (CX-D, Exs. 1-2; CX-N, Ex. 1; CX-C, Exs. 2-5.)

- 89. Cyanamid's Dr. Essenfeld testified concerning the application of the patent claims at issue to the sample French necklaces, according to the scientific analysis of those necklace contents established by Cyanamid test results. The Prolufab necklace samples included samples marked A for pink color, B for blue color, C for green color, and D for the orange color. The samples contained an outer casing of over 19 inches long and a diameter of 3.3mm, and an inner separating glass capillary over 18 inches long and 1.0mm in diameter. Plastic connectors for the ends of the tube were included with the samples for their use as a necklace. The necklaces contained an activator solution and separate oxalate solutions. (CX-D, Ex. 1.)
 - 90. The only known commercial use of the fluorescers

cyanamid's Dr. Baretz. There is no practical reason for using them for other purposes, due to their relative expense to manufacture, their sensitivity to sunlight which prevents a usefulness as commercial pigments, and there are available different inexpensive fluorescers for other purposes like detergents, paint pigments, etc. Updated literature searches are regularly performed on such chemiluminescent fluorescer compounds. and

the literature indicates no commercial application for such fluorescer compounds other than chemiluminescence. (Baretz CX-A at 65-69).

The '679 Patent

- 91. Dr. Essenfeld testified that the compound formula stated in claim 1 of the '679 patent is a generalized format which includes the compound CPPO. The Hammett sigma constant referred to in the claim pertains to a measure of the electronegativity of certain atoms as to which there is a rating system. The p integer in the claim refers to how many carbonyls there are adjacent to one another in the molecule. The Prolufab samples all contain CPPO as confirmed by the results of mass spectroscopy tests. The CPPO contains electronegative chlorine substituents, and a carblalkoxy group which is the carbopentoxy group. (CX-D at 12-15).
- 92. The Prolufab sample necklaces all contain CPPO, so the p integer for the carbonyls is 1, as Dr. Essenfeld applied claim 2 of the '679 patent. (CX-D at 15).
- 93. The reported analysis of the Prolufab samples show the presence of sodium salicylate as the catalyst, as Dr. Essenfeld testified in applying claim 4 of the '679 patent. (CX-D at 16).
- 94. The Prolufab sample necklaces all contain 2,4,5-trichloro-6-carbopentoxy substitution within the CPPO, as shown by the Cyanamid test results, as Dr. Essenfeld stated in applying claim 5 of the '679 patent. (CX-D at 16).
- 95. The Prolufab sample necklaces contain organic solvents, principally dibutylphthalate, DBP, and in a minor amount dimethylphthalate, DMP, according to Dr. Essenfeld's application of claim 7 of the '679 patent. (CX-D at 17-18).

- 96. The mass spectroscopy results show that the solvents found in the Prolufab samples are an ester and an aromatic, the DBP and DMP, as Dr. Essenfeld applied the '679 patent's claim 8. (CX-D at 17.)
- 97. The mass spectroscopy results also show that the solvents are within the class of solvents described by a dialkylphthalate where the alkyl group can be between one and 12 carbons, according to Dr. Essenfeld's application of claim 9 of the '679 patent. (CX-D at 17-18).

98. Sample D contained

as Dr. Essenfeld testified in applying claim 10 of the '579 patent. (CX-D at 18-19).

The '336 Patent

- 99. The necklace samples contained a chemiluminescent system having the catalyst sodium salicylate which is a weakly basic salt and according to the literature it has a log of the pKa value in water of 1 to 6, according to Dr. Essenfeld's application of the '336 patent's claim 1. Such a catalyst helps to increase the light output. The preamble of the claim refers to a bisaryl oxalate ester which includes CPPO. (CX-D at 20-21).
- 100. The CPPO in the sample necklaces is a substituted aryl oxalate ester, according to Dr. Essenfeld's application of claim 2 of the '336 patent. She testified that the aryl substitution refers to the phenyl ring, and in the CPPO the substitution here is 2,4,5-trichloro-6-carbopentoxy substitution. (CX-D at 21.)

- 103. The necklaces samples contain sodium salicylate as confirmed by as Dr. Essenfeld applied claim 6 of the '336 patent. (CX-D at 22.)
- 104. The step of adding a weakly basic salt catalyst to the reaction of a bis aryl oxalate ester, hydrogen peroxide, an organic fluorescer and an organic solvent for such ingredients actually takes place upon the mixing and combining of the two different solutions the oxalate and the activator solutions, as Dr. Essenfeld stated in her application of the process claim 8 of the '336 patent. (CX-D at 22-23).

The '786 Patent

105. The necklace samples contain hydroperoxide, which is hydrogen peroxide, for reaction with an ester of the formula presented in the claim, which in the samples is CPPO, as Dr. Essenfeld attested in applying claim 1 of the '786 patent.

Measurements and light output tests show that the necklace samples contain ingredients in sufficient amounts to produce chemiluminescence. (CX-D at 23-24).

106. The samples contain CPPO which is a bis ester of oxalic acide because it contains two ester groups in the molecule, as Dr. Essenfeld attested in applying claim 2 of the '786 patent. She testified that bis

ester of oxalic acid generally means that such a molecule is formed by taking oxalic acid with two carboxylic acid groups and combining this with two alcohol or phenol molecules to form two ester bonds. (CX-D at 24).

107. The necklace samples contain CPPO in which the ester is formed from oxalic acid and a phenol where the phenol has three electronegative chloro substituent groups on the phenol, thus its ionization constant is greater than 1.3 times 10 to the minus 10, considering the three substituents and the literature ionization constant value of 1.28 times 10 to the minus 10, as Dr. Essenfeld testified in applying claim 3 of the '786 patent. (CX-D at 26.)

108. The necklaces samples contain CPPO which specifically is ester, as Dr. Essenfeld indicated in applying claim 4 of the '786 patent. (CX-D at 26).

109. The results confirm that the CPPO molecule in the necklace samples have carbalkoxy groups on it in the sixth position, being a carbopentoxy group, according to Dr. Essenfeld's application of claim 5 of the '786 patent. (CX-D at 26).

110.

The '843 Patent

- 112. The samples each contained a tertiary alcohol solvent, specifically tertiary butyl alcohol butanol, as well as hydrogen peroxide in the t. butanol as a solvent, with the activator molar concentration of hydrogen peroxide being in excess of .01 M, and the system molar concentration of the sodium salicylate catalyst being 1.3 and 1.71 times 10 to the minus 4 according to Dr. Essenfeld's calculations based on the weight percentages found through analysis, and in her application of claim 1 of the '843 patent. (CX-D at 28-32, 46-50).
- 113. The necklaces samples upon analysis contained only tert-butyl alcohol and no other tertiary alcohol, according to Dr. Essenfeld's application of claim 4 of the '843 patent. (CX-D at 32-33).
- 114. The necklace samples upon analysis contained the specific catalyst sodium salicylate, as Dr. Essenfeld testified in her application of claim 5 of the '843 patent. (CX-D at 33).

The '426 Patent

115. The sample necklaces contain esters of polycarbonyl acids, specifically the CPPO, according to Dr. Essenfeld's application of claim 1 of the '426 patent. She testified that of the various chemical groups stated in the claim— anhydrides, amides, O-acylhydroxy amines, and esters of polycarbonyl acids— it has been found that the esters of

are superior in light output. (CX-D at 33-34.)

118. The samples contain CPPO which contains a bis-ester of oxalic acid and an alcohol characterized by an acid ionization constant in water greater than 1.3 times 10 to the minus 10, according to Dr. Essenfeld's testimony applying claim 6 of the '426 patent. (CX-D at 24, 28-32, 35-36,).

119. Green and orange imported necklace samples contained the solvent DBT, dibutylphthalate, which is a dialkyl solvent in which the alkyl substituent contains 4 carbon atoms, and they also contain CPPO which is a bis(substituted-phenyl)oxalate, according to Dr. Essenfeld's attested application of claim 7 of the '426 patent. (CX-D at 36.)

The '645 Patent

121.

122.

Prolufab Necklaces Sampled Do Not Contain Genuine CYALUME

123.

Contributory Trademark Infringement

126. Invoices/purchase orders evidencing sales of green, blue, pink, and orange necklaces to domestic customers expressly from Nite Lite

Novelties Inc. are of record with the following statement:

OUR NECKLACES ARE NOT A PRODUCT OF AMERICAN CYANAMID CO. BUT ARE MADE FROM THE "GLOW JUICE" EXTRACTED FROM THE CYANAMID GLOW STICK.

(CX-B, Ex. 2; CX-L, Ex. 4).

127. The flyer contained with the sample necklaces purchased by Cyanamid from Nite Lite Products Inc., is headlined GLOW NECKLACES and in part states as follows:

Although our product is not to be confused with Lite Rope(R), please note that all of our glow products are made with the glow juice CYALUME(R) which is extracted from the GLOW STICK(R) made by American Cyanamid Company.

(CX-L, Ex. 4.)

128. Upon first being involved with the French product Mr. Schrimmer obtained assurances from the French, written assurances translated and presented by Crazy Light, that the chemical used inside their necklace was

pure undiluted CYALUME extracted from a CYALUME light stick, and so Mr.

Schrimmer testified he did not intend to infringe upon rights involved in the CYALUME product. (CX-M at 43-45.)

129. After receipt of Cyanamid's beware of imitations notice concerning its Lite Rope necklaces, and upon the instructions of Mr. Schrimmer, in March 1988 Mr. Poulin sent a letter to Cyanamid's Mr. Ware stating that there was no intent to infringe the patents or trademarks of Cyanamid. The letter stated in part:

As you probably know, Nite Lite Novelties Inc. acts as a distributor of imported glow necklaces and does not have anything to do with their direct importation or manufacture. I have been assured by both the manufacturer (Prolufab) and the importer (Crazy Lights) that the necklaces do contain genuine Cyalume product.

(Complaint, Ex. K1; CX-M at 26-28.)

130. Nite Lite Novelty Inc. regularly advertised the sale of the imported glow necklaces in trade magazines and newspaper such as Amusement Business, Rollerskating Rink Association, and others, according to Mr. Poulin's sworn statement. These ads were composed and printed in conjunction with Mr. Schrimmer. Flyers additionally were used to promote the sales of the imported French glow necklaces. A classified advertisement in the May 21, 1988 edition of Amusement Business expressly promotes GLOW NECKLACE and states that the necklace is:

Made with CYALUME(R). A product of American Cyanamid Co.*
*This Product should not be confused with the Lite Rope(R) a product of American Cyanamid Co.

(Complaint, Ex. M; CX-I at 6.)

131. Prolufab 's principals assured Mr. Renard, according to his testimony, that the product shipped to fill his orders did after November 11, 1987 contain genuine CYALUME chemicals of Cyanamid which had been

extracted from its CYALUME light stick products and then refilled into the imported glow necklaces. Mr. Renard then repeated this assurance to Mr. Schrimmer, and both were then under the belief that the products did not infringe other patents of Cyanamid covering the chemicals used in light sticks, as stated by Mr. Renard. (CX-J at 4.)

132. In a signed and issued consent decree against Mr. Luc Noel, he admitted having:

"actively induced (and as a result received financial benefits from) other defendants named herein to purchase and import such glow necklaces from Societe Prolufab, 26 Rue Emile Declaux, 92150 Suresnes, France, and has joined with the principals of Prolufab, namely Paul Noel and Eric Noel, in giving knowingly false assurances to his co-defendants herein, which they relied upon, that such necklaces contained genuine chemicals extracted from plaintiff's [Cyanamid's] products...."

The consent order against Luc Noel was entered in the United States

District Court for the Central District of California by the Honorable

Consuelo Marshall on September 20, 1988. Similar consent judgments were

signed by Messrs. Schrimmer, Poulin and Renard and entered by that court

against themselves and Nite Lite Novelty Inc., Crazy Light and Chemical

Light Inc. in which the defendants admitted that they purchased and

imported chemiluminescent glow necklaces from Societe Prolufab, but stated

that they received formal assurances from Prolufab, which they relied upon,

that such necklaces contained genuine chemicals extracted from the

plaintiff Cyanamid's products. (CX-T).

EMINIAL DETERMINATION AND ORDER

Based on the foregoing findings of fact, conclusions of law, the opinion and the record as a whole and pursuant to Commission rule 210.50, it is the administrative law judge's determination that, as a matter of law there has been a violation of sections 337(a)(1)(B)(i) and (a)(1)(C) by respondent Prolufab in the sale for importation of certain glow necklaces which were thereafter imported and sold in the United States, and which infringe or induce and/or contributorily infringe the following intellectual property as to which there is a protected industry in the United States: claims 1, 2, 4, 6 and 8 of the '336 patent, claims 1-5 and 7-10 of the '679 patent, claims 1-6 of the '786 patent, claims 1, 4 and 5 of the '843 patent, claims 1 and 3 of the '645 patent, claims 1, 2, 4, 6 and 7 of the '426 patent and registered '341 and '455 trademarks. 16/ 17/

^{16/} The intellectual property as to which infringement has been found, but which the domestic industry does not exploit or practice, cannot be the subject of a violation under section 337. This includes

Thus, these claims of the patents at issue which are infringed by Prolufab necklaces are not the subject of a violation of section 337, because they are not practiced by the domestic industry. While the Omnibus Trade and Competitiveness Act of 1988 liberalized the requirements for a domestic industry in "articles protected by the patent," still the Act retained the requirement that some domestic industry must be shown. The claims of a patent constitute separate definitions of the scope of the patent's protection, and the practice, infringement and validity of separate claims is determined separately under the patent law, see, 35 U.S. C. sections 112, 271, 282. The domestic industry issue focuses on whether the intellectual property right covers the domestic activity, (Report of Senate Committee on Finance on S.490, Rpt. No. 100-71, 100th Congr., 1st Sess., June 12, 1987 at 128-129), and here the coverage of

on the domestic industry has not been shown.

Motion No. 285-9 is granted.

Further, it is ORDERED that:

- 1. In accordance with Rule 210.44(b), all material heretofore marked in camera because of business, financial, and marketing data and considered confidential business information under Rule 201.6(a), is to be given in camera treatment;
- 2. The Secretary shall serve a copy of the public version of this Initial Determination upon all parties of record and the confidential version upon all counsel of record who are signatories to the protective order issued by the administrative law judge in this investigation; and
- 3. Counsel for the parties shall submit to the office of the administrative law judge by Friday March 31, 1989 those bracketed portions of the subject initial determination which contain confidential business information to be deleted from the public version of this initial determination. If portions of the initial determination are not so designated, the party will be deemed to have no objection to removal of a confidential designation and protection therefor.

This INITIAL DETERMINATION is hereby CERTIFIED to the Commission. The pleadings of the parties are not certified, since they are already in the Commission's possession in accordance with Commission Rules of Practice and Procedure.

This initial determination shall become the final determination of the Commission pursuant to Commission rule 210.53(h) thirty (30) days after the service thereof on the parties, unless the Commission, within thirty (30)

days after the date of such service shall have ordered its review of the initial determination or of certain issues therein, pursuant to Commission rules 210.54(b) or 210.55, or by order shall have changed the effective date of the initial determination.

Paul J. Luckern Administrative Law Judge

Issued: March 22, 1989

CERTAIN CHEMILUMINESCENT COMPOSITIONS AND COMPONENTS THEREOF AND METHODS OF USING THE SAME

CERTIFICATE OF SERVICE

I, Kenneth R. Mason, hereby certify that the attached Initial Determination (Public Version) was served upon Jeffrey R. Whieldon, Esq. and upon the following parties via first class mail, and air mail where necessary, on April 13, 1989.

Kenneth R. Mason, Secretary

U.S. International Trade Commission

500 E Street, S.W. Washington, D.C.

FOR COMPLAINANT: AMERICAN CYANAMID COMPANY

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