

In the Matter of

**CERTAIN SLIDE FASTENER STRINGERS AND  
MACHINES AND COMPONENTS THEREOF  
FOR PRODUCING SUCH SLIDE  
FASTENER STRINGERS**

Investigation No. 337-TA-85

USITC PUBLICATION 1141

APRIL 1981

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



# **UNITED STATES INTERNATIONAL TRADE COMMISSION**

## **COMMISSIONERS**

**Bill Alberger, Chairman**

**Michael J. Calhoun, Vice Chairman**

**Catherine Bedell**

**Paula Stern**

---

**Kenneth R. Mason, Secretary to the Commission**

---

**Address all communications to  
Office of the Secretary  
United States International Trade Commission  
Washington, D.C. 20436**

"PUBLIC VERSION"

UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C.

In the Matter of	)	
	)	
CERTAIN SLIDE FASTENER STRINGERS AND	)	Investigation No. 337-TA-85
MACHINES AND COMPONENTS THEREOF FOR	)	
PRODUCING SUCH SLIDE FASTENER STRINGERS	)	
	)	

COMMISSION ACTION AND ORDER

Introduction

The United States International Trade Commission is conducting an investigation under the authority of section 337 of the Tariff Act of 1930 (19 U.S.C. 1337) into alleged unfair methods of competition and unfair acts in the unauthorized importation of certain slide fastener stringers and machines and components thereof for producing such slide fastener stringers into the United States, or in their sale by the owner, importer, consignee, or agent of either, the effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States. Textron , Inc., is the complainant; Yoshida Kogyo K.K. and Y.K.K. (U.S.A.) Inc., are the respondents. On August 29, 1980, the Commission determined that there is no reason to believe that there is a violation of section 337, and that the domestic industry would not suffer immediate and substantial harm in the absence of temporary relief. The Commission therefore denied complainant's request for temporary relief. On November 10, 1980, the complainant petitioned the Commission to reconsider its denial of temporary

relief in light of the Commission Opinion issued in connection with the temporary relief phase of investigation No. 337-TA-89, Certain Apparatus for the Continuous Production of Copper Rod. On November 26, 1980, the Commission reaffirmed its vote of August 29, 1980.

Action 1/

Having reviewed the record compiled in this investigation, including (1) the submissions filed by the parties, (2) the transcript of the evidentiary hearing before the Administrative Law Judge (ALJ) and the exhibits which were accepted into evidence in the course of that hearing, (3) the recommended determination of the ALJ, and (4) the arguments made and information presented at the public hearing before the Commission on August 15, 1980, the Commission on August 29, 1980, determined--

1. That with respect to the respondents in investigation No. 337-TA-85, there is no reason to believe that there is a violation of section 337 of the Tariff Act of 1930, in the unauthorized importation into the United States of certain slide fastener stringers and machines and components thereof for producing such slide fastener stringers, or in their sale by the owner, importer, consignee, or agent of either, the effect or tendency of which is to substantially injure an industry, efficiently and economically operated, in the United States;
2. That a domestic industry will not suffer immediate and substantial harm in the absence of temporary relief 2/; and

---

1/ Commissioner George Moore dissents in view of his determination that there is reason to believe that a violation of section 337 exists and that the complainant will suffer immediate and substantial harm if temporary relief is not granted.

2/ Commissioner Catherine Bedell does not reach the questions related to injury because she has concluded that there is no reason to believe that the patents in controversy in the investigation are infringed.

3. That the possible harm to the respondents that would be caused by the requested temporary relief indicates that temporary relief should not be granted.

Order

Accordingly, it is hereby ordered--

1. That the complainant's request for temporary relief be denied;
2. That notice of this Commission Action and Order be published in the Federal Register, and that this Action and Order and the opinions of the Commissioners be served upon each party of record to this investigation and upon the Department of Health and Human Services, the U.S. Department of Justice, the Federal Trade Commission, and the Secretary of the Treasury.

By order of the Commission.



Kenneth R. Mason  
Secretary

Issued: January 12, 1981



OPINION OF CHAIRMAN BILL ALBERGER, VICE CHAIRMAN MICHAEL J. CALHOUN,  
AND COMMISSIONERS CATHERINE BEDELL AND PAULA STERN 1/

Procedural History

The complaint forming the basis of this investigation was filed with the Commission on May 9, 1980, on behalf of Textron, Inc. (hereinafter "complainant"). The complaint alleged unfair methods of competition and unfair acts in the unauthorized importation of certain (1) slide fastener stringers, (2) chains made from such slide fastener stringers and (3) machines and components thereof for producing such slide fastener stringers, into the United States or in their sale, by reason of the infringement of claim 1 of U.S. Letters Patent 3,143,779 and claim 5 of U.S. Letters Patent 3,123,103 by such slide fastener stringers and machines for producing such slide fastener stringers, respectively, the effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States.

The Commission instituted the investigation on June 3, 1980. Notice of the investigation was published in the Federal Register of June 11, 1980 (45 F.R. 39580). Yoshida Kogyo K.K. and YKK (USA) Inc. (hereinafter "respondents") were named as alleged infringers of the patents in question.

At the time of institution, this investigation was referred to a presiding officer. A hearing on temporary relief, in accord with 5 U.S.C. 551 et seq., was held before the presiding officer on July 7-15, 1980. On July 31, 1980, the presiding officer submitted to the Commission her recommended determination containing proposed findings of fact and conclusions of law and

---

1/ Commissioner George Moore dissents in a separate opinion.

an opinion in support thereof.

In that recommended determination, the presiding officer recommended that the Commission determine that there is no reason to believe that there is a violation of section 337 by reason of the unauthorized importation or sale of certain slide fastener stringers, chains made from such slide fastener stringers, and machines and components thereof for producing such slide fastener stringers because these articles infringe neither the '103 patent nor the '779 patent. The presiding officer also concluded that these patents were valid and enforceable, and that if there were reason to find infringement of the patents, the domestic industry would, in the absence of temporary relief, suffer immediate and substantial harm as a result.

Following receipt of the recommended determination, the Commission on August 15, 1980, held a public hearing to hear (1) oral argument concerning the presiding officer's recommended determination and (2) presentations concerning relief, bonding, and the public interest in the event that the Commission determined that there is reason to believe that there is a violation of section 337. Both complainant and respondents participated in that hearing and filed posthearing briefs. On August 29, 1980, the Commission met and voted to deny the complainant's request for temporary relief. On November 10, 1980, the complainant filed a motion that the Commission reconsider its denial in light of its findings in Certain Apparatus for the Production of Copper Rod, Inv. No. 337-TA-89 (1980). The Commission granted the motion on November 13, 1980, and on November 26, 1980, it reaffirmed its denial of the complainant's request for temporary relief.

TEMPORARY RELIEF IS DENIED

In Certain Apparatus for the Continuous Production of Copper Rod, Inv. No. 337-TA-89 (1980), the Commission adopted a standard for evaluating



requests for temporary relief similar to that enunciated in Virginia Petroleum Jobbers v. FPC. <sup>1/</sup> Under this standard, "the Commission will balance the evidence of violation and the evidence that the complainant will suffer immediate and substantial harm absent the granting of such relief against the evidence of any adverse impact on other parties." Copper Rod, supra, at 6. Where the complainant does not establish the existence of a section 337 violation by a preponderance of the evidence, it may still obtain temporary relief if it raises serious questions regarding the existence of a section 337 violation, presents a compelling case with respect to immediate and substantial harm to the domestic industry, and shows that the respondents will not suffer any significant harm if relief is granted. Once the complainant raises serious questions regarding the existence of a section 337 violation, the Copper Rod standard permits the Commission to weigh evidence for and against the issuance of temporary relief.

However, in the instant case, none of the factors to be considered by the Commission suggests that temporary relief should be granted: We have determined that there is no reason to believe that there is infringement of the '103 patent or the '779 patent; that, even if there were reason to believe that a violation of section 337 exists, there would be no consequent immediate and substantial harm to the domestic industry; <sup>2/</sup> and that the issuance of temporary relief might injure the respondents to the extent that it would inhibit their imports. Our conclusions regarding the complainant's likelihood of success on the merits and the potential harm to the domestic industry and

---

<sup>1/</sup> 259 F.2d 921, 925 (D.C. Cir. 1958).

<sup>2/</sup> Commissioner Bedell does not reach the questions related to injury because of her conclusion that there is no reason to believe that the '103 or the '779 patent is infringed.

respondents, all favor the denial of temporary relief in this case. Inasmuch as each factor points toward denial of temporary relief no balance between competing factors need be struck. Since we have decided not to grant temporary relief, it is unnecessary to determine whether the issuance of such relief would adversely effect the public interest. We hereby adopt the findings of fact and conclusions of law of the presiding officer, more fully discussed below, to the extent that they are not inconsistent with this opinion. The reasons for our findings are as follows.

#### Violation

The '103 patent.--The '103 patent was issued on March 3, 1964, on the basis of application No. 220,091 filed in 1962. James Hendley, an employee of the complainant, was named as inventor. Claim 5 of the '103 patent, the only claim in issue, describes a weaving machine for simultaneously weaving a slide fastener tape and incorporating into one edge of that tape a slide fastener coil formed from a continuous plastic filament. The product of this machine is termed a "slide fastener stringer," that is, one side of a zipper. Claim 5 can be broken down into the following elements:

1. a means for feeding,
2. a preformed fastener filament,
3. co-extensively with the warp threads and cord along the edge of the warp threads,
4. the means for guiding the filament to a point adjacent to the fell,
5. the weft thread being passed around the filament, and
6. immediately after the filament is delivered from the forward end of said guiding means. Stipulation 6, Complainant's Exhibit (hereafter "CX")-77.

Respondents assert that the '103 patent is invalid because (a) it has been anticipated by the prior art, (b) the subject matter of the patent would have been obvious to one of ordinary skill in the relevant art at the time the invention was made, and (c) complainant's patent counsel committed a fraud upon the Patent Office during the prosecution of the '103 patent. After examining respondents' arguments, the presiding officer concluded that the '103 patent is valid. (R.D. 5-9.)

#### Validity of the '103 patent

Patents are presumed to be valid, and the burden of showing them to be invalid is upon the respondents. 35 U.S.C. 282; Solder Removal Co. v. U.S. International Trade Commission, 582 F.2d 628, 632, 65 CCPA 120 (CCPA 1978). Nevertheless, the presumption is a rebuttable one. Railex Corp. v. Joseph Cress & Sons, Inc., 383 F.2d 179 (D.C. Cir. 1967).

1. Anticipation. A patent may not be granted if the invention has been patented or described in a printed publication in the United States or in a foreign country before the invention by the patent applicant or if the invention has been patented or described in a printed publication in the United States or a foreign country more than 1 year prior to the date of application for the United States patent. 35 U.S.C. 102(a) and (b).

Although the respondents cite 22 patents as prior art to the '103 patent, they rely principally upon the two patents most similar to the '103 patent: the Mostertz patent (U.S. Letters Patent 2,651,330) and the Kruse patent (West German patent 1,023,442). Since the patent examiner considered these patents before issuing the '103 patent, the statutory presumption of patent validity

is strengthened. Skil Corp. v. Cutler-Hammer, 412 F.2d 821, 824, 162 U.S.P.Q. 132 (7th Cir. 1969); cf., Ellicott Machine Corp. v. United States, 405 F.2d 1385, 1392, 186 Ct. Cl. 655 (1969); see Respondents' Exhibit (hereafter "RX") 15.

The Mostertz patent describes a shuttle loom for making filament slide fastener stringers. This patent can be distinguished from the '103 patent in three respects: (1) Mostertz refers to a shuttle loom, while the '103 patent describes a needle loom; (2) Mostertz does not teach that the fastener filament should be woven into the tape in the same relative position as described in claim 5 of the '103 patent; and (3) Mostertz does not include a cord. The presiding officer correctly dismissed the first two distinctions as not going to the heart of the complainant's invention. (R.D. 8.)

With respect to the first distinction, the patent itself disclaims any invention regarding the selection of a needle loom over a shuttle loom. ('103 patent, col. 2, lines 39-45.) Moreover, the patent examiner indicated in the file history that the use of a needle over a shuttle was merely a matter of choice, and did not affect the operation of the machine.

With respect to the second distinction, Mostertz does indeed describe a method for weaving the fastener filament into the tape. Even if the method is not precisely identical to that set forth in the '103 patent, it is certainly the equivalent. Concerning the third distinction, the presiding officer properly focused upon the recitation in the '103 patent of a means for feeding a cord along one side of the warp thread. The Mostertz invention does not provide for such a means. Although the Mostertz patent refers to the

provision of a "heavier warp thread" (col. 2, line 21), this thread is not equivalent to a cord. (Tr. 1290-1291.) The cord assumes a special significance in view of Mr. Moertel's testimony that the Mostertz device would not make a usable stringer because it lacked a cord. For, without the cord, the coil would be too loosely attached to perform as an acceptable zipper. (Tr. 1297.)

In addition, the commercial failure of the Mostertz invention confirms its inefficacy. It is the uncontradicted testimony of the complainant's witness that no commercial use has ever been made of the stringer produced by the machine recited in the Mostertz patent. (Tr. 1291.)

The patent examiner who processed the '103 patent also considered the Kruse patent as relevant art. (Tr. 1291); CX 77, col. 10.) The Kruse patent describes a shuttle loom in which the fastener coil is woven into the tape by the warp threads, rather than by the weft threads. (Tr. 1291.) There are, therefore, substantial differences between the '103 patent and the Kruse patent.

Although the Mostertz and Kruse patents, together with the others cited by the respondents, individually show needle looms for weaving textile fabrics, shuttle looms for weaving filament slide fastener stringers, means for guiding a fastener filament to the fell, a cord, and means for feeding the cord into the tape, they do not disclose the invention of claim 5 taken as a whole. Even if one or some of the elements called for in claim 5 were shown in the prior art, it must appear that the combination of all the elements is anticipated in a single prior art reference before the patent will be found

invalid. In re Antonie, 559 F.2d 618, 619; 195 U.S.P.Q. 6, 8 (CCPA 1977); In re Langer and Hayes, 465 F.2d 896, 898-899, 175 U.S.P.Q. 169, 171 (CCPA 1972).

2. Obviousness. A United States patent cannot be granted if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time of the invention to a person having ordinary skill in the art to which the subject matter pertains. 35 U.S.C. 103.

The presiding officer correctly determined that the '103 patent is not invalid as obvious. The respondents presented little evidence of obviousness. Nor is there any evidence that any of the patents cited against the '103 patent have been put into commercial use. Lack of commercial use is affirmative evidence of nonobviousness of the combination described in claim 5 of the '103 patent. Campbell v. Mueller, 159 F.2d 803, 809, 72 U.S.P.Q. 295, 300 (6th Cir. 1947); Wahl Clipper Corp. v. Andis Clipper Co., 66 F.2d 162, 165, 18 U.S.P.Q. 179, 182 (7th Cir. 1933). Conversely, the commercial success of the machine described in the '103 patent points to its nonobviousness. (RX 3, CX 86.) Stevenson v. U.S.I.T.C., 612 F.2d 546, 553, 204 U.S.P.Q. 276 (CCPA 1979); Application of Sponnoble, 405 F.2d 578, 587, 56 CCPA 1273 (1969); Application of Grant, 377 F.2d 1019, 1022, 54 CCPA 1559 (1967). These secondary considerations of nonobviousness should be given considerable weight, In the Matter of Certain Apparatus for the Continuous Production of Copper Rod, 206 U.S.P.Q. 138, 147 (ITC 1979), particularly in the absence of contrary evidence.

3. Fraud. Finally, respondents assert that the complainant committed a fraud upon the Patent Office during the prosecution of the '103

patent, thereby rendering the patent unenforceable. Since a high standard of trust and honesty must prevail between applicants and the Patent Office, a patent is void and unenforceable where the applicant has acted inequitably by misrepresenting or omitting information before the Patent Office. Precision Instrument Mfg. Co. v. Automotive Maintenance Machine Co., 324 U.S. 806, 815-817, 65 U.S.P.Q. 133, 138-9 (1945); In re Clark, 522 F.2d 623, 628, 187 U.S.P.Q. 209 (CCPA 1975); Norton v. Curtiss, 433 F.2d 779, 792, 167 U.S.P.Q. 532 (1970).

Respondents allege that the complainant misled the Patent Office during the prosecution of the '103 patent by intentionally concealing the fact that it had acquired the Mostertz patent and was, therefore, fully acquainted with it. The complainant also failed, according to the respondents, to explain the nonillustrated disclosures of the Kruse patent. (Respondents' Post Trial Brief, at 39.)

The presiding officer recites the details of the alleged misrepresentation and then concludes that there is no evidence that the complainant intentionally withheld information from the Patent Office. (R.D. 6-7). This conclusion is consistent with the case law which holds that any misrepresentation must be committed intentionally, rather than as a result of poor judgment, before it will be considered fraud on the Patent Office. Johnson & Johnson v. W.L. Gore & Associates, Inc. 436 F. Supp. 704, 731-732 (D. Del. 1977); see also, Food Service Corp. v. Kent Feeds, 528 F.2d 756, 763, 188 U.S.P.Q. 616 (7th Cir. 1976).

An examination of the alleged misrepresentation shows that it was directed not to claim 5, the only claim in issue in this case, but to claims

21-24. (RX 15, pp. 48-49.) Moreover, the patent examiner specifically had allowed claim 5, among others, 6 months before the alleged misrepresentation occurred. (RX 15, p. 44; RD at 6.) Even a false statement does not destroy the presumption of validity of a patent unless the statement was "essentially material" to its issuance. Edward Valves, Inc. v. Cameron Iron Works, Inc., 286 F.2d 933, 947 (5th Cir. 1951), mod. on other grounds and reh. den., 368 U.S. 833 (1962). Given the sequence of the patent examiner's analysis and the alleged misrepresentation, it is impossible to conclude that the misrepresentation was material to the issuance of the patent. Even though the presiding officer determined that the fraudulent behavior of the complainant before the Patent Office deprived the '103 patent of its presumption of validity, she concluded that there is no reason to believe that the patent is invalid despite the arguments of anticipation, obviousness and fraud. We concur. Stevenson v. U.S.I.T.C., 612 F.2d 546, 555, 204 U.S.P.Q. 276 (CCPA 1979); will not strip the '103 patent of its presumption of validity.

#### Infringement of the '103 patent

Only claim 5 of the '103 patent is in issue here. It reads:

5. In a loom of the class described for weaving tape having means for feeding warp threads and at least one cord thereto along one side of said warp threads, means for forming a shed between the warp threads, a weft needle for laying a weft thread in the shed, and beat-up means for moving the weft thread into the fell of the tape, the combination of means for feeding a preformed fastener filament co-extensively with the warp threads and cord along the edge of the warp threads, and means for guiding the filament to a point adjacent the fell, the weft thread being passed around said cord and around the filament immediately after it is delivered from the forward end of said guiding means as the weft thread is moved into and through the shed by successive movements of the weft needle thereinto so as to weave the filament into the edge of the tape adjacent said cord on the outer side thereof.



To establish infringement, the complainant must demonstrate that the respondents' machine reads on each element of claim 5. We concur with the finding of the presiding officer that the respondents' machine covers all elements of claim 5 except the element requiring a preformed fastener filament. Further analysis of three of the elements is necessary.

(1) "means for feeding"

Respondents maintain that their machine does not have a means for feeding the filament along the edge of the warp threads. The essence of respondents' argument is that while the complainant's machine delivers the filament to the edge of the tape in a natural, tension-free state, the respondents' machine pulls the filament through a combination of the indent wheels, the rotor, the mandrel, and the tape itself. As the respondents' filament is woven into the tape, the forward movement of the tape draws the filament forward, increasing the tension on the earlier filament.

Respondents give too narrow an interpretation to the "means for feeding" element. It is true that there is a reference in claim 6 and in the specification to a positive drive means. However, there is nothing in claim 5 itself requiring that a positive drive means be employed. Whether the respondents' means for feeding pushes or pulls, it still introduces the filament into the weaving process, and thus we find this element to be satisfied.

(2) "pre-formed fastener filament"

In claim 5, the filament is pre-formed as it enters the weaving process. The repeated references in the claim to the fact that this pre-formed filament

is capable of interlocking with a corresponding fastener filament indicates that it is in a form, such as a coil, at the time it emerges from the tubular member. (YKK55, pages 50-51). For example,

( )

In contrast, the respondents' filament enters the weaving process in an essentially uniform state. As the respondents' filament approaches the fell, flats are pressed into it at specific intervals. Near the fell, the mandrel and the interior cord work the filament into the shape of coils. The coils themselves are shaped substantially simultaneously with the weaving of the tape and the weaving of the filament into the tape.

The Commission concludes that the "pre-formed fastener filament" element in claim 5 calls for a completely formed filament before the start of the weaving process. Since the respondents' filament is formed simultaneously with the weaving process, there is no infringement of claim 5. The mere stamping of flats on the filament prior to weaving does not make the filament interlockable, and thus, it cannot be said that the filament is "pre-formed." Even if the "pre-formed fastener filament" element describes a filament which is only partially formed at the beginning of the weaving, the respondents' filament is completely unformed at that point, and there is no infringement of claim 5.

(3) "coextensively"

Respondents interpret the word "coextensively" to mean that the filament in claim 5 moves at the same rate of speed as the warp threads and the cord.

Respondents argue that since the filament in their machine moves faster than the warp threads and the cord, their machine does not infringe claim 5. But the respondents offer no reason to interpret "coextensively" in terms of time rather than space. Indeed, an element which reveals the filament and the warp threads and the cord moving coextensively, that is, in the same general path toward the fell, better describes an actual stringer machine than does an element focused only on the rate of speed.

In sum the respondents' machine produces the same result in the same way as claim 5, but it does not employ the same means. Since the respondents' machine does not read on each of the elements in claim 5, there is no literal infringement. 1/

#### The '779 patent

Claim 1, the only claim of the '779 patent in issue here, describes a slide fastener stringer where a helical coil is woven to the web with an enlarged bead formed at the edge of the web, the bead being formed by a single large cord surrounded concentrically by cover warp threads. It reads:

1. In a stringer for a slide fastener, a plurality of longitudinally extending warp threads, a continuous weft thread interwoven back and forth through and between said warp threads so as to provide a woven web, a beaded edge arranged along one edge of said web consisting of a longitudinally extending cord having a plurality of longitudinally extending warp threads disposed therearound, a continuous filament arranged along said web at the outer side of said cord having one side only in contact therewith coextensive throughout the length thereof, said filament being deformed so as to provide spaced interlocking means therealong, said weft thread also being interwoven with said last mentioned longitudinally extending warp threads and extending around both said cord and said filament between said interlocking means, the weft

---

1/ Inasmuch as the counsel for complainant stipulated that he would not raise the doctrine of equivalents, we do not consider it. See hearing transcript 901-903.

thread passing through the web, over and between the last mentioned warp threads on one side of the cord at the edge of the tape, over and around the cord and filament at said edge, then back over and between the last mentioned warp threads on the opposite side of the cord, and back through the web to complete one weaving cycle.

#### Validity of the '779 patent

Respondents argue that claim 1 is invalid for two reasons. First, according to the respondents, the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious. 35 U.S.C. 103. Second, the respondents assert that the specifications and drawings do not correspond to or support claim 1 of the patent. 35 U.S.C. 112. The presiding officer concludes that there is reason to believe that the '779 patent is valid. We concur in that conclusion.

1. Obviousness. As noted above, a regularly issued patent is accorded a statutory presumption of validity (35 U.S.C. 282), which can be overcome only by clear and convincing evidence. In re Certain Thermometer Sheath Packages, 205 U.S.P.Q. 932, 942 (CCPA 1979). Even if one or more of the elements called for in claim 1 is shown in the prior art, it must appear that the combination of all the elements is either anticipated or obvious. In re Antonie, supra, at 619. Respondents cite 17 prior art patents, each of which describes some element of the '779 patent. However, none of these patents shows a combination of all the elements present in claim 1. Nor does any of these patents disclose the beaded edge called for in claim 1, having a continuous filament fastener element, a cord between the fastener element and the web of the tape, and cover yarns (warp threads) above and below the cord, all of which are covered together by a weft thread which passes between the

cover yarns on the top of the cord, then around the cord and the filament, and then through the cover yarns on the bottom of the cord.

Although the '779 patent does not represent a major advance, it constitutes a distinct improvement over the prior art. (Tr. 1302.) The slide fastener stringer described in the '779 patent has enjoyed substantial commercial success. In contrast, the patents cited by the respondents have been uniformly unsuccessful. As was noted with the '103 patent, such secondary considerations are strong evidence of nonobviousness. Stevenson, supra, at 553; Application of Sponnoble, supra, at 587; Application of Grout, supra, at 1022. <sup>1/</sup>

2. Adequate specification. An admitted problem with the '779 patent is that its figure 2 is not properly drawn. It appears to be stringer made not from a needle loom but from a shuttle loom, and is, therefore, inconsistent with claim 1 and the specification. No usable product could be manufactured under claim 1 if figure 2 were followed. Nevertheless, one skilled in the art would recognize the error and be able to construct a satisfactory product through claim 1 and figures 3-6.

Respondents contend that the complainant has violated the disclosure requirements of 35 U.S.C. 112, which provides as follows:

---

<sup>1/</sup> On Aug. 14, 1980, the day before the parties' oral argument before the Commission, the respondents addressed a letter to the Commission urging that consideration be given to a rejected patent application from West Germany. Respondents argued that this application is relevant to an analysis of the '779 patent and should be admitted into the record. We recognize the duty of complainants before the Commission to submit "a list of each foreign patent and each foreign patent application." 19 CFR 210.20(a)(9)(D). Although the record is not clear, we are not convinced that the complainant intentionally misled the Commission as to the existence of this West German patent application. In the interests of orderly procedure within the time limits required by the request for temporary relief, the Commission denied the respondents' request to admit the West German patent application into the record. (Tr. 34.)

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Respondents cite Application of Barker and Pehl, 559 F.2d 588, 194 U.S.Q. (CCPA 1977), cert. den. 197 U.S.P.Q. 271, for the proposition that an error, such as the one admitted by the complainant here, is an absolute bar to patent validity. A careful reading of the opinion reveals that a patent applicant must first describe his invention and then provide sufficient specifications to enable one skilled in the art to make and use the invention. Application of Barker, supra, at 591. Despite its error, complainant appears to have accomplished both tasks here. When claim 1 is read in the context of figures 3-6, the invention is both described and revealed for duplication by others.

Respondents refer to a second case, Application of Menough, 323 F.2d 1011, 138 U.S.P.Q. 278 (CCPA 1963), for the proposition that a claim is invalid where it is not supported by the specification or drawings. However, the facts of Menough support the complainant's view that the '779 patent is valid despite the drawing error. There the court noted that a particular claim was indistinct. But when a later claim was read onto it, the subject matter became clear. Application of Menough, supra, at 1014. The court, therefore, found the subject matter of the later claim, which included that of an earlier claim, to be patentable. So in the instant case, claim 1 is unclear if read alone, but when it is considered in conjunction with figures 3-6, one skilled in the art could duplicate and understand the invention. No additional inventiveness need be supplied by the reader of the patent. This

fact distinguishes the instant case from Bocciarelli v. Hoffman, 232 F.2d 647, 652 (CCPA 1956), in which the patent was declared invalid because the applicant left an "inventive gap" in his application.

This result seems especially equitable in view of the fact that the complainant did not intend to mislead the Patent Office or the public with figure 2. The error can be traced to sketches which the inventor placed in the "invention record." (Talon's Exhibit 124.) One drawing, which shows figure 2 without the error, indicates that the inventor intended to illustrate a double pick and a needle loom as provided in claim 1. An error in a drawing which is the result of the draftsman's inadvertence does not invalidate an otherwise valid patent where the specifications and other figures are accurate. Chicago Forging & Manufacturing Co. v. Bassick Co., 60 F.2d 581, (D.C. Conn. 1932), aff'd 70 F.2d 1012 (2d Cir. 1934).

#### Infringement of the '779 patent

The crucial question in resolving the infringement issue for the '779 patent is whether claim 1 in that patent permits only one cord or several cords.

The presiding officer found that claim 1 covers only stringers with one cord, and that there is no reason to believe that the respondents' stringer (with three cords, two outside the coil and one inside) infringes the patent. We concur with her finding. 1/

---

1/ We are concerned here only with the issue of literal infringement since the complainant has stipulated that the doctrine of equivalents is not applicable to the '779 patent.

Claim 1 describes a slide fastener stringer with "a beaded edge . . . consisting of a longitudinally extending cord having a plurality of longitudinally extending warp threads disposed therearound, a continuous filament arranged along said web at the outer side of said cord having one side only in contact therewith coextensive throughout the length thereof . . . ."

The claim lists the various elements of the invention, beginning that list with the expression "consisting of." In the language of patent claims, transition phrases of this sort have developed special meanings. Three particularly important transition phrases are commonly used: (1) "comprising"; (2) "consisting essentially of"; and (3) "consisting of."

'Comprising' means that the 'recited elements' are only a part of the device. In other words, if the invention is claimed as 'comprising' elements X and Y it also may 'read on' and cover a device with elements X, Y and Z. The claim is thus 'open'. 'Including' and 'having' can also be used in drafting an open claim. 'Consisting' on the other hand, means that the claim covers devices having the recited elements and no more. If the invention is claimed as 'consisting' of elements X and Y it will not read on or cover a device with elements X, Y and Z. The claim is thus 'closed'. Claim draftsmen prefer to avoid closed claims unless the nature of the invention is such as to require such restriction to avoid undue breadth. 2 Chisum, PATENTS (1980) 8.06(1)(b), 8-74-75.

The presence of the phrase "consisting of" in claim 1 indicates that the list of elements is to be exclusive. By referring to "a longitudinally extending cord," (emphasis added), the patentee limits himself to one cord in the stringer. His claim will not cover stringers with more than one cord. In re Fenton, 451 F.2d 640, 642, 171 U.S.P.Q. 693 (CCPA 1971); Ex parte Davis and Tuukkanen, 80 U.S.P.Q. 448, 450 (Pat. Bd. App. 1948). Since the patentee has limited his claim to only those stringers with "a longitudinally extending cord," the complainant cannot now claim that the respondents' three-cord stringer infringes the patent.

Complainant answers that the phrase "consisting of" assumes its special meaning only in the context of chemical patents. It notes that all the cases



cited by the respondents to define the expression "consisting of" concern chemical patents. However, the complainant does not refer to a single case which has limited the expression to chemical patents. Nor has it presented any conceptual reasons for not applying the patent terminology described above to nonchemical patents. Moreover, patent texts indicate that this rule of interpretation is one of general application. See, Rosenberg, Patent Law Fundamentals, p. 46 (1977); Deller's Walker on Patents, section 241, p. 114 (1965).

The history of the '779 patent also indicates that claim 1 must be limited to one cord. The file wrapper reveals that claim 3 (now claim 1) of the original application was registered initially because of the Swiss patent 340,460 to Prym-Werke and the West German patent 1,087,096 to Wilcken. These patents describe stringers startlingly similar to the complainant's product. The complainant noted that the Wilcken and Werke patents taught that the cord should be placed inside the filament itself. Complainant then amended its application by adding the following limitation: "a continuous filament arranged along the web at the outer side of the cord having one side only in contact therewith coextensive throughout the length thereof." In essence, the complainant asserted that the cord in its stringer touched the filament on only one side. The cord was therefore outside the filament and distinguishable from the Wilcken and Werke patents. Complainant cannot now be heard to say that its claim 1 covers slide fasteners with a cord inside the filament.

Complainant replies that "the feature of the claim distinguishing it from the prior art was not the absence of an interior cord, but instead was the

presence of an exterior cord." (Complainant's Exceptions, at 11.) This assertion is simply inaccurate. For instance, Yoshida's U.S. Letters Patent 3,058,188 is quite similar to the complainant's application except that the former has two cords outside the filament. To distinguish its invention from Yoshida's patent, the complainant had to do more than teach the presence of a cord in the exterior of the stringer. The complainant also had to limit the number of cords in the exterior. As before, the complainant cannot now argue that its patent covers stringers with two exterior cords since it limited its claim 1 to one exterior cord to avoid the prior art. We therefore conclude that there is no reason to believe that the respondents' stringer infringes the '779 patent.

An efficiently and economically operated industry

The respondents do not contend that the domestic industry is not efficiently and economically operated. Indeed, there is substantial evidence that the domestic industry is well run. The industry uses modern equipment and engages in extensive research to improve its product. Perhaps the best indication of its success is the complainant's regularly high level of profit.

The '103 patent.--The domestic industry in a section 337 patent infringement case comprises that portion of the complainant's and its domestic licensees' business devoted to the exploitation of the patent. Trade Reform Act of 1973: Report of the Committee on Ways and Means . . .) H. Rept. No. 93-571 (93d Cong., 1st sess.), 1973, at 78. Recently, in Certain Apparatus for the Continuous Production of Copper Rod, 206 U.S.P.Q. 138 (ITC 1979), the Commission defined the domestic industry as that part of a complainant's

business devoted to the development, sale, servicing, and licensing of the copper-rod-producing systems in issue, as well as that part of the business of the subcontractors devoted to the manufacture of parts for the copper rod systems. Moreover, the Commission is not bound by any rigid formula in defining the industry, but will evaluate each case in light of the realities of the marketplace.

Here the presiding officer concludes that there is a domestic industry operating in the United States. The '103 patent refers to a loom for making slide fastener stringers. The complainant builds and repairs looms for its own use, selling to the public only the slide fastener stringers produced by these looms. The presiding officer argues that the building and repairing of these looms constitutes a domestic industry even though the complainant does not sell the looms. 1/

According to the presiding officer, there is no requirement in section 337 that an unfair practice be found only if the complainant manufactures and sells the product in issue. An arbitrary restriction on the type of U.S. industry entitled to protection under section 337 would be unwarranted. We concur in the conclusion of the presiding officer that a domestic industry exists in the United States under section 337. To argue, as the Commission investigative attorney has done, that there is no area of commercial competition with respect to the right of the complainant to enjoy the '103 patent ignores business reality. Cf., Copper Rod, supra. Surely one of the

---

1/ Respondents and the Commission investigative attorney contend that there is no domestic industry because the complainant has not built any new machines recently, nor does it sell its machines to the public. Post Trial Brief of YKK (USA) Inc. and Yoshida Kogyo K.K., at 48; Proposed Findings of Fact and Analysis of Legal Issues of the Commission Investigative Attorney, at 27-28.

commercial benefits derived from a patented machine is the competitive advantage gained in marketing the goods produced by that machine. The domestic industry is defined, therefore, to include not merely the building and repair of the looms but also the sale of the zippers produced by the patented device even though the zippers themselves are not covered by the '103 patent.

The '779 patent.--As before, the domestic industry comprises that portion of the complainant's and its licensees' business devoted to the exploitation of the patent. Trade Reform Act of 1973, supra. We must therefore evaluate that portion of the complainant's business which is devoted to the sale of zippers produced in accord with the '779 patent.

Injury 1/

Even if there were reason to believe that a violation of section 337 exists, the Commission will not order temporary relief unless there is also some indication that the domestic industry would suffer immediate and substantial harm if such relief is not granted. This standard corresponds to the requirement of Rule 64 of the Federal Rules of Civil Procedure that a petitioner for a preliminary injunction must be likely to sustain irreparable harm in the absence of temporary relief. The purpose of both standards is to preserve an approximate status quo pending final resolution of proceedings. Thus, in Commission practice, the concept of "immediacy" means that the anticipated harm must be likely to occur before the Commission is able to

---

1/ Commissionerr Bedell does not reach the questions related to injury because of her conclusion that there is no reason to believe that the '103 or the '779 patent is infringed.

issue permanent relief. The notion of "substantial harm" requires that the injury to the domestic industry be so significant that it would not fully recover from the harmful effects of the section 337 violation once permanent relief was granted. 1/

In the instant case, the presiding officer concluded that if there was a section 337 violation, the domestic industry would suffer immediate and substantial harm in the absence of temporary relief.

In support of her conclusion, the presiding officer makes several points. First, although complainant is the dominant competitor in the zipper industry, it is vulnerable to lowerpriced competition in a period of contracting markets. Second, respondents have a substantial capacity to supply the zipper market, and an interest in capturing substantial shares of various submarkets. Third, complainant has already lost a number of sales to YKK during a time when complainant's profit has declined. And finally, according to the presiding officer, difficulty of converting from one system to another means that a customer which switches from Talon to YKK is unlikely to switch back. Complainant makes substantially the same arguments.

However, we conclude that even if there were reason to believe that an unfair trade act exists, there is minimal evidence that the domestic industry would suffer immediate and substantial harm in the absence of temporary relief. The ratio of the respondents' imported stringers to those produced by the complainant in accord with its '103 and '779 patents is slight and has

---

1/ The potential for substantial harm (harm for which permanent relief could not afford full recovery) is greater where the life of the patent will end at or about the time of a final determination. Once the patent expires, the Commission is powerless to remedy past infringement.

actually declined in the first half of this year. In 1978, the respondents' imports were only per cent of the complainant's total sales; in 1979 they amounted to only per cent and in the first 5 months of 1980 they declined to per cent. Moreover, the respondents' import projections show a further decline for the remainder of 1980 and for 1981.

The complainant's profit levels do not suggest injury caused by respondents' imports. From 1976 to 1978, complainant's profit averaged about per cent. 1/ In 1979, when the respondents' imports began to decline, the complainant's profit fell to per cent. Thus, there does not appear to be any relationship between the complainant's profit and imports.

Other economic indicators also suggest a healthy domestic industry unaffected by foreign imports. Since 1976, the complainant has been able to increase its prices at a rate equal to that of the rise in the Consumer Price Index. 2/ Complainant's share of the market increased during the period of highest imports. 3/ In addition, plant utilization and employment levels have appeared to rise in view of the increase in work shifts since 1979.

The Commission cannot grant temporary relief unless there is some prospect of injury. In view of the healthy condition of the domestic industry in this case and the negligible level of imports, the presiding officer's argument that the domestic industry is vulnerable to imports and that the respondents have a high production capacity seems quite speculative. Moreover, there is no proof that the complainant has lost a substantial amount

---

1/ LX 134; see also Tr. 1049 and Tr. 1163.

2/ CX 88; Tr. 1062; Tr. 1123

3/ Tr. 421.

of sales to the respondents. Finally, the cost of conversion from one type of machine to another does not preclude a subsequent conversion to the domestic machine.

#### The Effect on Respondents

Among the factors which the Commission considers in deciding whether to grant temporary relief is the effect that the relief would have on other parties. Here the granting of temporary relief would impose a burden upon the respondents. Although the respondents might continue to import their goods under bond, temporary relief could tend to inhibit importation. While this tendency is not substantial, it is noteworthy in view of the complainant's failure to demonstrate immediate and substantial harm in the absence of temporary relief, or to show that there is reason to believe that a violation of section 337 exists.

#### Public Interest

Subsection 337(e) states that temporary relief may be imposed where there is reason to believe that a violation of section 337 exists, unless the Commission finds, after considering the effect of 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, that such articles should not be excluded.

In the instant case, none of the public interest factors recited in subsection 337(e) would be compromised by the issuance of temporary relief. Nevertheless, the conclusion that the public interest would not be injured by temporary relief, cannot compel the issuance of temporary relief where, as

here, the Commission has found that no reason exists to believe that there is a violation of section 337, that there will be no immediate and substantial harm to the domestic industry in the absence of temporary relief and that temporary relief could injure the respondents.



DISSENTING OPINION OF COMMISSIONER GEORGE MOORE

With minor exceptions the facts in this case are not in controversy. They are set forth in the "Factual Background" in the record of this proceeding in the presiding officer's recommendations to the Commission at pages 2 to 5.

I concur with my colleagues in finding that there is reason to believe that the complainant's U.S. Patent No. 3,143,779 is valid and enforceable but not infringed by the respondents' imports, and that the complainant's U.S. Patent No. 3,123,103 is valid and enforceable. However, I differ with their conclusion that there is no reason to believe that the '103 patent is infringed by the respondents' imported machine for making such stringers.

There is reason to find infringement of the '103 patent. There is also reason to believe that the effect or tendency of this unfair act is to destroy or substantially injure an industry, efficiently and economically operated, in the United States. This violation of section 337 of the Tariff Act of 1930, as amended, will cause immediate and substantial harm to the domestic industry if temporary relief is not granted. Moreover, such temporary relief will not jeopardize the public health and welfare, or competitive conditions in the United States, nor will it injure U.S. consumers. It is necessary, therefore, to conclude that the Commission should issue a temporary cease and desist order against respondents' domestic use or commercial transfer of machines for producing slide fastener stringers which infringe the '103 patent. 1/

---

1/ The choice of a temporary cease and desist order over a temporary exclusion order is required because respondents have already imported a substantial number of the infringing machines.

Infringement of the '103 Patent

The record supports the conclusion that the respondents' machine does not literally infringe the '103 patent. Such literal infringement is difficult to establish. The complainant must show that each element of its patented claim is precisely reflected in an accused device. See American Technical Machine Corp. v. Caparotts, 339 F.2d 557, 559 (2d Cir. 1964), cert. denied 382 U.S. 842 (1965). The means, the operation, and the result of an accused device must be identical with the patented invention. See Fife Manufacturing Co. v. Stanford Engineering Co., 299 F.2d 223, 226 (7th Cir. 1962); Displan Corp. v. Deering Milliken Inc., 444 F. Supp. 648, 726-7 (D.S.C. 1977), aff'd in part, rev'd in part, 594 F.2d 979 (1979).

In this case, it is true that the respondents' machine does not read precisely upon the '103 patent. Claim 5 of the '103 patent requires that a preformed fastener filament be fed into the machine, where it is woven into a tape simultaneously with the weaving of the tape to form a slide fastener stringer. In contrast, the respondents' machine does not use a preformed fastener filament. Rather, the fastener filament is formed simultaneously with the weaving of the tape into the fastener filament. Since complainant's patent uses a preformed fastener filament and the respondents' machine uses an unformed fastener filament, there is no precise identity between the physical structure of the two machines and, thus, there is no literal infringement. To the extent that the majority concludes that there is no literal infringement, I concur.

Nevertheless, although claim 5 of the '103 patent "does not read literally on the accused structures, infringement is not necessarily ruled out." See Antogiro Company of America v. United States, 384 F.2d 391, 400

(Ct. Cl. 1967). In the absence of literal infringement, we must consider the two machines under the "doctrine of equivalents" 1/ (hereinafter referred to as equivalents). See Cardinal of Adrian, Inc. v. Peerless Wood Products, Inc., 515 F.2d 534, 540 (6th Cir. 1975). On the basis of leading Federal court decisions, the respondents' machine infringes the complainant's '103 patent if it performs substantially the same function in substantially the same way for the same result as set forth in claim 5. See Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 608 (1950); Sanitary Refrigerator Co. v. Winters, 280 U.S. 30, 42 (1930). Rosen v. Kahlenberg, 474 F.2d 858, 867 (5th Cir. 1973).

During oral argument before the Commission, counsel for the complainant asserted that he would not make an equivalents' argument because he did not need to do so, given the strength of his literal infringement argument. (Tr. 52). The fact that the complainant in his legal argument did not raise the "doctrine of equivalents" does not relieve the Commission of its responsibility to consider this issue.

A litigant in an adversary proceeding in Federal court may find himself bound by the omissions of his counsel. But an administrative agency's investigation is not a judicial proceeding. See United States v. Bowman, 236 F. Supp. 548, 550 (M.D.Pa. 1964), aff'd, 358 F.2d. 421 (1966). Administrative agencies are not bound by technical common-law of principles evidence and

---

1/ The "doctrine of equivalents" in patent law protects the patent holder where there has been an unauthorized appropriation of the substance of the patent. Infringement is found where an unauthorized device employs substantially the same means, to achieve the same results, in substantially the same way, as that claimed. Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 608 (1950); Sanitary Refrigerator Co. v. Winters, 280 U.S. 30, 42 (1930).

procedure. See Clearfield Cheese Co. v. United States, 308 F. Supp. 1072, 1076, n. 4 (W.D.Mo. 1969); Fried v. United States, 212 F. Supp. 886, 896 (S.D.N.Y. 1962). Administrative agency investigations must extend beyond matters alleged by the parties in order to make the proper determination. See Clarksbury Publishing Co. v. F.C.C., 225 F.2d 511, 515 (D.C. Cir. 1955). Federal agencies are, therefore, obliged to construe pleadings to raise rather than to avoid issues and to be sensitive to public-interest questions. See Retail Store Corp. Union, Local 880, Retail Clarks Intern. Asso. v. F.C.C., 436 F.2d 248, 254 (D.C. Cir. 1970). This concern for the public interest is particularly significant for the Commission in view of the repeated references to the public welfare in section 337. If there is basis in the factual record before the Commission for considering the "doctrine of equivalents," the Commission must do so despite the omissions of counsel and the consequent difficulty of evaluating such a complex issue without full argument by the parties.

A second difficulty is that regrettably the record was limited by the presiding officer on the equivalents' issue. In her recommended determination, she maintains that the "doctrine of equivalents" is not available to the complainant with respect to the '779 patent because counsel for the complainants had stipulated that he would not argue it. (R.D. 25). There was no indication in her recommended determination that this stipulation might also refer to the '103 patent. At one point during the hearing before the presiding officer, without any specific reference to either the '779 patent or the '103 patent, respondents' counsel appeared to solicit testimony regarding file wrapper estoppel. The presiding officer asked whether equivalents was in issue. When the complainant's counsel said that he would

not raise that issue, the presiding officer directed the respondents not to argue file wrapper estoppel. (Hearing transcript, 901-903.) As a result, the Commission does not have the benefit of the parties' legal arguments on this issue.

The duty of the Commission transcends the legal arguments of the parties. The failure of the presiding officer to develop a full record does not excuse the Commission from its responsibilities. By reason of the manifest public interest expressed in section 337 in protecting U.S. industries from unfair trade practices involving imported articles, the Commission should encourage the admission of evidence on every significant issue relating to whether there is a violation of section 337.

In this proceeding, questions relating to equivalents and file wrapper estoppel are important, particularly with respect to the '103 patent, and should have been investigated below.

Nevertheless, the evidence offered by the complainant to demonstrate infringement is sufficient for the Commission to consider infringement under the "doctrine of equivalents." Moreover, the evidence as to prior art pertinent to the file wrapper estoppel issue was introduced in connection with the validity of the '103 patent.

#### Application of Doctrine of Equivalents

On the basis of the evidence before the Commission, I conclude that there is reason to believe that the respondents' machine infringes the '103 patent under the "doctrine of equivalents". As stated earlier, equivalent infringement is established where an unauthorized device employs substantially the same means, to achieve substantially the same results, in substantially

the same way, as that claimed in the patent. <sup>1/</sup> Such infringement exists where a person reasonably skilled in the art would have known of the interchangeability of an ingredient not disclosed in the patent with one that was disclosed. See Lockheed Aircraft Corp. v. United States, 190 U.S.P.Q. 134, 146 (Ct. Cl. 1976).

The fastener filaments used in both the complainant's and the respondents' machines perform similar functions. Although the two filaments are not literally the same, they are substantially same. While the '103 patent covers a machine which utilizes a preformed fastener filament, the respondents' machine draws an unformed filament toward the fell under tension as the filament is woven into the tape. Immediately before the filament is woven into the tape in the respondents' machine, it passes through two indent rollers which press against the filament and flatten it at uniform intervals. The serial "flats" created by this process become the heel and the buckle of the coil. The filament is then guided by a stationary mandrel to be woven into the tape. The creation of the coil during the weaving process is not different from the inventive concept of the '103 patent. The '103 patent refers to a preformed interlocking fastener filament capable of joining a corresponding filament before either is woven into its tape.

The capability of the respondents' machine to form the filament into coil simultaneously with the weaving of the coil into the tape is a different inventive concept. However, the law is well established that even where a patented machine is improved to the extent that a new patent may be available, unauthorized use of the patented machine still constitutes infringement. In

---

<sup>1/</sup> See Graver Tank & Mfg. Co. v. Lince, supra; Hunt v. Armous & Co., 185 F.2d 322, 327 (7th Cir. 1950).

Frick Co. v. Lindsay, <sup>1/</sup> the court held that "if the inventive idea of the original patentee has been appropriated, and the alleged infringing device contains the material features of the patent in suit, the court will declare infringement" despite the respondent's improvements. See also, Temco Electric Motor Co. v. Apco Mfg. Co., 275 U.S. 319, 328 (1928); Cochrane v. Deener, 94 U.S. 780, 787 (1876); Zeigler v. Phillips Petroleum Co., 177 U.S.P.Q. 481, 489 (5th Cir. 1973). In Eastern Rotocraft Corporation v. U.S., <sup>2/</sup> the plaintiff had patented a device utilizing high strength flexible cable and a "tilting block" tying cargo to ships. The defendant had refined the patented device by attaching a lever to the tilting block. The court noted that despite the improvement, the defendant's machine still performed all the functions of the plaintiff's patented invention and found the defendant to be infringing. (397 F.2d, at 981.) In the present case, whether the tape is preformed or not, the basic claims of the '103 patent relate to the construction and operation of the complainant's machine in producing the slide fastener stringer from such tape.

In Deere & Co. v. International Harvester Co., 460 F. Supp. 523, 534 (S.D. Ill. 1978), the court held that "infringement is not avoided by separating a one-piece element into several parts if the element does accomplish the same result in substantially the same way." Conversely, the use of a single means to perform the same function in the same manner as two separate means does not avoid infringement. See Lockhead Aircraft Corporation v. United States, 193 U.S.P.Q. 449, 462, 553 F.2d 699 (Ct. Cl. 1977). In Abbott v. Barrentine Mfg. Co., 255 F. Supp. 890, 899 (N.D. Miss. 1965), the court specifically held that

---

<sup>1/</sup> 27 F.2d 59, 63 (4th Cir. 1928).

<sup>2/</sup> 397 F.2d 978 (Ct. Cl. 1968).

"infringement cannot be avoided by using a one-piece structure rather than a two-piece structure." The respondents have merely improved the complainant's device by accomplishing the same result in one step rather than in two steps. This improvement does not avoid infringement, according to the court decisions cited above.

The notion of "preformed filament," which played no role in distinguishing claim 5 of the '103 patent from the prior art, is not part of the invention concept of the '103 patent, but rather a limitation upon the function of the complainant's machine. The record reveals that the broad construction which should be given under the "doctrine of equivalents" to the phrase in the complainant's patent, "pre-formed fastener filament," is not precluded by file wrapper estoppel. There is no indication in the file wrapper presented in evidence during the hearing that the complainant was compelled by the patent examiner or by the prior art to be limited to a machine in which the filament is preformed.

Applying the "doctrine of equivalents" in accordance with the decisions of the Federal courts, I conclude that the filament in the respondents' machine is the equivalent of that described in the '103 patent, despite the nature of the respondents' filament at the beginning of the process. Both filaments become, at some point in the process, fully formed filament coils; both filaments are woven into the tape simultaneously with the weaving of the tape; and both filaments result in a slide fastener stringer. Substantially the same means is used to create the same result in the same way. This constitutes infringement of the complainant's machine.



Immediate and Substantial Harm to the Domestic Industry

I dissent from the Commission's determination in this investigation that there would be no immediate and substantial harm to the domestic industry in the absence of temporary relief. Cf., Certain Luggage Products, Investigation No. 337-TA-39 (ITC 1978); In the Matter of Chicory Root--Crude and Prepared, Investigation No. 337-TA-27 (ITC 1976).

The domestic industry is defined to be that portion of the complainant's and of its licensees' domestic production facilities which is devoted to the production of slide fastener stringer machines under the '103 patent and to the production of slide fastener stringers. See Chain Door Locks, Investigation No. 337-TA-5, p. 35 (ITC 1976); Certain Ultra-Microtone Freezing Attachments, Investigation No. 337-TA-10, p. 8 (ITC 1976). Although the '103 patent describes a machine for making slide fastener stringers, the domestic industry is not composed merely of those facilities devoted to the production of these machines. A patent grants to the inventor the exclusive privilege to make, use or sell his invention. Given this privilege of exclusive use, the domestic industry is composed also of those facilities devoted to the use of these machines. The domestic industry can, therefore, be injured when it loses sales of the '103 patent machine or when it loses sales of the slide fastener stringer manufactured on those machines.

The record shows that the domestic industry will suffer immediate and substantial harm if temporary relief is not granted. The level of penetration by the respondents stringers have greatly expanded in the past two years. In 1978 stringers imported by the respondents were valued at . In 1979 the value of respondents' imports increased to . (CX 62). Although the value of respondents' imports dropped to in the first five months of





