In the Matter of

CERTAIN METHODS FOR EXTRUDING PLASTIC TUBING

Investigation No. 337-TA-110

USITC PUBLICATION 1287

SEPTEMBER 1982

United States International Trade Commission / Washington, D.C. 20436

UNITED STATES INTERNATIONAL TRADE COMMISSION

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COMMISSION ACTION AND ORDER

Introduction

The U.S. International Trade Commission has concluded its investigation under section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) of alleged unfair methods of competition and unfair acts in the unauthorized importation into the United States of certain extruded plastic tubing and reclosable plastic bags, or in their sale by the owner, importer, consignee, or agent of either, the alleged effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States. The Commission's investigation concerned allegations that extruded plastic tubing and reclosable plastic bags imported or sold by the respondents in this investigation are the product of a process covered by certain claims of U.S. Letters Patents Re 26,991, Re 28,959 and Re 29,208. These patents are owned by assignment and license by complainant Minigrip, Inc.

This Action and Order provides for final disposition of the above-captioned investigation. It is based upon the Commission's determination, made in public session at the Commmission meeting of August 3, 1982, that there is violation of section 337.

Action

Having reviewed the record in investigation No. 337-TA-110, including the recommended determination of the Administrative Law Judge, the Commission, on August 3, 1982, determined that--

1. There is a violation of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) and 19 U.S.C. § 1337a in the unauthorized importation and sale of certain extruded plastic tubing and reclosable plastic bags which are the product of a process which, if practiced in the United States, would infringe claims of U.S. Letters Patents Re 26,991, Re 28,959 and Re 29,208, the effect or tendency of which is to substantially injure an industry, efficiently and economically operated, in the United States;

2. The appropriate remedy for such violation of section 337 is a general exclusion order, pursuant to subsection (d) of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337(d)), preventing the importation of extruded plastic tubing and reclosable plastic bags which are the product of a process which, if practiced in the United States, would infringe claims of complainant's U.S. Letters Patents Re 26,991, Re 28,959 and Re 29,208;

3. The public-interest factors enumerated in subsection (d) of section 337 of the Tariff Act of 1930 do not preclude the issuance of an exclusion order in this investigation; and

4. As provided in subsection (g)(3) of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337(g)(3)), the appropriate bond during the period this matter is pending before the President is 400 percent of the entered value of the infringing products.

Order

Accordingly, it is hereby ORDERED THAT--

1. Extruded plastic tubing and reclosable plastic bags that are the product of a process which, if practiced in the United States, would infringe one or more claims of U.S. Letters Patent Re 26,991; U.S. Letters Patent Re 28,959; and/or U.S. Letters Patent Re 29,208 are excluded from entry into the United States for the remaining terms of the patents, except where such importation is licensed by the patent owner;

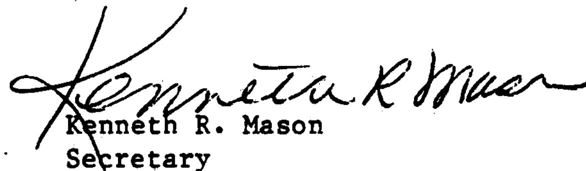
2. The articles to be excluded from entry into the United States shall be entitled to entry under bond in the amount of 400 percent of the entered value of the imported articles from the day after this order is received by the President pursuant to subsection (g)(3) of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337(g)(3)) 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 the date of receipt;

3. Notice of this Action and Order be published in the Federal Register;

4. A copy of this Action and Order and of the Comission Opinion issued in connection therewith be served upon each party of record to this investigation and upon the Department of Health and Human Services, the Department of Justice, the Federal Trade Commission, and the Secretary of the Treasury; and

5. The Commission may amend this Order in accordance with the procedure described in section 211.57 of the Commission's Rules of Practice and Procedure (46 F.R. 17533, Mar. 18, 1981; to be codified at 19 C.F.R. § 211.57).

By order of the Commisison.



Kenneth R. Mason
Secretary

Issued: September 2, 1982

COMMISSION OPINION 1/

Procedural History

Complainant Minigrip, Inc. ("Minigrip" or "complainant") is a corporation organized under the laws of the State of New York with its principal place of business at Route No. 303, Orangeburg, New York 10962. Minigrip is engaged in the manufacture, production, assembly, sale, distribution, and marketing of extruded tubing and reclosable plastic bags made therefrom. It sells its bags predominantly in the industrial market. 2/

Complainant has alleged a violation of section 337 of the Tariff Act of 1930, as amended, by reason of the unauthorized importation of plastic tubing and reclosable plastic bags which if produced in the United States would infringe U.S. Letters Patent Re 29,208, Re 28,959 and Re 26,991. U.S. Letters Patent Re. 29,208 and Re. 28,959 are owned through assignment by Kabushiki Kasha Nikon Sha (Seisan) of Japan and exclusively licensed to Minigrip. The three patents disclose a method for extruding plastic tubing from which reclosable plastic bags are made. A one piece closed tube is extruded from heated plastic with the male and female interlocking profiles simultaneously and integrally formed. Air is directed into the tube to maintain it in a tubular form, and outer cooling air is directed annularly around the tube in an area where it has reached its final size, the air is directed at a rate so that the profiles remain on one surface and retain their size and shape.

1/ In this opinion the following abbreviations will be used: ALJ means the Administrative Law Judge; RD means Recommended Determination of the ALJ; and IA means Commission Investigative Attorney, Tr. means Hearing Transcript.
2/ See explanation of "industrial market" at page 10, infra.

The '208 patent discloses the method for forming a continuous plastic tube with circumferentially spaced axially extending interlocking profiles formed integrally therewith wherein a main flow stream of plastic is delivered to an annular opening in a die, and separate flow streams of plastic taken from the main flow are delivered in such manner as to rejoin the main flow stream at the profile forming portions of the die. These separate flow streams cause the proper, controlled amount of plastic to be delivered in such a manner as to insure the provisions of complete operable interlocking profiles.

The '959 patent discloses the method for aligning the male and female profiles during the continuous extrusion operation. This alignment allows the profiles to be closed or forced together, a crucial feature of the reclosable bag. A free floating guide device is used inside the flattened tube. The guide device has grooves which engage the projections and guide them into alignment so that the flattened tube of plastic is drawn between a pair of plates, causing a force to be exerted against the outer surfaces of the tube and causing the aligned profiles to interlock. The flattened plastic tube is then rolled up.

The '991 patent describes a method to provide additional cooling of the profiles. Under this method, the profiles are cooled additionally by air directed by conduits against the profile areas of the tube. The additional cooling is necessary because the profiles have more mass and retain more heat than the remainder of the tube. This additional cooling of the profiles enables production of the tubes at a more rapid, commercially efficient rate, while maintaining the desired size and precise shape of the profiles.

The Commission's notice of investigation named ten (10) foreign respondents. The foreign respondents are: Fong Tsu/Ming Hsu Industries, Inc., Fortune Well Plastics Co., Ltd., Gideons Plastic Industrial Co., Ltd., Hong Ter Product Co., Ltd., Ideal Plastic Industrial Co., Ltd., Keron Industrial Co., Ltd., Lien Bin Plastics Co., Ltd., Morrison Enterprises Corp., Shin Shing Plastic Indutrial Co., Ltd., and Ta Sen Plastic Industrial Co., Ltd. The domestic respondents are: ABC Jewelry Imports, Clearoll Poly Film Inc., LOGO Paris, Inc., PHC Enterprises, Pacific Orient Imports, and Sue Trading Co. 3/

Responses to the complaint and notice of investigation were filed by respondents LOGO Paris, Inc. and PHC Enterprises. Respondent Clearoll Poly Film, Inc., replied to the complaint and notice of investigation by way of a letter sent to the Secretary without service on the other parties of record and also participated in discovery. Because of their failure to respond to the complaint or otherwise appear and defend in this investigation, all of the foreign respondents were found in default by the ALJ pursuant to Commission rule 210.21(d). Pursuant to Order No. 17, issued May 7, 1982, Clearoll Poly Film, Inc., and all ten foreign respondents were precluded from contesting the allegations of the complaint and from submitting evidence at the evidentiary hearing.

In addition to the complainant and the sixteen named respondents there are three non-parties involved in this investigation: Dow Chemical

3/ Of these respondents, the Commission, upon the recommendation of the ALJ (Judge Duvall), has terminated LOGO Paris, Inc. (April 13, 1982), Pacific Orient Imports, and ABC Jewelry Imports (May 10, 1982), and Sue Trading Co. (July 9, 1982).

Corporation ("Dow"), KCL Corporation ("KCL"), and Milhiser, Inc. ("Milhiser"). Dow is a U.S. corporation located in Midland, Michigan. Dow, a licensee of Minigrip under the patents in issue, manufactures plastic tubing and sells reclosable plastic bags in the consumer market. 4/ KCL is located at Shelbyville, Indiana and converts plastic tubing purchased from Minigrip into reclosable plastic bags. Milhiser, located in Richmond, Virginia also converts plastic tubing purchased from Minigrip into reclosable plastic bags. Both KCL and Milhiser sell bags in direct competition with Minigrip; neither produces tubing, and neither practices any of the patents in controversy.

Complainant was before the Commission in an earlier section 337 investigation, In the Matter of Reclosable Plastic Bags, Inv. No. 337-TA-22 (1977). That investigation was based on claims of infringement of a U.S. product patent not at issue in the instant investigation. Based on a finding of infringement of that patent, the Commission directed that a general exclusion order be entered against imported goods that infringed the product patent-in-suit. That exclusion order terminated on August 3, 1982, the expiration date of the product patent in question. Because of the expiration of the exclusion order and based on the facts of this investigation, complainant, with the support of the IA, moved for expedited relief (Motion Docket No. 110-7); the ALJ recommended that this motion be granted and we concurred.

Prehearing conferences were held in this investigation on May 6 and May 24, 1982. The evidentiary hearing commenced on May 24, 1982, and following a

4/ See explanation of "consumer market" at page 10, infra.

one day recess, was concluded on May 26, 1982. No respondents made an appearance at the evidentiary hearing; only complainant and the IA participated in the presentation of evidence. This is a default case.

In his recommended determination, the ALJ found that there is a violation of section 337 in the unauthorized importation and sale of certain plastic tubing and reclosable plastic bags by reason of the infringement of the Minigrip patents by the method used to manufacture these products, with the tendency to substantially injure an industry, efficiently and economically operated, in the United States.

The Commission hearing was held on July 15, 1982. On August 3, 1982, the Commission unanimously determined that there was a violation of section 337.

Patent Validity

Patents are presumed valid pursuant to 35 U.S.C. § 282 (1980), and respondents have the burden of proving invalidity or unenforceability. In the Matter of Certain Display Devices for Photographs and the Like, Inv. No. 337-TA-30, pp. 6, 13 (1978). In the absence of any clear and convincing evidence submitted to controvert the validity of the patents-in-suit, the statutory presumption of validity must prevail. In the Matter of Certain Rotary Scraping Tools, Inv. No. 337-TA-62, p. 9 (1980). In the present case, no one has asserted that the patents are invalid or questioned complainant's rights in the patents. Moreover, the evidence in this case further supports the finding of validity of the patents. That evidence indicates that each of the patents was examined twice by the Patent Office; that Dow Chemical Company has taken a license under the patents-in-suit and is paying complainant

substantial royalties for the license; and that all relevant prior art cited before the Patent Office in the reissue proceedings and in the previous Commission investigation was considered by complainant's expert, Mr. Fischer, a consulting engineer and patent expert. Mr. Fischer testified to the unique and ingenious character of the patents and concluded, in his expert opinion, that the three suit patents are valid. Based on the foregoing, the Commission finds the patents-in-suit valid.

Patent Infringement

The primary sources of evidence of infringement of the suit patents by the named foreign respondents are reports based upon visits to the facilities of the foreign manufacturers by Mr. Ausnit, president of Minigrip. (SPX 1, Exh. I). From April 13 to April 16, 1981, while on a trip to Taiwan, Mr. Ausnit visited the plants of respondents Hong Ter, Ideal, Shin Shing, Lien Bin, Keron, Fong Tsu, Ta Sen, Gideons, and Fortune Well. The reports of Mr. Ausnit's visits to the foreign manufacturers substantiate infringement of the suit patents by all of these respondents.

Mr. Ausnit did not visit the manufacturing facilities of respondent Morrison Enterprises. However, he did speak with its president, Morris Wang, who stated that the technology used by Morrison Enterprises was obtained from respondent Hong Ter, who in turn obtained it from the patent owner Seisan in Japan, and included the processes protected by the suit patents. Thus, there is a clear inference that the method used by Morrison Enterprises infringes the patents-in-suit. This inference is supported by the actions of Morrison

Enterprises in its surreptitious attempts to import reclosable plastic bags into the United States. 5/

The evidence of infringement of the patents-in-suit by the foreign respondents is substantiated further by the fact that this evidence is unrefuted. Copies of the sketches, photographs and price quotations were submitted to the Taiwanese respondents as attachments to requests for admissions so as to give the Taiwanese respondents an opportunity to clarify or correct any errors appearing therein. No responses to the requests for admissions were made. Therefore, under Commission rule 210.34, the subject matter of the admissions may be conclusively established. Additionally, Mr. Fischer, a consulting engineer and complainant's patent expert, rendered his opinion on the record that the evidence obtained by Mr. Ausnit, as reflected in his reports on his Taiwanese visit, establishes infringement of the patents-in-suit by the foreign respondents named in this investigation.

Finally, the uncontested testimony of Mr. Ausnit and Mr. Fischer establishes that bags made from extruded plastic tubing produced in accordance with the patented methods can, by a simple inspection, be readily identified by the presence of specified characteristics (Ausnit Tr. 67-68; Fischer Tr. 111; RD p. 48). Thus, the documented imports of bags meeting these criteria from foreign respondents is evidence of patent infringement. The validity of this type of evidence has been sustained by the Court of Customs and Patent Appeals which upheld a determination of patent infringement based solely on expert testimony that "they must have been made by the patented process" in a

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5/ RD p. 100.

case in which there was no direct evidence as to how the product was made. In re Von Clemm, 229 F.2d 441 (CCPA 1955). No evidence to contest the allegation of infringement was presented.

Based on this evidence, we find that the ten Taiwanese respondents named in the notice of investigation have committed unfair methods of competition and unfair acts by their importations into the United States of plastic tubing or reclosable plastic bags made by an infringing process.

Importation and Sale

Complainant has offered evidence establishing numerous documented instances of actual and attempted importation and sale of the accused reclosable plastic bags in the United States, notwithstanding the current exclusion order.

In response to the Commission investigative attorney's request for data concerning attempted importation of such reclosable plastic bags during the past four years, the Customs District Director of San Francisco reported the interception of 359 cartons involving 101 instances of attempted importations. The Los Angeles District reported intercepting shipments of bags from respondents Ideal Plastics, Keron Indutrial, and Lien Bin Plastics. There is also evidence that reclosable plastic bags have entered the United States through Jacksonville, Tampa, and Miami, Florida. 6/.

Complainant has introduced twenty-four depositions 7/ which document the successful importation and sale of approximately 25 million reclosable plastic

6/ CPX 18, p. 19.
7/ See Deposition Nos. CPX 17, CPX 18, CPX 19, CPX 20, CPX 23, CPX 25, CPX 26, CPX 31, CPX 32, CPX 34, CPX 36, CPX 37, CPX 38, CPX 39.

bags, notwithstanding the current exclusion order. The depositions 8/ offered by complainant also document shipments of 5.5 million bags confiscated by Customs and intended for customers in the United States. We therefore find that complainant has proven numerous instances of importation and sale of accused reclosable plastic bags in the United States.

Domestic Industry

Definition

The term "domestic industry" is not defined in section 337. However, legislative history and case precedent indicate that, in patent-based cases, the domestic industry consists of the domestic operations of the patent owner and his licensees devoted to the exploitation of the patent.

Complainant Minigrip, in its plant at Orangeburg, New York, practices the methods of extruding plastic tubing disclosed in the claims of the patents-in-suit, and engages as well in the manufacture and sale of reclosable plastic bags. Complainant uses approximately 50 percent of the plastic tubing it manufactures to produce reclosable plastic bags. The bulk of the remaining tube is sold to KCL and Milhiser. KCL and Milhiser use most of the tubing they purchase to produce reclosable plastic bags which are sold in competition with complainant. KCL and Milhiser only manufacture reclosable plastic bags from the tubing they purchase from Minigrip; they do not themselves utilize the methods of the patents-in-suit for the extrusion of plastic tubing.

Another factor to be considered is that Minigrip, KCL, and Milhiser sell their bags predominantly to what is called the "industrial" market. That is,

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8/ See Deposition Nos. CPX 17, CPX 19, CPX 22, CPX 26, CPX 30, CPX 32, CPX 34, CPX 36.

the bags are designed for use by an industrial company as a package, container or envelope, rather than for household use. A small percentage of their sales is to customers who feed their tubing into specially designed form and fill machines.

Complainant has granted to Dow Chemical Company licenses under the patents-in-suit which allow Dow to extrude tubing and manufacture reclosable plastic bags. Generally speaking, the plastic bags manufactured by Dow are for resale to consumers through supermarkets and similar retail outlets. This market is referred to as the "consumer" market. Dow sells predominantly in the "consumer" market. 9/

The proper approach in examining the domestic industry in this case is to define the scope of the domestic industry in ordinary commercial circumstances as those domestic operations which exploit the process patents rights in issue. Minigrip and Dow are the only domestic firms which practice the three process patents in issue. Therefore, we conclude that Minigrip and that portion of Dow devoted to the exploitation of the three process patent in issue for the production of plastic tubing and reclosable plastic bags comprise the domestic industry.

Efficient and economic operation

Section 337 requires proof that the domestic industry is "efficiently and economically operated." The Commission has developed certain criteria to determine efficient and economic operation. Among these factors are: (1) the

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9/ The Dow licensing agreement with Minigrip does not preclude Dow from selling in the "industrial market".

use of modern equipment and procedures; (2) substantial investment in research and development; (3) the constant upgrading of manufacturing equipment; (4) incentive benefit programs for employees; and (5) sustained profitable operation. See Certain Luggage Products, Inv. No. 337-TA-39 (1978); Certain Automatic Crankpin Grinders, Inv. No. 337-TA-60 (1979). It is apparent from the evidence of record that Minigrip is efficiently and economically operated.

Complainant Minigrip has made improvements in the delivery of its materials, its extrusion output, its bag making process, and its scheduling, all tending to increase the efficiency and economy of the operation. A railroad track was installed to allow delivery of resin in large quantities directly to Minigrip's silos, from which the resin is automatically transferred to the extruders. The extrusion output has been improved by: (1) perfecting the use of double tubing; (2) increased extrusion speeds made possible by the use of improved die and cooling techniques, high bays, and plant air conditioning; (3) minimization of down-time and scrap by the dedication of a specific line to one specific size bag; and (4) the use of a 3-shifts/day, 7-days/week schedule. Bag making improvements include the use of a two-lane bag machine which allows the production of four bags per cycle, as opposed to the one-bag per cycle machines used abroad. Minigrip's expert witnesses agreed that the Minigrip plant is one of the most efficiently and economically operated plants they have ever seen. 10/

Minigrip maintains an extensive research and development facility partially funded by its parent corporation, Signode, and channels its dividends into plant expansion and improvements. Projects currently under

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10/ RD p. 111.

development include: (1) the use of a robot to catch and band bags from the bag machine; (2) placement of the bag machine directly in front of the extruder for the production of stock bags; (3) the development of a form fill machine to permit a bag to be easily and inexpensively filled by customers; and (4) development of a quadruple tube die. Complainant stresses that, upon completion of these developments, which will take several years, Minigrip will be in a better position to meet foreign competition.

The efficient and economic operation of Minigrip is supported further by its sustained profitable operation. The evaluation of Dr. Warren Keegan 11/ leads him to believe that Minigrip is twice as efficient as its foreign competitors. 12/ In addition, a recent audit by the New York State Job Development Agency determined according to its standards that Minigrip was efficiently and economically operated. 13/

The information presented by complainant and Dow indicates that Dow Chemical Co. is also efficiently and economically operated. Admittedly, this might not accurately reflect the true state of Dow's patent-based production. However, this showing of an overall efficient and economical business shifts the burden to respondent to demonstrate that the patent operation is an exception. Since this is a default case there is no contradictory evidence on the record. We therefore conclude that Dow's ZIP LOC division 14/ is

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11/ Dr. Keegan is a professor at New York University's Graduate School of Business Administration who served as an expert witness for complainant.

12/ RD P. 111.

13/ RD p. 112.

14/ ZIP LOC is the trademark under which Dow markets its reclosable plastic bags.

efficiently and economically operated. 15/ Moreover, the information provided by Dow indicates that it expends considerable amounts of money in the production, research, and advertising of its ZIP LOC bags. The view that the Dow operation is as efficient as possible for the production of standard-sized bags is confirmed by Mr. Ausnit and the IA.

We find, based on the evidence of record and absent information to the contrary, that the domestic industry is efficiently and economically operated.

Injury

Substantial injury

Complainant has demonstrated numerous instances of importation and sales of infringing reclosable plastic bags. Customs records and depositions taken by complainant indicate that approximately 25 million reclosable plastic bags have been imported and sold in the United States, and that a minimum of six million bags have been refused entry into the United States.

Dow, which accounts for approximately 70-80 percent of domestic bag production, states that it "is not aware of any significant impact on its business because of imports while the present exclusionary order has been in effect." KCL and MIlhiser account for approximately 10 percent of domestic bag production. The documented cases of importation and sales therefore impact upon a percentage of sales of only about 20-30 percent of total U.S. reclosable plastic bag production. 16/

15/ We must not allow our restrictive definition of industries in patent-based cases to make it impossible for a complainant to show it is efficiently and economically operated. Our requirements of proof on these matters must comport with business realities.

16/ RD p. 115.

With respect to the volume of actual and attempted imports, the ratio of volume of imports to volume of bags produced domestically is quite small. Given the total number of imported bags documented by depositions and those bags intercepted by Customs in Los Angeles and San Francisco, 43.5 million bags have been identified positively as imports within the past five years. The importation of an approximate annual average of 8.7 to 10.9 million bags represents about 2 percent of Minigrip's total production in 1981 of 471,000,000 bags. This volume of imports, standing alone, does not support a finding of present substantial injury.

Complainant further alleges present injury in the form of an order cancelled by one of its distributors in anticipation of the impending expiration of the existing exclusion order. Mr. Ausnit testified that the volume of orders placed for reclosable tubing sold to the franchise fabricators and the volume of stock bags ordered by distributors has decreased approximately 10-15 percent in the last few months as a result of the anticipated expiration of the exclusion order.

We believe that the cancellation and decrease of orders are more appropriately considered as constituting tendency to injure, because they are the result of anticipation of the impending termination of the exclusion order.

Based upon the above arguments and evidence, we find that complainant has not established present substantial injury within the meaning of section 337.

Tendency to substantially injure

Although complainant has failed to show substantial injury, a showing of a tendency to injure is sufficient to obtain relief under section 337.

Complainant has offered sufficient evidence to establish a tendency to substantially injure by demonstrating substantial foreign capacity to manufacture and export reclosable plastic bags; explicit foreign intentions to export; the inability of the domestic industry to compete with the foreign products at this time because of vastly lower foreign costs of production and lower prices; and the significant negative impact this would have on the domestic industry.

Substantial foreign capacity to manufacture and export reclosable plastic bags is revealed by Mr. Ausnit's reports of his visits to foreign manufacturers. Moreover, the majority of the foreign manufacturers visited could not only easily increase their production by operating all machinery on a 24/hours per day, 7/days per week basis, but also indicated their intention to expand exports to the United States upon the termination of the existing exclusion order. 17/ This intention is manifested through the manufacturers' statements, solicitations already sent to potential customers in the United States, and the covert methods utilized by exporters to enter goods into the United States market despite the present exclusion order. 18/

As alluded to above, one respondent concealed bags in a shipment of drop cloths addressed to an innocent third party and asked the third party to forward the bags to the intended recipients. Another respondent requested the names of the intended customer's employees in order to mail unsolicited bags to the homes of the unsuspecting employees.

17/ RD p. 117.
18/ RD p. 120.

Of the Taiwanese plants visited, all but one indicated that they could increase production capacity immediately by increasing the use of the machinery and/or adding shifts. Of the plants visited in South Korea, Singapore, Hong Kong, and Thailand, only two could expand the number of production hours per day per extruder, but four could utilize extruders currently idle. 19/

Based upon information provided by the manufacturers, Mr. Ausnit estimated that the total output of bags per year without any expansion of facilities beyond full utilization could reach 2,800,000,000 from Taiwan and 1,126,000,000 from Thailand, South Korea, Singapore and Hong Kong combined.

In addition to full utilization of facilities, many manufacturers indicated the existence of available plant space for expansion. In Taiwan, seven out of ten manufacturers stated that such space was available and that they could expand operations in an average time of one to two months. Fong Tsu openly expressed its intention to begin expansion as soon as the United States market became available. Fortune Well revealed intentions to expand its existing building and add extrusion lines. Mr. Ausnit's observations of eight out of thirteen plants in the other countries visited indicate the availability of space for a 50-100 percent expansion of capacity. The machinery, materials, and labor are also readily available for plant expansion. 20/

Complainant also presented evidence regarding the inability of the domestic industry to compete with foreign imports at this time because of

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19/ RD p. 118.
20/ RD p. 118.

vastly lower foreign costs of production which result in lower prices for foreign products. These costs include the cost of labor, materials, machinery, and compliance with governmental regulations. The prices at which reclosable bags are offered from Taiwan are from one-half to one-fourth the price offered for comparable sized bags produced domestically.

Minigrip estimates that its cost of labor is 21.8 percent of its total cost allocation, or approximately twice the percentage of cost allocated by respondent Keron in its answer to the investigative attorney's interrogatories. Minigrip's estimate is corroborated by the research of Dr. Keegan. As previously noted, wages paid laborers in the Far East are substantially lower than the wages of their U.S. counterparts. 21/

The domestic industry is also at a substantial disadvantage with respect to the cost of machinery. Minigrip budgeted $120,000 for the addition of one extrusion line and $135,000 for three bag machines in 1982. The cost of one new extrusion line and one bag machine to Minigrip is approximately 6.6 times respondent Ideal's cost for comparable equipment. In summarizing his visits to five Taiwanese extrusion line manufacturers, Mr. Ausnit estimated the cost of a Taiwanese line at 15 to 20 percent of the cost of an American line. 22/

The availability of lower foreign prices has led several of Minigrip's oldest and largest customers to threaten to seek alternative supplies of bags if Minigrip does not obtain further relief. Such threats are an indication of the existence of a tendency to injure the domestic industry. Certain Airless Paint Spray Pumps, ("Pumps") Inv. No. 337-TA-90, at 15.

21/ RD p. 122.
22/ RD p. 123.

If Minigrip's customers purchase their tubing and bags from abroad, Mr. Ausnit testified that it will become necessary for Minigrip to abandon a major portion of its manufacturing and become a substantial importer of reclosable plastic bags. As a result, Minigrip estimates the need to lay off approximately 75 percent of its extrusion and bag machine operators. The alternative would be to transfer Minigrip's facilities to the Far East to take advantage of the lower foreign costs of production.

Licensee Dow has expressed concern over the negative effect on Dow's business that could be created by the entrance of foreign competitors into the domestic consumer market.

The foreign manufacturers have not limited their export objectives specifically to the U.S. industrial market; they simply stated that they see the United States as their largest potential market. In as much as the consumer market constitutes the bulk of domestic sales, it would be commercially lucrative for foreign manufacturers to divert infringing bags to the U.S. consumer market.

The threats, when combined with the cancellation of orders, the 10 to 15 percent decrease in sales allegedly due to the anticipation of the expiration of the existing exclusion order, and the substantial foreign capacity, support the conclusion that there is a tendency to substantially injure. Based on the evidence discussed above, we find that there is a tendency to substantially injure the domestic industry.

D. Relief, Public Interest and Bonding

1. Relief

Both the complainant and the IA request that the Commission issue a general exclusion order covering all extruded plastic tubing and reclosable plastic bags produced by a method which infringes complainant's patents. Complainant's principal argument in support of a general exclusion order is that cease and desist orders or a limited exclusion order would apply only against respondents to this investigation. Such a limitation would leave the domestic industry unprotected against other future importers of infringing products, many of whom are as yet unknown to the complainant.

The Commission has indicated that a complainant seeking a general exclusion order must show "both a widespread pattern of unauthorized use of its patented invention" and such "business conditions" as would suggest that "foreign manufacturers other than the respondents to the investigation may attempt to enter the U.S. market with infringing articles" (Pumps at p. 18). 23/

In this regard, the Commission indicated factors which would support a widespread pattern of unauthorized use. One of these was a Commission determination of unauthorized importation into the United States of infringing articles by numerous foreign manufactuers. We believe consideration of this

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23/ Commissioner Calhoun notes that he dissented from the majority's views on remedy in the Pumps opinion. (See Pumps, Additional Views of Vice Chairman Michael J. Calhoun and Commissioner Eugene Frank).

While it might be appropriate for the Commission, in deciding whether to issue a general exclusion order, to consider the factors referred to by the majority in Pumps, it remains his view that the complainant does not bear the sole burden of proof, rather "the parties together with the Commission share the responsibility to develop an adequate record for action under 337." (Additional Views, p. 5.)

factor strongly supports the issuance of a general exclusion order in this investigation. Complainant has established in this investigation the foreign use of the patented method and the importation of infringing articles by a multiplicity of foreign manufacturers.

The Commission also listed in Pumps certain market factors that are evidence of the "business conditions," referred to above, which would suggest that foreign manufacturers other than the respondents may attempt to enter the U.S. market with infringing articles:

(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 producting the patented articles;

(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. 24/

These considerations support the conclusion that the emergence of many infringers is likely and the issuance of a general exclusion order is the proper remedy. The domestic demand for the reclosable plastic bags has been high and remains high. The complainant has offered testimony that Taiwanese companies will try to export infringing bags to the United States. Further, an extensive marketing and distribution network is already in place in the United States to accommodate the future importation of infringing products. Additionally, complainant and the IA testified that numerous companies in

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24/ Although the passage refers to product patent infringement, the same analysis would apply to a process patent.

Taiwan and other parts of the Far East have or will soon have the capacity to produce large numbers of reclosable plastic bags at a very low cost and within a very short period of time.

Finally, the IA and complainant note that, despite the attempts to evade the existing exclusion order, the Customs Service has been enforcing the present exclusion order and has been able to determine, from examination, that products come within the purview of the order. The record shows that the reclosable plastic bags made from tubing produced in accordance with these patent methods can be readily identified from the following characteristics: 25/

(1) the bags have integral front and back walls and side edges which are sealed together;

(2) the bags have lines or striations that run across from one side edge to the other;

(3) the bags have male and female interlocking profiles integral with the walls of the bag, one on each wall, on the inner surface of the wall only, near the upper edge and extending from one side edge to the other;

(4) the bags have male and female profiles of the proper shape and size to interlock repeatedly, as can be readily determined by opening and reclosing the bags several times;

(5) the bags have male and female profiles in exact alignment and of the same length from edge to edge so that the profiles when closed are interlocked from edge to edge without any gap or open corrugations between the profiles. 26/

In conclusion, we believe that a general exclusion order is the appropriate remedy in this investigation.

25/ We have received a letter dated July 21, 1982 from the Customs Service expressing the view that they would have little difficulty in enforcing an exclusion order in this matter.

26/ RD pp. 97-98.

2. Public Interest

Even where the Commission finds the existence of an unfair act, it will not grant relief where such relief would adversely affect the public interest. Among the factors to be considered in assessing the public interest in addition to public health and welfare are "the domestic industry's ability to supply the market in the absence of imports, the availability of substitute products, previous anticompetitive behavior of the complainant, and the industry's likely pricing behavior in the absence of imports." Certain Surveying Devices, Inv. No. 337-TA-68, pp. 36-37 (1980). We note that the complainant is capable of satisfying the domestic demand for the reclosable plastic bags in question and that numerous substitute bags are available. Further, there is no evidence of anticompetitive behavior on the part of the complainant or of price increases resulting from an exclusion order. Complainant has testified that any savings resulting from lower priced foreign bags are absorbed by the distributor as higher profits rather than passed on to the consumers in the form of reduced priced bags. We therefore believe that the public interest does not preclude the issuance of a general exclusion order in this case.

3. Bonding

During the Presidential review period, the infringing articles may enter the United States under a bond prescribed by the Commission. The bond should be set at "the amount which would offset any competitive advantage resuling from the unfair act enjoyed by persons benefitting from the importation of the article." S. Rep. No. 1298, 93rd Cong., 2d sess. 198 (1974).

The complainant and the IA have argued, and we agree, that these articles should be entitled to enter under a bond set at 400 percent of the entered value of the articles. The 400 percent figure was derived from the evidence in the record which discloses that reclosable bags from Taiwan are offered at anywhere from one-half to one-fourth the price at which are offered comparable sized bags produced domestically. 27/ Because the bags vary in size, shipments may contain several sizes, and it was not possible to calculate a weighted average, a bond of 400 percent is necessary in order to insure that the bond will completely "offset any competitive advantage resulting from the unfair method of competition or unfair act enjoyed by the persons benefitting from the importation." 28/

CONCLUSIONS

After reviewing the record in this investigation, we determine:

1. That there has been a violation of Section 337 in the unauthorized importation and sale in the United States of plastic tubing and reclosable plastic bags made by a process which would, if practiced in the United State, infringe certain claims of U.S. Letters Patent Re 26,991, Re 28,959, Re 29,208.

2. That such unfair methods of competition and unfair acts have a tendency to substantially injure on efficiently and economically operated industry in the United States.

3. That the issuance of a general exclusion order against plastic tubing and reclosable plastic bags which infringe complainant's patents is appropriate.

4. That public interest considerations do not preclude relief.

5. That bond be set at 400 percent of the entered value of the imported articles.

27/ RD F.F. 289.
28/ S. Rep. No. 93-1298, 93d Cong., 2nd Sess. 198 (1974).