

In the Matter of
**Certain Muzzle-Loading Firearms and
Components Thereof**

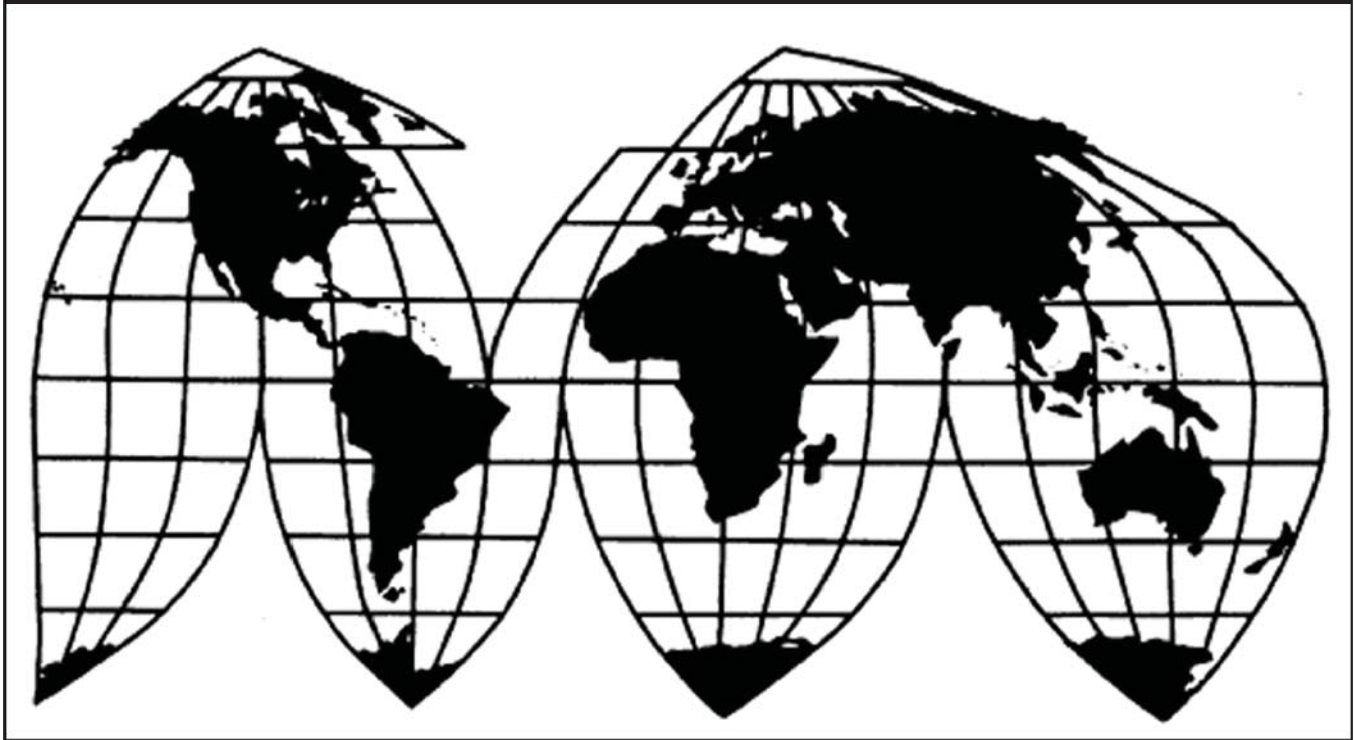
Temporary Relief Proceedings

Investigation No. 337-TA-777

Publication 4404

July 2013

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

Deanna Tanner Okun, Chairman
Irving A. Williamson, Vice Chairman
Daniel R. Pearson, Commissioner
Shara L. Aranoff, Commissioner
Dean A. Pinkert, Commissioner
David S. Johanson, Commissioner

**Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436**

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

In the Matter of **Certain Muzzle-Loading Firearms and Components Thereof**

Temporary Relief Proceedings

Investigation No. 337-TA-777



UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN MUZZLE-LOADING
FIREARMS AND COMPONENTS
THEREOF**

Investigation No. 337-TA-777

**NOTICE OF COMMISSION DETERMINATION TO REVIEW IN PART
THE INITIAL DETERMINATION DENYING COMPLAINANTS' MOTION
FOR TEMPORARY RELIEF AND ON REVIEW TO TAKE NO POSITION
ON THE LIKELIHOOD OF SUCCESS, THE BALANCE OF HARDSHIPS
AND THE PUBLIC INTEREST**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review in part the initial determination ("ID") issued by the presiding administrative law judge ("ALJ") on August 31, 2011, denying complainants' motion for temporary relief. The Commission has determined not to review the ID's denial of temporary relief and its analyses of irreparable harm. On review, the Commission has determined to take no position on the remainder of the ID.

FOR FURTHER INFORMATION CONTACT: Erin D.E. Joffre, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2550. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on June 17, 2011, based on a complaint filed by Thompson/Center Arms Company, Inc. ("T/C") and Smith & Wesson Corp. ("Smith & Wesson") of Springfield, Massachusetts ("Complainants"). 76 *Fed. Reg.* 35469 (Jun. 17, 2011). The complainants named seven respondents: (1) Dikar Sociedad Cooperativa Limitada of Bergara, Spain; (2) Blackpowder Products Inc. of Duluth,

Georgia; (3) Connecticut Valley Arms of Duluth, Georgia; (4) Bergara Barrels North America of Duluth, Georgia; (5) Bergara Barrels Europe of Bergara, Spain; (6) Ardesa Firearms of Zamudio (Vizcaya), Spain; and (7) Traditional Sporting Goods, Inc., d/b/a Traditions Sporting Firearms of Saybrook, Connecticut. The complaint alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain muzzle-loading firearms and components thereof by reason of infringement of certain claims of U.S. Patent No. 7,908,781 (“the ‘781 patent”); U.S. Patent No. 7,814,694 (“the ‘694 patent”); U.S. Patent No. 7,140,138 (“the ‘138 patent”); U.S. Patent No. 6,604,311 (“the ‘311 patent”); U.S. Patent No. 5,782,030 (“the ‘030 patent”); and U.S. Patent No. 5,639,981 (“the ‘981 patent”). On July 8, 2011, the ALJ granted Complainants’ motion to partially terminate the investigation as to the ‘781 and ‘138 patents. Order No. 7 (July 8, 2011), Notice of Commission Determination Not to Review (July 22, 2011).

The Complainants also filed with their complaint in this investigation a motion for temporary relief directed only to respondents Traditions and Ardesa (collectively, “TEO Respondents”) that requested the Commission to issue a temporary limited exclusion order and temporary cease and desist orders. The Complainants’ motion for temporary relief initially addressed the ‘781, ‘694, ‘138, ‘030, and ‘981 patents. During the initial pre-hearing conference, however, the parties entered into a stipulation that limited the Complainants’ motion to the ‘694 patent – specifically, claims 1, 10 and 11. The Initial Determination (“ID”) at issue is the ALJ’s denial of the Complainants’ motion. In the subject ID, the ALJ analyzed the four factors for determining whether to grant preliminary relief: the likelihood of success on the merits, irreparable harm, the balance of hardships, and the public interest.

The ID found that the Complainants had not demonstrated that they would suffer irreparable harm. Specifically, the ID found that the Complainants failed to demonstrate an irreparable harm from the following: (1) price erosion; (2) exclusivity erosion; (3) loss of goodwill and reputation; (4) lost sales and market share; or (5) reduced investment. The ALJ found that the lack of irreparable harm precluded temporary relief in this investigation. The ALJ also found the following: a likelihood of success on the merits with respect to claim 10 of the ‘694 patent; that the balance of hardships did not favor either party; and that the public interest would not preclude preliminary relief.

On September 12, 2011, the TEO Respondents filed opening comments and on September 14, 2011, the Complainants submitted reply comments as authorized by 19 C.F.R. §§ 210.66(c), (e)(1). These comments do not take issue with the ALJ’s findings regarding the lack of irreparable harm. Instead, the comments principally deal with Complainants’ likelihood of success on the merits, challenging various aspects of the ALJ’s analyses of infringement and the balance of hardships.

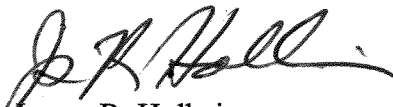
Having examined the record of this investigation, including the ALJ’s ID and the subsequent comments and reply comments, the Commission finds that irreparable harm has not been demonstrated. It was Complainants’ burden to demonstrate that such harm was likely absent temporary relief, and it failed to meet that burden. *Winter v. Natural Res. Defense Council, Inc.*, 129 S. Ct. 365, 375 (2008). The Commission has therefore determined not to review the ID’s

finding of lack of irreparable harm and the ID's denial of temporary relief.

Because irreparable harm is dispositive here, the Commission need not evaluate the remaining factors, *i.e.*, the likelihood of success on the merits, the balance of hardships, or the public interest. Therefore, the Commission has determined to review the ID's findings on the likelihood of success, the balance of hardships, and the public interest and to take no position on them. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421 (Fed. Cir. 1984).

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in section 210.66 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.66).

By order of the Commission.



James R. Holbein
Secretary to the Commission

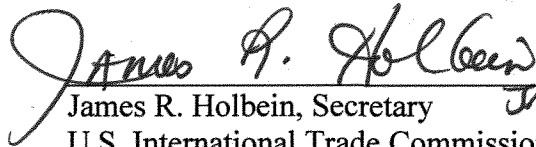
Issued: November 10, 2011

**CERTAIN MUZZLE-LOADING FIREARMS AND
COMPONENTS THEREOF**

337-TA-777

CERTIFICATE OF SERVICE

I, James R. Holbein, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Esq., and the following parties as indicated, on **November 10, 2011**


James R. Holbein, Secretary *JRH*
U.S. International Trade Commission
500 E Street, SW
Washington, DC 20436

**On Behalf of Complainants Thompson/Center Arms
Company, Inc. and Smith & Wesson Corp.:**

J. Kevin Grogan, Esq.
MCCORMICK, PAULDING & HUBER LLP
1350 Main Street
Sovereign Bank Building 5th Floor
Springfield, MA 01103

Via Hand Delivery
 Via Overnight Mail
 Via First Class Mail
 Other: _____

**On Behalf of Respondents Traditions Sporting Firearms
and Ardesa Firearms:**

Andrew F. Pratt
ADDUCI, MASTRIANI & SCHAUMBERG L.L.P.
1200 Seventeenth Street, NW, Fifth Floor
Washington, DC 20036

Via Hand Delivery
 Via Overnight Mail
 Via First Class Mail
 Other: _____

**On Behalf of Respondents Blackpowder Products, Inc.
and Dikar Sociedad Cooperativa Limitada:**

Scott J. Pivnick
ALSTON & BIRD LLP
The Atlantic Building
950 F Street, N.W.
Washington, DC 20004

Via Hand Delivery
 Via Overnight Mail
 Via First Class Mail
 Other: _____

Respondents:

Bergara Barrels Europe
Urate, 26
20570 Bergara,
SPAIN

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- INTERNATIONAL

Connecticut Valley Arms
1685 Boggs Road, Suite 300
Duluth, GA 30096

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- Other: _____

Bergara Barrels North America
1685 Boggs Road, Suite 300
Duluth, GA 30096

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- Other: _____

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

CERTAIN MUZZLE-LOADING FIREARMS
AND COMPONENTS THEREOF

Inv. Nos. 337-TA-777

INITIAL DETERMINATION ON COMPLAINANT'S MOTION FOR TEMPORARY
RELIEF

Administrative Law Judge Robert K. Rogers, Jr.

(August 31, 2011)

Appearances:

For the Complainants Thompson/Center Arms Company, Inc. and Smith & Wesson Corp.:

J. Kevin Grogan, Esq. of McCormick, Paulding & Huber LLP of Springfield, Massachusetts

Jeffrey E. Schiller, Esq. of Deutsch, Levy & Engel of Chicago, Illinois

For the Respondents Traditional Sporting Goods, Inc., d/b/a Traditions Sporting Firearms and Ardesa, S.A., d/b/a Ardesa Firearms:

Andrew F. Pratt, Esq.; Katherine R. Lahnstein, Esq.; Asha Allam, Esq. of Adduci, Mastriani & Schuamberg, L.L.P. of Washington, D.C.

Peter Peterson, Esq.; Robert Curcio, Esq. of DeLio & Peterson, LLC of New Haven, Connecticut

For the Commission Investigative Staff:

Lynn I. Levine, Esq., Director; Thomas S. Fusco, Esq., Supervisory Attorney; Rett Snotherly, Esq., Investigative Attorney; of the Office of Unfair Import Investigations, U.S. International Trade Commission, of Washington, D.C.

PUBLIC VERSION

TABLE OF CONTENTS

I. BACKGROUND 1

 A. Procedural History..... 1

 B. The Private Parties 2

 1. Complainants..... 2

 2. Respondents..... 3

 C. Overview Of The Patent At Issue 3

 D. Accused Products 4

II. JURISDICTION 4

 A. Subject Matter Jurisdiction 4

 B. Personal Jurisdiction 4

 C. In Rem Jurisdiction 4

III. STANDARD FOR MOTIONS FOR TEMPORARY RELIEF 5

IV. LIKELIHOOD OF SUCCESS ON THE MERITS 6

 A. Applicable Law..... 6

 B. Claim Construction..... 7

 1. Applicable Law..... 7

 2. “deformable seal element” 9

 3. “stepped initial portion” 18

 C. Invalidity 21

 1. Applicable Law..... 21

 2. Anticipation 21

 3. Obviousness 24

 D. Infringement..... 25

 1. Applicable Law..... 25

 2. Claims 1 & 11 26

 3. Claim 10 31

 E. Domestic Industry 34

 1. Applicable Law..... 34

 2. Technical Prong 36

 3. Economic Prong 36

V. IRREPARABLE HARM..... 37

 A. Applicable Law..... 37

 B. Analysis 38

VI. BALANCING THE HARDSHIPS 54

 A. Applicable Law..... 54

 B. Analysis 54

VII. PUBLIC INTEREST 58

 A. Applicable Law..... 58

 B. Analysis 59

VIII. BONDING 60

 A. Applicable Law..... 60

 B. Analysis 61

IX. MATTERS NOT DISCUSSED..... 62

XI. ORDER 62

PUBLIC VERSION

Pursuant to the Notice of Investigation and Rule 210.66 of the Rules of Practice and Procedure of the United States International Trade Commission, this is the Administrative Law Judge's Initial Determination regarding the motion for temporary relief filed by complainants Thompson/Center Arms Company, Inc. and Smith & Wesson Corp. The Administrative Law Judge hereby determines that the motion for temporary relief is DENIED.

PUBLIC VERSION

The following abbreviations may be used in this Initial Determination:

CDX	Complainants' demonstrative exhibit
CPX	Complainants' physical exhibit
CX	Complainants' exhibit
Dep.	Deposition
JSRCC	Joint Statement Regarding Claim Construction
JX	Joint Exhibit
RDX	Respondents' demonstrative exhibit
RPX	Respondents' physical exhibit
RX	Respondents' exhibit
Tr.	Transcript
CM	Complainants' Memorandum in Support of Their Motion
RR	Respondents' Response
SR	Staff's Response

I. BACKGROUND

A. Procedural History

On June 14, 2011, the Commission issued a Notice of Investigation in this matter to determine:

Whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain muzzle-loading firearms and components that infringe one or more of claim 11 of [U.S. Patent No. 7,908,781]; claims 1-3 and 10-12 of [U.S. Patent No. 7,814,694]; claims 19 and 20 of [U.S. Patent No. 7,140,138]; claims 1 and 6 of [U.S. Patent No. 6,604,311]; claims 1-5 of [U.S. Patent No. 5,782,030]; and claims 1 and 2 of [U.S. Patent No. 5,639,981], and whether an industry in the United States exists or is in the process of being established as required by subsection (a)(2) of section 337.

(See Notice of Investigation.) The investigation was instituted upon publication of the Notice of Investigation in the *Federal Register* on June 17, 2011. See 76 Fed. Reg. 35469-70 (2011). 19 CFR § 210.10(b).

The complainants are Thompson/Center Arms Company, Inc., 2100 Roosevelt Avenue, Springfield, MA 01104, and Smith & Wesson Corp., 2100 Roosevelt Avenue, Springfield, MA 01104. The respondents are Dikar Sociedad Cooperativa Limitada, Calle Urarte Kalea-Pol. Ind. San, Lorenzo 26 APTDO 193 20570 Bergara, Spain; Bergara Barrels Europe, Urarte, 26 Bergara 20570, Spain; Blackpowder Products Inc., 1685 Boggs Road, Suite 300, Duluth, GA 30096; Connecticut Valley Arms, 1685 Boggs Road, Suite 300, Duluth, GA 30096; Bergara Barrels North America, 1685 Boggs Road, Suite 300, Duluth, GA 30096; Ardesa Firearms, Camino del Talleri, s/n, 48170 Zamudio-Vizcoya, Spain; Traditional Sporting Goods, Inc., d/b/a Traditions Sporting Firearms, 1375 Boston Post Road, P.O. Box 776 Old Saybrook, CT 06475. The Commission Investigative Staff of the Office of Unfair Import Investigations ("Staff") is also a party in this investigation.

PUBLIC VERSION

When filing the complaint, complainants Thompson/Center Arms Company, Inc. and Smith & Wesson Corp. (collectively “Complainants”) moved for temporary relief under subsection (e) of section 337 of the Tariff Act of 1930. Complainants’ motion for temporary relief is directed to respondents Traditional Sporting Goods, Inc., d/b/a Traditions Sporting Firearms and Ardesa, S.A., d/b/a Ardesa Firearms (collectively “Respondents”). The only patent at issue in the motion for temporary relief is U.S. Patent No. 7,814,694 (“the ‘694 patent”).¹ In the Notice of Investigation, the Commission provisionally accepted Complainants’ motion and referred it to the presiding administrative law judge.

Pursuant to Commission Rule 210.60, I designated the investigation “more complicated.” (See Order No. 4.) An evidentiary hearing regarding the motion for temporary relief was conducted before me from August 8-9, 2011. Complainants, Respondents, and Staff participated in the hearing.

B. The Private Parties

1. Complainants

Thompson/Center Arms Company, Inc. (“Thompson/Center” or “Thompson”) is organized under the laws of the state of New Hampshire, with a principal place of business located in Springfield, Massachusetts. (Complaint at ¶ 10.) Thompson/Center is a wholly owned subsidiary of the Smith & Wesson Holding Corporation, which is organized under the laws of the state of Nevada. (*Id.*)

Smith & Wesson Corp. is organized under the laws of the state of Delaware, with a principal place of business located in Springfield, Massachusetts. (Complaint at ¶ 13.) Smith & Wesson Corp. is a wholly owned subsidiary of Smith & Wesson Holding Corporation. (*Id.*)

¹ Complainants’ motion for temporary relief addressed multiple patents. During the initial pre-hearing conference, the parties entered into a stipulation that limited Complainants’ motion to only the ‘694 patent. (July 12, 2011 Pre-Hearing Conference Tr. at 35:1-36:4.)

PUBLIC VERSION

2. Respondents

Ardesa, S.A. d/b/a Ardesa Firearms (“Ardesa”) is a corporation organized under the laws of Spain. (Complaint at ¶ 19; TSG Respondents’ Answer to Complaint at ¶ 19.) Ardesa is a manufacturer and importer of firearms and firearm components. (*Id.*) Ardesa has made and sold for importation products in the United States at least as early as 2002. (*Id.*)

Traditional Sporting Goods, Inc., d/b/a Traditions Sporting Firearms (“Traditions” or “TSG”) is a subsidiary of Ardesa, with its principal place of business located in Old Saybrook, Connecticut. (Complaint at ¶ 20; TSG Respondents’ Answer to Complaint at ¶ 20.) Traditions imports and/or sells after importation products in the United States that are manufactured and assembled abroad by Ardesa. (*Id.*)

C. Overview Of The Patent At Issue

The ‘694 patent is entitled “Muzzle Loading Rifle With Breech Plug Having Gas Seal Facility.” (JX-1.) The named inventors are Mark C. Laney and Gene L. Garland. (*Id.*) The named assignee is Thompson/Center Arms Company, Inc. (*Id.*) The ‘694 patent was filed on January 17, 2006, and issued on October 19, 2010. (*Id.*) The Abstract states the following:

A muzzle loading firearm has a barrel with a bore on a bore axis, and the barrel has a muzzle end and a breech end. A frame is connected to the barrel, and has a breech face. The frame moves between an open position in which the breech face is away from the breech end of the barrel, and a closed position in which the breech face abuts the breech end of the barrel. A breech plug is removably attached to the barrel. The breech plug including a seal element closely received by the bore. The seal element may be a set of piston rings that are received in a circumferential groove about a forward end of the plug, or may be a cup at the forward end, with a forward rim that flares under pressure to provide a gas seal. (*Id.*)

PUBLIC VERSION

D. Accused Products

Complainants have identified at least the following firearm products from Respondents that they believe infringe the '694 patent: the Vortek rifle and the Accelerator breech plug. (*See* CX-190 at Q. 159-182.)

II. JURISDICTION

A. Subject Matter Jurisdiction

The complaint alleges that Respondents have violated Subsection 337(a)(1)(B) by the importation and sale of products that infringe the asserted patents. I find that Respondents have imported into the United States, sold for importation into the United States, and/or sold within the United States after importation products accused of infringement. (*See* Complaint at ¶¶ 19, 20; TSG Respondents' Answer to Complaint at ¶¶ 19, 20.) Thus, I find that the Commission has subject matter jurisdiction over this investigation under Section 337 of the Tariff Act of 1930. *See Amgen, Inc. v. U.S. Int'l Trade Comm'n*, 902 F.2d 1532, 1536 (Fed. Cir. 1990).

B. Personal Jurisdiction

Respondents responded to the complaint and notice of investigation, responded to the motion for temporary relief, participated in discovery, and made an appearance at the evidentiary hearing. Thus, I find that, for the purposes of Complainants' motion for temporary relief, Respondents submitted to the personal jurisdiction of the Commission. *See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Initial Determination, 1986 WL 379287 (October 15, 1986).

C. In Rem Jurisdiction

The Commission has *in rem* jurisdiction over the accused products by virtue of the finding that accused products have been imported into the United States. *See Sealed Air Corp. v. United States Int'l Trade Comm'n*, 645 F.2d 976, 985 (C.C.P.A. 1981).

PUBLIC VERSION

III. STANDARD FOR MOTIONS FOR TEMPORARY RELIEF

Commission Rule 210.52, which governs motions for temporary relief, states, *inter alia*:

In determining whether to grant temporary relief, the Commission will apply the standards the U.S. Court of Appeals for the Federal Circuit uses in determining whether to affirm lower court decisions granting preliminary injunctions. The motion for temporary relief accordingly must contain a detailed statement of specific facts bearing on the factors the Federal Circuit has stated that a U.S. District Court must consider in granting a preliminary injunction.

19 CFR § 210.52(a).

“A preliminary injunction is a ‘drastic and extraordinary remedy that is not to be routinely granted.’” *Nat’l Steel Car, Ltd. v. Canadian Pac. Railway, Ltd.*, 357 F.3d 1319, 1324 (Fed. Cir. 2004) (citation omitted). “The grant or denial of a preliminary injunction...is within the sound discretion of the district court.” *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1350 (Fed. Cir. 2001).

The Federal Circuit has outlined a four-factor test that district courts must use in analyzing whether to grant a preliminary injunction. A district court must assess: (1) the likelihood of the patentee’s success on the merits; (2) irreparable harm if the injunction is not granted; (3) the balance of hardships between the parties; and (4) the public interest. *Procter & Gamble Co. v. Kraft Foods Global, Inc.*, 549 F.3d 842, 847 (Fed. Cir. 2008). “[Federal Circuit] case law and logic both require that a movant cannot be granted a preliminary injunction unless it establishes *both* of the first two factors, *i.e.*, likelihood of success on the merits and irreparable harm.” *Amazon.com*, 239 F.3d at 1350; *see also Altana Pharma AG v. Teva Pharm. USA, Inc.*, 566 F.3d 999, 1005 (Fed. Cir. 2009) (“Although the factors are not applied mechanically, a movant must establish the existence of both of the first two factors to be entitled to a preliminary injunction.”)

IV. LIKELIHOOD OF SUCCESS ON THE MERITS

A. Applicable Law

With regard to the first factor, “the patentee seeking a preliminary injunction in a patent infringement suit must show that it will likely prove infringement, and that it will likely withstand challenges, if any, to the validity of the patent.” *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir. 2009). “In other words, if [the challenger] raises a ‘substantial question’ concerning validity, enforceability, or infringement (*i.e.*, asserts a defense that [the movant] cannot show ‘lacks substantial merit’) the preliminary injunction should not issue.” *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1364 (Fed. Cir. 1997) (citing *New England Braiding Co. v. A.W. Chesterton Co.*, 970 F.3d 878, 882-883 (Fed. Cir. 1992)). At the Commission, the patentee must also show that it will likely establish the existence a domestic industry in accordance with 19 U.S.C. § 1337(a)(2)-(3). See *Certain Hardware Logic Emulation Systems & Components Thereof*, Inv. No. 337-TA-383, Order No. 34 (July 8, 1996) (finding that the complainant has a likelihood of success in establishing both the economic prong and the technical prong of the domestic industry requirement).

During a preliminary injunction analysis, the patent retains its statutory presumption of validity. *Titan Tire*, 566 F.3d at 1377. Yet, an alleged infringer need not present clear and convincing evidence of invalidity to prevail at the preliminary injunction stage:

In resisting a preliminary injunction, however, one need not make out a case of actual invalidity. Vulnerability is the issue at the preliminary injunction stage, while validity is the issue at trial. The showing of a substantial question as to invalidity thus requires less proof than the clear and convincing showing necessary to establish invalidity itself.

Amazon.com, 239 F.3d at 1359. The Federal Circuit has explained the relative burdens of the patentee and the alleged infringer as follows:

PUBLIC VERSION

If...the alleged infringer responds to the preliminary injunction motion by launching an attack on the validity of the patent, the burden is on the challenger to come forward with evidence of invalidity, just as it would be at trial. The patentee, to avoid a conclusion that it is unable to show a likelihood of success, then has the burden of responding with contrary evidence, which of course may include analysis and argument.

Titan Tire, 566 F.3d at 1377.

B. Claim Construction

1. Applicable Law

“An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996) (citation omitted). Claim construction “is a matter of law exclusively for the court.” *Id.* at 970-71. “The construction of claims is simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims.” *Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000). “[O]nly those [claim] terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Claim construction focuses on the intrinsic evidence, which consists of the claims themselves, the specification, and the prosecution history. *See generally Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*). The Federal Circuit in *Phillips* explained that in construing terms, courts must analyze each of these components to determine the “ordinary and customary meaning of a claim term,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313.

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention

PUBLIC VERSION

to which the patentee is entitled the right to exclude.” *Id.* at 1312 (citations omitted). “Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Id.* at 1314. For example, “the context in which a term is used in the asserted claim can be highly instructive,” and “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.” *Id.*

“[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (citation omitted). “The longstanding difficulty is the contrasting nature of the axioms that (a) a claim must be read in view of the specification and (b) a court may not read a limitation into a claim from the specification.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1117 (Fed. Cir. 2004). The Federal Circuit has explained that there are certain instances when the specification may limit the meaning of the claim language:

[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs. In other cases, the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor. In that instance as well, the inventor has dictated the correct claim scope, and the inventor’s intention, as expressed in the specification, is regarded as dispositive.

Phillips, 415 F.3d at 1316.

In addition to the claims and the specification, the prosecution history should be examined if in evidence. “The prosecution history...consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent. Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Id.* at 1317 (citation omitted). “[T]he prosecution history can

PUBLIC VERSION

often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, including dictionaries, inventor testimony, expert testimony and learned treatises. *Id.* at 1317. Extrinsic evidence is generally viewed “as less reliable than the patent and its prosecution history in determining how to read claim terms[.]” *Id.* at 1318. “The court may receive extrinsic evidence to educate itself about the invention and the relevant technology, but the court may not use extrinsic evidence to arrive at a claim construction that is clearly at odds with the construction mandated by the intrinsic evidence.” *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 977 (Fed. Cir. 1999).

2. “deformable seal element”

The term “deformable seal element” appears in asserted claims 1 and 11.

Complainants’ Position: Exhibit 8 to the Memorandum supporting the motion for a temporary exclusion order (“TEO motion”) contains, *inter alia*, a “claim chart” that sets forth Complainants’ view of how the accused products practice claims 1 and 11. Regarding the term “a deformable seal element (55) positioned within said circumferential groove (100),” Complainants assert that in the accused products “a heavy duty O-ring (55) is seated in the groove.”

Complainants’ Memorandum in support of the TEO motion only briefly touches on claim construction, stating: “... each claimed invention in the Asserted Patents is, itself, straightforward, requiring no expert testimony to construe its corresponding scope.” (CM at 14.)

PUBLIC VERSION

Nevertheless, as this matter progressed, Complainants designated Mr. Mark C. Laney, a Thompson/Center employee and named inventor on the '694 patent, as their expert. Mr. Laney stated that a person of ordinary skill in the art would understand the term to have the meaning he gives the term in his expert report. (CX-21 at p. 7.) Mr. Laney then discussed the construction of the term "deformable seal element" by breaking it down into subparts; but he failed to offer a specific construction for the term itself. His testimony is that a "seal" is something that "tightly or completely closes or secures a thing" or "a tight and perfect closure." An "element" means "a constituent part", for example a "seal element" of a breech plug is a part of the breech plug that seals. "Deformable" means capable of changing shape. (CX-190 at Q. 83; CX-21 at p. 11.)

Mr. Laney noted that claim 1 also recites that the deformable seal element is "compressed" and is then "substantially coextensive with a diameter of said stepped initial portion, to thereby form a gas seal to prevent fouling of said threaded engagement portion during firing." (CX-21 at p. 11.)

Mr. Laney provided a definition of a person having ordinary skill in the art ("PHOSITA") as, "someone who has worked for several years in manufacturing, building, repairing and using muzzleloaders. Such a person would have at least introductory training in gunsmithing, as well as practical experience in handling, repairing, cleaning, loading, and discharging muzzle-loading firearms." Mr. Laney provided no specific basis for this definition of a PHOSITA. (CX-190 at Q. 62.)

Regarding claim 10, Mr. Laney stated that the seal element "is different from the seal element of claim 1 and ... 11 at least because claim 10 is not limited to a deformable seal element. As examples of seal elements, the '694 patent specification and prosecution history

PUBLIC VERSION

describe metal split ring(s) or a McFarland seal ('694 patent col. 3 line 24 – col. 4 line 8); or an O-ring (Response filed January 21, 2010, p. 13 last paragraph)." (CX-21 at p. 13.)

Regarding the seal in claim 10, Mr. Laney said that the '694 patent also teaches "to thereby form a gas seal to prevent fouling of said threaded engagement portion during firing." He opined that a "gas seal" specifically seals or tightly closes against passage of gas. 'Fouling' means 'encrusting with a foreign substance', which in my experience as a user of muzzleloaders I recognize to mean encrusting with residue of burnt black powder or black powder substitute. 'Prevent' means 'to keep from happening or hinder'." (CX-21 at p. 13.)

Respondents' Position: Respondents contend that the term should be construed as, "a set of metal piston rings or a single multi-turn closely wound helical coil positioned to fit loosely within the circumferential groove." Respondents' expert Seth Bredbury testified that a PHOSITA would understand the term to have the suggested meaning. (RX-398 at Q. 17.)

Mr. Bredbury testified that a PHOSITA would be an engineering technician, design/draftsman, or mechanical engineer. It would not be necessary for the person to have formal engineering or design training. A degree of mechanical aptitude and experience with the design and operation of basic mechanisms plus the particular details unique to muzzle loading firearms would be required. Mr. Bredbury said that his opinion about the qualifications of a PHOSITA is based on his 30 years' experience doing this type of design work with people in the firearms industry. (RX-398 at Q. 9.)

Mr. Bredbury referred to the specification of the '694 patent to support his opinion that the term "deformable seal element" is given the meaning he espouses. He said that the '694 patent describes in Figures 2-4 and at 2:28-32 and 3:24-4:8 metal piston rings 55 and the single

PUBLIC VERSION

multi-turn closely wound helical coil, a McFarland-style seal employed in the gas pistons of military rifle actions. He stated:

This understanding is consistent with the specification and the file history, which explains that a loosely fit deformable seal in the circumferential groove facilitates the insertion (or removal) of the threaded breech plug by having the set of metal piston rings fixed from rotating with respect to the breech plug chamber as the breech plug is threaded into the breech plug chamber of the barrel. The metal piston rings simply slide down the stepped initial portion of the breech plug chamber.

(RX-398 at Q. 18.)

Mr. Bredbury testified that the term “deformable seal element” cannot include an O-ring, because:

The loosely fit, rotatable “seal element” in the ‘694 patent claims was distinguished from an O-ring design which is a single polymer ring, having a tight or “snug-fit” to the inner diameter of the groove, and does not fit loosely or freely rotate about the breech plug. Thompson/Center’s attorney explicitly disclaimed an O-ring seal during prosecution of the ‘694 patent, in the Amendment filed on August 1, 2009, Exhibit JX-3, after being rejected over the unacknowledged “snug-fit” O-ring in the Lee patent. The attorney stated on page 10: “the O-ring 29 of Lee simply will not suffice to solve the problem that the present invention solves, and indeed, there is no evidence that the O-ring of Lee is capable of solving this problem.” In my opinion, one of ordinary skill in the art would understand this to be a disclaimer of all O-rings, even if they have a “snug-fit,” and not just the one disclosed in Lee.

(RX-398 at Q. 20.) Respondents argue that, because of the foregoing submission, the doctrine of prosecution history estoppel bars Complainants from asserting the an O-ring meets the “deformable seal element” definition.

Staff’s Position: Staff notes part of the discussion of Lee in the prosecution history contained in Exhibit 5 to Respondents’ response. Among other things, the quote provided by Staff reveals that the submission by the applicants refers to the Lee O-ring to provide a “snug-fit” which essentially centers the conversion plug within the shotgun barrel, rather than providing “a gas seal as is required by independent claims 20 and 22” of the application. (Citing Exhibit 5 to

PUBLIC VERSION

Respondents' Response.)

Construction to be applied: The plain and ordinary meaning of the term, which is “a barrier that prevents matter from moving from a point on one side of said barrier to a point on the other side of said barrier, and which barrier’s physical characteristics allow a change in its shape.”

Inasmuch as, the plain and ordinary meaning of a term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, I must define a PHOSITA. The parties differ somewhat on the qualifications they consider important in a PHOSITA. Based upon the record before me, I find that a PHOSITA in this case would be an engineering technician, design/draftsman, or mechanical engineer. It would not be necessary for the person to have formal engineering or design training. A degree of mechanical aptitude and experience with the design and operation of basic mechanisms plus the particular details unique to muzzle loading firearms would be required. This definition most closely follows that provided by Mr. Bredbury based upon his experience of 30 years in design work with people in the firearms industry. (RX-398 at Q. 9.)

While Mr. Laney’s definition of PHOSITA is similar to that of Mr. Bredbury, I note that Mr. Laney would require a PHOSITA to “have at least introductory training in gunsmithing.” (CX-190 at Q. 62.) Mr. Laney provided no specific basis for this requirement, and neither his curriculum vitae, nor his testimony, indicate that he has had such training. (*See, e.g.*, CX-22.) To adopt that additional educational requirement would eliminate Mr. Laney, an inventor on the ‘694 patent, from having ordinary skill in the art in which he is named as an inventor. On the other hand, Mr. Laney qualifies as a PHOSITA under the definition provided by Mr. Bredbury.

PUBLIC VERSION

The title of the '694 patent is Muzzle Loading Rifle with Breech Plug Having Gas Seal Facility, and the abstract of the '694 patent describes a muzzle loading firearm in which the breech can be opened so that the breech face is removed from the breech end of the barrel. The abstract teaches, *inter alia*:

... A breech plug is removably attached to the barrel. The breech plug including a seal element closely received by the bore. The seal element may be a set of piston rings that are received in a circumferential groove about a forward end of the plug or may be a cup at the forward end, with a forward rim that flares under pressure to provide a gas seal.

(JX-1 at Abstract.)

Claim 1 of the '694 patent teaches, in relevant part:

a deformable seal element positioned within said circumferential groove, said deformable seal element being compressed from a first position having a first outside diameter to a second position having a second outside diameter when said breech plug is secured in said breech plug chamber, said second outside diameter being less than said first outside diameter and substantially coextensive with a diameter of said stepped initial portion, to thereby form a gas seal to prevent fouling of said threaded engagement portion during firing.

(JX-1 at 5:1-10.)

Similarly, claim 11 of the '694 patent teaches, in relevant part:

a deformable seal element having an outside diameter and positioned within said circumferential groove, said deformable seal element having a relaxed position where said outside diameter of said deformable seal element is greater than said outside diameter of said forward portion of said breech plug body, and a deformed position where said outside diameter of said deformable seal element is less than said outside diameter of said seal element when in said relaxed position.

(JX-1 at 6:19-27.)

Claim 10 of the '694 patent describes:

a seal element positioned within said circumferential groove to thereby form a gas seal to prevent fouling of said threaded engagement portion during firing.

(JX-1 at 5:46-48.)

PUBLIC VERSION

The Background and Summary of the Invention of the '694 patent reveals that the state of the art at the time of the invention included a removable breech plug that "employs a finely threaded body that screws into the rear of the barrel, with 10-15 turns to secure it in place ..." (JX-1 at 1:20-22.) The patent describes a problem, "the fouling associated with muzzle loading rifles can clog the threads as gases and particles are forced into the threads during firing, this can freeze up the plug, and require undesirably great torque to remove the plug, through the many rotations required." (JX-1 at 1:20-28.) The '694 patent claims to overcome the foregoing limitations with a "breech plug including a seal element closely received by the bore. The seal element may be a set of piston rings that are received in a circumferential groove about the forward end of the plug, or may be a cup at the forward end, with a forward rim that flares under pressure to provide a gas seal." (JX-1 at 1:37-42.)

The detailed description of a preferred embodiment describes,

The nose portion 54 defines a circumferential groove that receives a set of three metal piston rings 55. The rings provide a tight seal against the sidewall of the breech plug chamber 36, so that the threads will be protected against the incursion of gas and debris. In an alternative embodiment, also discussed in detail below, a cup seal may be provided, the cup having an cylindrical sidewall extending to an open end in the forward direction and closely received in the chamber, so that the pressure generated by discharge tends to flare the cup, sealing against gases escaping rearwardly.

(JX-1 at 2:28-37.)

The description of a preferred embodiment clearly states that the invention is not intended to be limited by the described preferred and alternative embodiments. (JX-1, 4:42-44)

The invention of the '694 patent, which is clearly expressed throughout, is to provide a breech plug with a seal element to prevent fouling of the threads by gases and particles that are forced into the threads by firing. The result is a breech plug that can be removed without the need to apply "undesirably great torque." (JX-1 at 1:20-42.)

PUBLIC VERSION

It is readily apparent from the language of the claims, the description of the preferred embodiment, the abstract and the title of the '694 patent that the "seal" taught in claims 1, 10 and 11 represents a barrier that prevents matter from moving from a point on one side of said barrier to the other.

Claims 1 and 11 contain the additional requirement that the seal be "deformable," and they clearly teach that their respective seals change shape such that their outside diameters are smaller after the seals change shape than they were prior to the change occurring. In addition, the description of the preferred embodiment allows for an alternative seal represented by a "single mult-turn closely wound helical coil ... a McFarland-style seal employed in the gas pistons of military rifle actions." The specification teaches "[s]uch a coil would require that at least the rear face be ground flat and square, so that it provides a seal under pressure against the rear shoulder of the plug groove in which it is received." (JX-1 at 4:3-8.) This description contemplates a different change in shape than those specifically detailed in claims 1 and 11.

Based upon the language of the claims, read in light of the specification, I find that the term "deformable seal element" shall be construed to mean "a barrier that prevents matter from moving from a point on one side of said barrier to the other, and which barrier's physical characteristics allow a change in its shape."

While the respondents have argued that the applicants for the '694 patent disclaimed an "O-ring" as part of the "deformable seal element," I find that the evidence does not support their position. A reading of the relevant portions of JX-3 and the testimony on this issue shows that the applicants for the '694 patent were addressing a specific O-ring peculiar to U.S. Patent No. 4,222,191 ("Lee").

The prosecution history of the '694 patent, taken in context, states:

PUBLIC VERSION

In stark contrast to the present invention, Lee teaches a known conversion plug having the general shape of a shotgun shell, having a large counterbore formed in the end adjacent to the hammer an (sic) having a small threaded counterbore to receive a nipple adapted to receive a percussion firing element. (Lee, Abst). ***It will be readily appreciated from a review of Lee that the “seal element” is an “O-ring 29 [that] brings about a snug fit of the unit in the chamber.”***

As noted above, the primary goal of the present invention is to provide a threaded breech plug for a muzzle loading firearm that has a seal element positioned within a circumferential groove located on the nose portion thereof to thereby form a gas seal to prevent fouling of the engagement portion during firing, as a result of hot combustion gases and particulate. That is, as discussed on page 1 of the present application, existing breech plugs for muzzle loading rifles are extremely prone to fouling, which can clog the threads as gases and particles are forced into the threads during firing. This can freeze up the plug and require undesirably great torque to remove the plug. (See Application, paragraph [003]).

As explicitly noted in the specification of Lee as discussed above, the O-ring 29 disclosed therein provides a “snug fit” which essentially centers the conversion plug within the shotgun barrel, not a gas seal as is required by independent claims 20 and 22. That is, providing a “snug fit” is not the problem solved by the present invention. It will be readily appreciated by one of ordinary skill in the art that a “snug fit” will not suffice to keep tiny particulates from reaching the threaded engagement portion of the claimed breech plug where a “gas seal” is required. That is, the O-ring 29 of Lee simply will not suffice to solve the problem that the present invention solves, and indeed, there is no evidence indicating that the O-Ring of Lee is capable of solving this problem. Indeed, Lee is completely unconcerned with providing a “gas seal,” as the conversion plug and the shotgun of Lee has no threads that could potentially be subject to fouling and clogging.

Accordingly, Applicants respectfully submit that one looking to solve the problem that the present invention solves, i.e., preventing fouling of the threads of the breech plug during firing by providing for a gas seal, would not look to Lee, as Lee has no threads that would be subject to fouling. As the “conversion plug” of Lee is entirely void of threads and only provides a “snug fit” of the conversion plug, one of ordinary skill in the art would not look to Lee for guidance to solve the problem of clogged or fouled threads.

(JX-3 at TC085904.0150-TC085904.0151) (underlining in original; remaining emphasis added.)

A reading of the entire argument presented by the applicant makes clear that the “snug fit” O-ring contemplated by Lee was for the purpose of centering the conversion plug within the

PUBLIC VERSION

shotgun barrel. The Lee plug had no threads that would be subject to fouling. The '694 patent is directed specifically to providing a "seal" against fouling of the threads in the breech plug by gases and particulates. It is clear to me from this passage, taken in context, that the applicants, in distinguishing the O-ring of the Lee patent, did not generally disclaim an "O-ring" as a possible "seal element" in the '694 patent.

I find that examination of the extrinsic evidence (such as expert testimony) offered by the parties is unnecessary because the intrinsic evidence is sufficient to understand the meaning of "deformable seal element." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) ("In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence.")

3. "stepped initial portion"

The term "stepped initial portion" appears in asserted claims 1 and 11.

Complainants' Position: Complainants' expert, Mark Laney, testified that a "stepped initial portion" of a breech plug chamber, as recited by the '694 patent, describes a part of the breech plug chamber that begins at a change in dimension, such as a change in diameter.

Referring to the '694 patent, Mr. Laney testified that Figure 2 describes an embodiment with a stepped "initial portion" 40, which is included in the forward or beginning part of a breech plug chamber 36 adjacent to a bore 32. He added that the "stepped" initial portion 40 exhibits a change in diameter from the adjacent bore 32. In particular, the "stepped initial portion" 40 is stepped or offset outward from (i.e. of larger diameter than) the bore 32. In turn, this stepped initial portion is smaller in diameter than the threaded intermediate portion 42. He concluded, the stepped initial portion 40 forms a throat or "passageway" from the breech plug chamber to the bore. (CX-190 at Q. 68, 70, 71.)

PUBLIC VERSION

Respondents' Position: Respondents propose that this term be construed as “an inwardly indented portion of the breech plug chamber forward the threaded portion of the breech plug chamber, forming a step on the inside wall of the barrel and having a smaller diameter than the innermost diameter of the threaded portion of the breech plug chamber.”

Respondents argue that the '694 patent describes “the stepped initial portion 40 of the barrel is an inwardly indented portion of the breech plug chamber 36 forward the threaded portion 42 of the breech plug chamber and having a smaller diameter than the innermost diameter of the threaded portion 42.” Respondents quote the '694 patent: “[t]he rear portion of the barrel defines an enlarged breech plug chamber 36 having a stepped initial portion 40, an internally threaded intermediate portion 42, and an enlarged clearance portion 44.” (JX-1 at 2:6-9, Fig. 2.)

Staff's Position: Staff highlights the position of Respondents, noting the comparison of a drawing of the patent to a photograph of the Respondents' breech plug.

Construction to be Applied: “A part of the breech plug chamber located adjacent to the breech end of the barrel's bore and forward of the threaded intermediate portion of said breech plug chamber, and which has an inside diameter larger than the inside diameter of the bore of said barrel and smaller than the innermost diameter of the threaded intermediate portion of said breech plug chamber.”

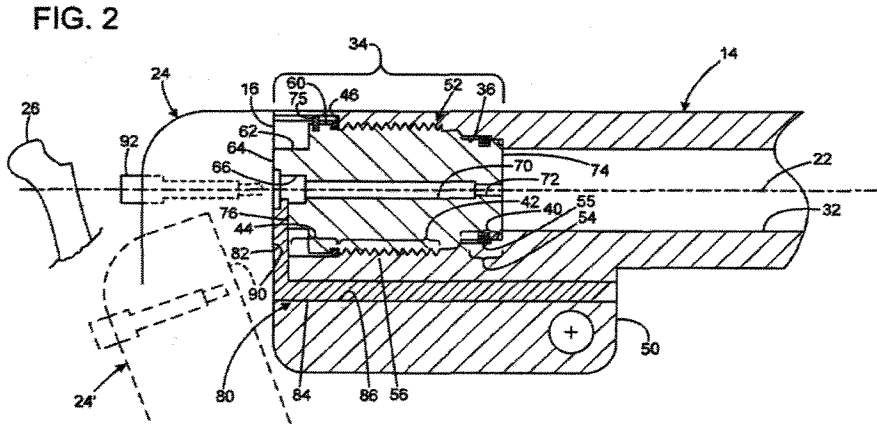
The constructions presented by the parties are essentially the same, and the construction to be applied is not inconsistent with the positions of the parties. Asserted claims 1 and 11 describe “a stepped initial portion forward from said internally threaded engagement portion.” (JX-1 at 4:55-56, 6:2-4.) The detailed description of the preferred embodiment teaches:

FIG. 2 shows the breech end 16 of the barrel 14. The barrel defines a rifled bore 32 (rifling not shown) that extends from the muzzle nearly the length of the barrel, except for a rear portion 34. The rear portion of the barrel defines an

PUBLIC VERSION

enlarged breech plug chamber 36 having a stepped initial portion 40, an internally threaded intermediate portion 42, and an enlarged clearance portion 44.

(JX-1 at 2:3-9.)



(JX-1 at Fig. 2.)

I find that the claims are clear in their meaning, and the specification provides sufficient guidance to give meaning to the phrase, “stepped initial portion.” I find that plain and ordinary meaning of the term “stepped initial portion” as used in asserted claims 1 and 11 of the ‘694 patent is “a part of the breech plug chamber located adjacent to the breech end of the barrel's bore and forward of the threaded intermediate portion of said breech plug chamber, and which has an inside diameter larger than the inside diameter of the bore of said barrel and smaller than the innermost diameter of the threaded intermediate portion of said breech plug chamber.”

I find that examination of the extrinsic evidence (such as expert testimony) offered by the parties is unnecessary because the intrinsic evidence is sufficient to understand the meaning of “stepped initial portion.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (“In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence.”)

PUBLIC VERSION

C. Invalidity

1. Applicable Law

“A patent is invalid for anticipation if a single prior art reference discloses each and every limitation of the claimed invention. Moreover, a prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present, or inherent, in the single anticipating reference.” *Schering Corp. v. Geneva Pharm., Inc.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003) (citations omitted). “When no prior art other than that which was considered by the PTO examiner is relied on by the attacker, he has the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job[.]” *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984). Therefore, the challenger’s “burden is especially difficult when the prior art was before the PTO examiner during prosecution of the application.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1467 (Fed.Cir.1990).

2. Anticipation

Respondents’ Position: Respondents contend that if the claims of the ‘694 patent are construed to cover a breech plug having an O-ring in the portion forward of the threads, the asserted claims are anticipated by European Patent No. EP 0178284 to Mocivnik (“Mocivnik”). (RX-398 at Q. 32.) Respondents’ expert, Seth Bredbury, testified that all of the elements of the asserted claims are found in Mocivnik. (*Id.* at Q. 35-40; RDX-3.)

Complainants’ Postion: Complainants contend that Mocivnik does not anticipate any of the asserted claims of the ‘694 patent.

Staff’s Position: Staff offers no position regarding invalidity.

PUBLIC VERSION

Discussion and Conclusions: Based on the evidence in the record, I find that Respondents have not raised a substantial question of invalidity based on anticipation by Mocivnik.

Respondents have failed to demonstrate that Mocivnik discloses the “deformable seal element” of claims 1 and 11, and the “seal element” of claim 10. I construed “deformable seal element” to mean “a barrier that prevents matter from moving from a point on one side of said barrier to a point on the other side of said barrier, and which barrier’s physical characteristics allow a change in its shape.” It follows that “seal element” means “a barrier that prevents matter from moving from a point on one side of said barrier to a point on the other side of said barrier.” Mocivnik describes a base member that is attached via a threaded connection to the barrel of a weapon. The base member includes two elements used for sealing purposes: a “resilient metallic ring (11)” and an “O-ring (9).” (RX-64 at 777TSG00000550.) These can be seen in Figure 1:

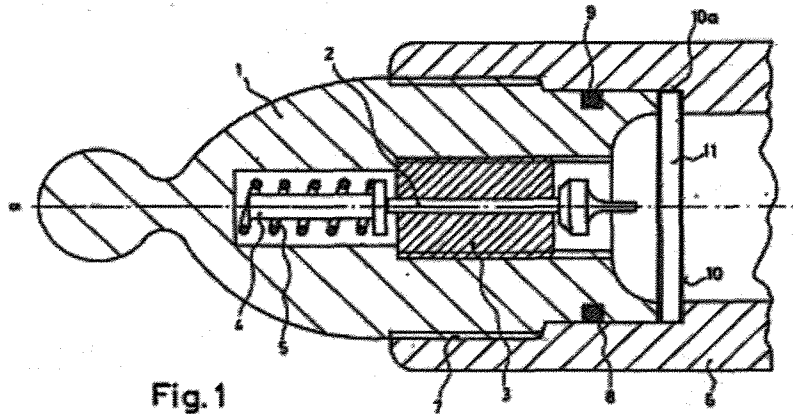


Fig. 1

(RX-64 at 777TSG00000551.)

Mocivnik discusses the prior art firearms that use an O-ring as a seal:

It is essential for the initial velocity of the projectile in any case that no gases which are created by the explosion of the propellant can escape through leaks. Furthermore, there exists the danger that at such leak points the hot gases may lead to a further destruction of the connection between the individual weapon parts, so that the leakage is now increased, which in a very short time, leads to the weapon being unusable. For this reason, it is necessary to provide a groove a the

PUBLIC VERSION

threads between the base of a mortar and the tube, in which an O-ring placed. This O-ring is placed closer to the tube than the threads placed behind it.

(CX-188 at TC352288.0016.)² Mocivnik then explains that an O-ring does not always create a sufficient seal:

Such a seal is sufficient in many cases, however through the use of more powerful propellants, the stresses due to pressure and temperature have become greater, so that such seals no longer show the desired sealing effect or after a short time of use must be replaced in order to avoid damages to the device. This sealing ring need not be O-shaped, but can also take the form of a hollow shape.

(*Id.*)

Mocivnik then discloses that the solution to this problem is the combination of an O-ring and a metallic ring:

It is however not shown how the pressure and therefore temperature stressing due to the use of ever more powerful propellants can be overcome. Special designs, such as a combination of a metallic ring with an O-ring or the like cannot be inferred.

(*Id.*) Mocivnik explains that the “problem to be solved by the invention was to create an annual sealing *combination* which blocks the pressure and temperature stresses and through which the remaining gase pressure is enclosed.” (*Id.*) (emphasis added). TSG’ Respondents’ expert Mr. Bredbury acknowledged that Mocivnik uses both the metallic ring and the O-ring in combination to achieve the desired sealing. (Tr. at 331:12-24.)

For the “deformable seal element” of claims 1 and 11, and the “seal element” of claim 10, Mr. Bredbury identifies the O-ring of Mocivnik. (RX-398 at Q. 35, 38-39.) The “deformable seal element” and the “seal element” must each be “a barrier that prevents matter from moving from a point on one side of said barrier to a point on the other side of said barrier.” Because Mocivnik makes clear that the O-ring itself does not serve as an adequate seal, and that it is necessary to include the metallic ring to form a sufficient seal, I do not find that the O-ring of

² CX-188 includes an English translation of RX-64.

PUBLIC VERSION

Mocivnik by itself serves as a “seal element” or “deformable seal element” of the asserted claims. (CX-188 at TC352288.0016.)

Because I conclude that Respondents have not identified a “seal element” or “deformable seal element” in Mocivnik, I find that Respondents have failed to raise a substantial question of invalidity based on anticipation by Mocivnik.

3. Obviousness

Respondents’ Position: Respondents contend that the asserted claims are obvious in view of the combination of Mocivnik, U.S. Patent No. 4,222,191 (“Lee”), U.S. Patent No. 5,133,143 (“Knight ‘143”), and U.S. Patent No. 6,311,421 (“Knight ‘421”).

Respondents contend that Mocivnik discloses all of the limitations of claim 1. (RX-398 at Q. 41.) Respondents assert that Knight ‘421 discloses a muzzle loading rifle, a barrel and breech plug in which the chamber has a rear end and an opposing forward end, and an internally threaded engagement portion adjacent to the rear end. (*Id.*) According to Respondents, the ‘694 patent and Knight ‘143 address the same problem to be solved – preventing the threads of the removable breech plug of a muzzle loading firearm from being clogged with gas and particles generated during firing. (*Id.*) Respondents note that Lee discloses the use of an O-ring that provides “some type of sealing.” (*Id.*) Respondents claim that it would have been obvious to one of ordinary skill in the art to substitute the O-ring and groove of Lee for that of Mocivnik to form the deformable seal element and circumferential groove. (*Id.*) Respondents assert that claims 10 and 11 would be obvious for the same reasons as claim 1. (*Id.* at Q. 44-45.)

Respondents claim that one of ordinary skill in the art would have a reason to combine Mocivnik, Lee, Knight ‘143, and Knight ‘421. (RX-398 at Q. 47.) Respondents assert that all of

PUBLIC VERSION

the references disclose breech plugs for weapons that may be loaded from the muzzle, and provide different possible configurations for such breech plugs. (*Id.*)

Complainants' Position: Complainants contend that the asserted claims of the '694 patent are not invalid due to obviousness.

Staff's Position: Staff offers no position regarding invalidity.

Discussion and Conclusions: Based on the evidence in the record, I find that Respondents have not raised a substantial question of invalidity based on obviousness.

In Section IV.C.2 *supra*, I concluded that Respondents failed to raise a substantial question of invalidity because they did not explain how Mocivnik discloses the “deformable seal element” of claims 1 and 11, and the “seal element” of claim 10. Respondents’ obviousness combination does nothing to remedy this deficiency, as Mr. Bredbury’s obviousness combination still uses the O-ring of Mocivnik to meet the “deformable seal element” and “seal element” limitations. (RX-398 at Q. 41, 44-45.) For the same reasons as described in Section IV.C.2 *supra*, Respondents have not demonstrated that Mocivnik discloses the “deformable seal element” and “seal element” limitations of the asserted claims.³ Thus, I conclude that Respondents have failed to raise a substantial question of invalidity based on obviousness.

D. Infringement

1. Applicable Law

Literal infringement is a question of fact. *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008). Literal infringement requires the patentee to prove that the accused device contains each and every limitation of the asserted claim(s). *Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc.*, 389 F.3d 1370, 1378 (Fed. Cir. 2004).

³ In addition, for the reasons discussed in Section IV.B.2 *supra*, I reaffirm that Lee does not disclose the “deformable seal element” or “seal element” limitations. Mr. Bredbury does not rely on either Knight reference to meet the “deformable seal element” or “seal element” limitations. (RX-398 at Q. 41.)

PUBLIC VERSION

As for the doctrine of equivalents:

Infringement under the doctrine of equivalents may be found when the accused device contains an “insubstantial” change from the claimed invention. Whether equivalency exists may be determined based on the “insubstantial differences” test or based on the “triple identity” test, namely, whether the element of the accused device “performs substantially the same function in substantially the same way to obtain the same result.” The essential inquiry is whether “the accused product or process contain elements identical or equivalent to each claimed element of the patented invention[.]”

TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1376-77 (Fed. Cir. 2008)

(citations omitted).

Thus, if an element is missing or not satisfied, infringement cannot be found under the doctrine of equivalents as a matter of law. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538-39 (Fed. Cir. 1991). Determining infringement under the doctrine of equivalents “requires an intensely factual inquiry.” *Vehicular Techs. Corp. v. Titan Wheel Int’l, Inc.*, 212 F.3d 1377, 1381 (Fed. Cir. 2000).

2. Claims 1 & 11

Complainants assert claims 1 and 11 against Respondents. Claim 1 recites in relevant part:

a barrel having a muzzle end and a longitudinal bore extending rearward from said muzzle end to a rear barrel portion with a breech plug chamber, ***said breech plug chamber having*** a rear end and an opposing forward end, an internally threaded engagement portion adjacent said rear end and ***a stepped initial portion forward from said internally threaded engagement portion;***

a breech plug having a one-piece, integral body with an outer peripheral surface and adapted to be received in said breech plug chamber, said breech plug body having a nose facing said longitudinal bore, a breech end opposite said nose, a nose portion adjacent said nose and a threaded engagement portion adjacent said breech end ... ***said nose portion having a circumferential groove formed in said outer peripheral surface thereof and spaced from said nose;*** and

a deformable seal element positioned within said circumferential groove, said deformable seal element being compressed from a first position having a first

PUBLIC VERSION

outside diameter to a second position having a second outside diameter when said breech plug is secured in said breech plug chamber, said second outside diameter being less than said first outside diameter and substantially coextensive with a diameter of said stepped initial portion, to thereby form a gas seal to prevent fouling of said threaded engagement portion during firing.

(JX-1 at 4:50-56, 5:1-10.)

Claim 11 teaches in relevant part:

a barrel having a muzzle end and a breech end, and a longitudinal bore having a bore axis and a diameter;

a breech plug chamber affixed to said barrel breech end, said breech plug chamber having a rear end and an opposing forward end, an internally threaded engagement portion adjacent said rear end, and ***a stepped initial portion forward from said internally threaded engagement portion and adjacent said forward end;***

a breech plug having a one-piece, integral body adapted to be threadedly received in said breech plug chamber, said breech plug body having:

a nose facing said longitudinal bore;

a breech end opposite said nose;

a forward portion adjacent said nose with an outside diameter dimensioned to be received by said stepped initial portion, ***said forward portion having a circumferential groove formed in said body and spaced from said nose;*** and ***a deformable seal element*** having an outside diameter and ***positioned within said circumferential groove***, said deformable seal element having a relaxed position where said outside diameter of said deformable seal element is greater than said outside diameter of said forward portion of said breech plug body, and a deformed position where said outside diameter of said deformable seal element is less than said outside diameter of said seal element when in said relaxed position.

(JX-1 at 5:50-6:27.)

Complainants' Position: Complainants' allege that the Traditions Vortek Rifle with the Accelerator breech plug (the "accused product") infringes claim 1 of the '694 patent.

Complainants' expert Mark Laney testified and referred to his expert report (CX-21) and related photographs and diagrams (CDX-32). Mr. Laney testified that page 20 of his expert report contains a photograph of the Accelerator breech plug with O-ring removed, showing the groove

PUBLIC VERSION

and nose portion, and a photograph of the Accelerator breech plug with O-ring installed. He said that page 23 of his report contains photographs of a composite image showing a schematic made by Traditions and a photograph of the Accelerator breech plug installed into a Vortek rifle, and that page 21 contains a photograph of the Vortek rifle breech plug chamber. (CX-190 at Q. 159-168.)

Mr. Laney testified, *inter alia*, that “[f]orward from the internally threaded engagement portion, the breech plug chamber includes a stepped initial portion (40), which is a part of the breech plug chamber that begins at a change in dimension, such as a change in diameter. The stepped initial portion in the Vortek rifle begins at a step or throat marked V1 in photographs at page 23 of CX-21.” Mr. Laney testified that the Accelerator breech plug is adapted to be received in the breech plug chamber of the Vortek rifle, and that it includes a nose portion with a circumferential groove. Mr. Laney said the Accelerator breech plug includes a “deformable seal element,” which he describes as “an O-ring (55).” Mr. Laney asserted that when the Accelerator breech plug is free-standing, the O-ring has a diameter that “stands proud of the nose portion of the breech plug.” Mr. Laney says that this is shown in a photograph on page 20 of CX-21.⁴ Mr. Laney continues that “[w]hen the Accelerator breech plug is threaded into the Vortek rifle breech plug chamber (36), as shown at page 23 of CX-21, it is my opinion based on visual inspection of the assembly that the O-ring (55) is deformed to fit within diameter “D2” of the stepped initial portion (40) of the breech plug chamber.” (CX-190 at Q. 173-179.)

Respondents’ Position: Respondents’ argue that Complainants excluded and disclaimed an O-ring seal design in the ‘694 invention and are now estopped from claiming that design as

⁴ Mr. Laney testified that the Vortek rifle and the Accelerator breech plug infringe claim 11 for “substantially the same reasons” discussed with reference to claim 1. (Citing CDX-31; CDX-32.)

PUBLIC VERSION

infringing the '694 patent. Respondents assert that, if the O-ring design is not claimed, then the asserted claims of the '694 patent are invalid in view of Lee.⁵

Respondents argue that the accused products do not have a “stepped initial portion” in the breech plug chamber. In their opposition, Respondents refer to a cross-sectional schematic view of, among others, the muzzle loading barrel of the Vortek rifle with an Accelerator breech plug inserted therein. Respondents aver that there is “no indented step between the innermost diameter of the threaded portion of the barrel and the portion of the barrel that ultimately receives the end of the breech plug. The innermost diameter of the threaded portion is constant throughout the length of the breech plug.”⁶ (RR at 40-42.)

Staff's Position: Staff takes the view that there are substantial questions about whether or not Thompson can establish a likelihood of success with respect to infringement of the '694 patent.

Discussion and Conclusions: The parties differ on two material issues related to whether or not the accused products infringe claims 1 and 11. First, whether or not the O-ring of the Accelerator breech plug meets the “deformable seal element” taught in asserted claims 1 and 11. Second, whether or not the accused Vortek rifle meets the “stepped initial portion” within the breech plug chamber, as taught by asserted claims 1 and 11.

In Section IV.B.2, *supra*, I found that the '694 patent applicants did not disclaim an O-ring as a seal element. In the interest of brevity, that discussion will not be repeated here; but it is incorporated herein by this reference.

Respondents' expert Seth Bredbury admitted under cross-examination that an O-ring can be a deformable seal. (Tr. at 306:22-25.) While Mr. Bredbury maintained that the file history of

⁵ Respondents' assertions of invalidity are treated in Section IV.C, herein.

⁶ Respondents also assert that the Accelerator breech plug has no “nose portion;” but I find that it clearly does have a “nose portion”. See Section IV.D.3, *infra*.

PUBLIC VERSION

the '694 patent shows a disclaimer of O-rings from the term deformable seal element, he admitted under cross-examination that there is no reference to "O-rings" in the '694 patent and that the file history does not contain a disclaimer of all O-rings in general. (Tr. at 311:2-5, 311:19-313:11)

Mr. Tom Hall testified for respondents. He is the President of Traditions. He said his company, Traditions, has been trying to {

. } (Tr. at 390:18-391:17; 393:3-8;

393:10-394:9.) Mr. Hall admits that the literature about the Vortek rifle says that it features a "heavy duty O-ring that eliminates blowback." Mr. Hall admitted that this feature helps reduce the fouling of the threads. (Tr. at 396:6-13.)

Ms. Susanna Lameiras, an employee of Ardesa, testified that her company {

} (Tr. at 423:9-12, 428:12-429:20.)

The evidence supports a finding that the Accelerator breech plug used in the Vortek rifle meets the "deformable seal element" element of claims 1 and 11 of the '694 patent. I turn to the requirement in claims 1 and 11 that the breech plug chamber has a "stepped initial portion" as that term is construed in Section IV.B.3, *supra*.

Although the complainants' expert, Mr. Mark Laney, testified that the breech plug chamber of the Vortek rifle has the required "stepped initial portion," I find that the evidence of record does not support his opinion. Respondents assert that, in the accused Vortek rifle, the innermost diameter of the threaded portion is constant throughout the length of the breech plug,

PUBLIC VERSION

and there is no indented step between the innermost diameter of the threaded portion of the barrel and the portion of the barrel that ultimately receives the end of the breech plug. (RR at 43.) Respondents' expert, Mr. Seth Bredbury, testified credibly that the accused Vortek rifle has no step or reduction in breech plug chamber diameter forward the threaded portion of the breech plug chamber and before the rifling bore. He testified that he observed the rifles themselves, and had reviewed, among other things, RX-441, which is a production product drawing of the accused Vortek rifle's breech plug chamber showing dimensions. He testified that the innermost (minor) diameter of the internally threaded portion at the breech end of the barrel used to engage the Accelerator breech plug threads is 14.20mm plus or minus 0.10mm, and the diameter of the non-threaded portion at the breech end of the barrel immediately forward of the threaded portion is the same. (RX-439C at Q. 11-21.)

A review of the evidence supports Mr. Bredbury's testimony. RPX-1, the Vortek rifle, with an Accelerator breech plug *in situ*, demonstrates the relative diameters to which Mr. Bredbury testified, and that evidence is further illustrated by RDX-12, which is a close up photograph with line markings showing the relationships of the diameters described in RX-441 and as can be seen in RPX-1.

Based upon the foregoing, I find that Respondents have raised a "substantial question" concerning infringement, and complainants have failed to meet their burden to show a likelihood of success on the merits that the accused Vortek rifle with the Accelerator breech plug infringes claims 1 or 11 of the '694 patent.

3. Claim 10

Complainants assert claim 10 against Respondents. Claim 10 recites:

PUBLIC VERSION

A breech plug for a muzzle loading firearm having a barrel with a muzzle end and a longitudinal bore extending rearward from said muzzle end to a rear barrel portion with a breech plug chamber, said breech plug comprising:

a breech plug having a one-piece, integral body with an outer peripheral surface and adapted to be received in said breech plug chamber, said breech plug body having a nose adapted to face said longitudinal bore, a breech end opposite said nose, a nose portion adjacent said nose and a threaded engagement portion adjacent said breech end, said threaded engagement portion engaging a complimentary threaded inner periphery of said breech plug chamber, said nose portion having a circumferential groove formed in said outer peripheral surface thereof and spaced from said nose; and

a seal element positioned within said circumferential groove to thereby form a gas seal to prevent fouling of said threaded engagement portion during firing.

(JX-1 at 5:31-48.)

Complainants' Position: Mr. Laney, Complainants' expert and employee, testified that “[f]or substantially the same reasons discussed above with reference to claim 1, it is my opinion that the Accelerator breech plug, standing alone, includes each and every element of the ‘694 patent claim 10 ...” (CX 190 at Q. 181 (Citing CDX-31; CDX-32).)

Respondents' Position: The only specific assertion made by Respondents to show that the accused Accelerator breech plug does not infringe claim 10 is that it does not contain a “nose portion” as required by claims 1 and 10. Respondents assert that in all three asserted claims “the nose or forward portion is defined as ... the portion of the breech plug forward the threaded portion of the breech plug, having a smaller diameter than the smallest diameter of the threaded portion of the breech plug. It is the portion of the breech plug that is insertable within the stepped initial portion of the barrel. It defines a circumferential groove for receiving sealing rings.” (RR at 44.)

Staff's Position: Staff offered no specific position regarding claim 10.

PUBLIC VERSION

Discussion and Conclusions: For purposes of this TEO issue, claim 10 differs from claims 1 and 11 in two ways. First, claim 10 does not contain an element that requires a “stepped initial portion” of the breech plug chamber. Second, claim 10 does not require that the “seal element” be “deformable.”

I have already found that the Accelerator breech plug used with the Vortek rifle has a “deformable seal element” which is embodied in its O-ring that is set in a circumferential groove in the nose portion of the breech plug. Inasmuch as, claim 10, requires a seal element and is silent on the requirement that the seal element be “deformable,” the discussion of that seal element set forth, *supra*, in connection with claims 1 and 11 is applicable here, and I incorporate it herein by reference.

The remaining issue raised by Respondents is that the Accelerator breech plug does not have a “nose portion” “adapted to be received in said breech.” Respondents argue that claims 1 and 10 require a “‘nose portion’ for the breech plug inserted within the breech plug chamber.” Respondents then shift to claim 11 and say that it requires a “nose portion” described as: “a forward portion adjacent said nose with an outside diameter dimensioned to be received by said stepped initial portion, said forward portion having a circumferential groove formed in said body and spaced from said nose.” Respondents then aver, incorrectly, that “[i]n all three claims, the nose or forward portion is defined as discussed *supra* i.e., the portion of the breech plug forward the threaded portion of the breech plug, *having a smaller diameter than the smallest diameter of the threaded portion of the breech plug. It is the portion of the breech plug that is insertable within the stepped initial portion of the barrel.* It defines a circumferential groove for receiving sealing rings.” (RR at 44) (emphasis added.)

PUBLIC VERSION

Respondents fail to recognize the differences between claim 10 and claims 1 and 11. Claim 10 does not include the requirement for a stepped initial portion, and there is no need for the “nose portion” of the breech plug contemplated in claim 10 to have a smaller diameter than the smallest diameter of the threaded portion of the breech plug. Claim 10 does *not* require that the nose portion be “insertable within the stepped initial portion of the barrel,” because claim 10 does not require that there be a “stepped initial portion” within its breech plug chamber. It follows that the breech plug of claim 10 may include a nose portion that is, for example, the same diameter as the smallest diameter of the threaded portion of the breech plug and which diameter allows the breech plug to be received in said breech plug chamber.

The evidence in the record shows that the accused Accelerator breech plug used in the Vortek rifle does, in fact, have a “nose portion” adjacent said nose, and that the diameter of said nose portion is such that the breech plug is adapted to be received in the breech plug chamber of the Vortek rifle. (CX-190 at Q. 174-176, 181; CDX-31; CDX-32; RPX-1; RX-442 (illustrated by RDX-12).)

Based upon all of the foregoing, I find that complainants have shown a likelihood of success on the merits regarding infringement of claim 10 by the Accelerator breech plug used with the Vortek rifle.

E. Domestic Industry

1. Applicable Law

In patent-based proceedings under Section 337, a complainant must establish that an industry “relating to the articles protected by the patent...exists or is in the process of being established” in the United States. 19 U.S.C. § 1337(a)(2) (2008). Under Commission precedent, the domestic industry requirement of Section 337 consists of an “economic prong” and a

PUBLIC VERSION

“technical prong.” *Certain Data Storage Systems and Components Thereof*, Inv. No. 337-TA-471, Initial Determination Granting EMC’s Motion No. 471-8 Relating to the Domestic Industry Requirement’s Economic Prong (unreviewed) at 3 (Public Version, October 25, 2002).

The “economic prong” of the domestic industry requirement is satisfied when it is determined that the economic activities set forth in subsections (A), (B), and/or (C) of subsection 337(a)(3) have taken place or are taking place. *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, USITC Pub. No. 3003, 1996 ITC LEXIS 556, Comm’n Op. at 21 (Nov. 1996). With respect to the “economic prong,” 19 U.S.C. § 1337(a)(2) and (3) provide, in full:

(2) Subparagraphs (B), (C), (D), and (E) of paragraph (1) apply only if an industry in the United States, relating to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.

(3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned-

(A) significant investment in plant and equipment;

(B) significant employment of labor or capital; or

(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

Given that these criteria are listed in the disjunctive, satisfaction of any one of them will be sufficient to meet the domestic industry requirement. *Certain Integrated Circuit Chipsets and Products Containing Same*, Inv. No. 337-TA-428, Order No 10, Initial Determination (Unreviewed) (May 4, 2000), citing *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, Commission Op. at 15, USITC Pub. 3003 (Nov. 1996).

To meet the technical prong, the complainant must establish that it practices at least one

PUBLIC VERSION

claim of the asserted patent. *Certain Point of Sale Terminals and Components Thereof*, Inv. No. 337-TA-524, Order No. 40 (April 11, 2005). “The test for satisfying the ‘technical prong’ of the industry requirement is essentially same as that for infringement, i.e., a comparison of domestic products to the asserted claims.” *Alloc v. Int’l Trade Comm’n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). The technical prong of the domestic industry can be satisfied either literally or under the doctrine of equivalents. *Certain Excimer Laser Systems for Vision Correction Surgery and Components Thereof and Methods for Performing Such Surgery*, Inv. No. 337-TA-419, Order No. 43 (July 30, 1999).

2. Technical Prong

Complainants contend that the Thompson/Center Encore Rifle with SpeedBreech XT breech plug practices claim 1 of the ‘694 patent. Complainants offer expert testimony from Mr. Laney to support this contention. (See CX-190; CDX-29; CDX-30.) Specifically, Mr. Laney offers an element-by-element comparison of the Thompson/Center product and claim 1. (CX-190 at Q. 146-156; CDX-29; CDX-30.) Neither Respondents nor Staff offer any rebuttal evidence or argument on the technical prong. Based on the unrebutted evidence offered by Complainants, I find that Complainants have demonstrated that they are likely to succeed in proving the technical prong of the domestic industry requirement.

3. Economic Prong

Complainants contend that they satisfy the economic prong due to their significant investment in plant in equipment, significant employment of labor and capital, and substantial investment in the exploitation of the articles protected by the ‘694 patent.

With regard to investment in plant and equipment, Complainants manufacture all of their muzzle-loading firearms in the United States. (CX-192C at Q. 10.) Complainants have a facility

PUBLIC VERSION

in Springfield, Massachusetts that includes { } manufacturing stations for muzzle-loading firearms. (CX-193C at Q. 44.) Approximately { } of manufacturing space in Springfield is devoted to products allegedly covered by the '694 patent. (*Id.* at Q. 47.)

With regard to investment in the exploitation of the '694 patent through research and development, Complainants have about { } of plant space dedicated to muzzleloader research and development, with about { } specifically dedicated to products allegedly covered by the '694 patent. (CX-191C at Q. 43-46.) Complainants' 2011 research and development budget for products allegedly covered by the '694 patent is { } and the number of research and development personnel involved is { } (CX-195C at Q. 22.)

Neither Respondents nor Staff offer any evidence or argument to rebut these facts. Based on the unrebutted evidence offered by Complainants, I find that Complainants have demonstrated that they are likely to succeed in proving the economic prong of the domestic industry requirement.

V. IRREPARABLE HARM

A. Applicable Law

A harm is considered "irreparable harm" when "monetary damages cannot be calculated with a reasonable degree of certainty or will not adequately compensate the injured party."

AmeriGas Propane, Inc. v. Crook, 844 F. Supp. 379, 390 (M.D. Tenn. 1993); *Leach v. Ford Motor Co.*, 299 F. Supp. 2d 763, 774 (E.D. Mich. 2004) ("To establish irreparable harm, a party seeking preliminary injunctive relief must demonstrate that he is threatened by some injury for which there exists no adequate legal remedy such as monetary damages."); *see also* 11A Charles Alan Wright et al., *FEDERAL PRACTICE & PROCEDURE* § 2948.1 (2d ed. 2009).

PUBLIC VERSION

The Federal Circuit has found irreparable harm in a variety of instances. *See, e.g., Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1382-1383 (Fed. Cir. 2006) (affirming district court's finding that the patentee would suffer irreparable harm in the form of irreversible price erosion, loss of goodwill, the potential reduction in work force, and the discontinuation of clinical trials); *Bio-Technology General Corp. v. Genentech, Inc.*, 80 F.3d 1553, 1566 (Fed. Cir. 1996) (finding that loss of revenue, goodwill, and research and development support constitute irreparable harm).

B. Analysis

Complainants' Position: Complainants contend that the domestic industry will be irreparably harmed due to: (1) price erosion; (2) exclusivity erosion; (3) loss of goodwill and reputation; and (4) unquantifiable lost sales and market share.

Complainants assert that the sale of muzzle-loading firearms is concentrated in the late summer and early fall, when hunters purchase firearms in preparation for the late fall and early winter hunting season. Complainants assert that final relief before the Commission will not likely come until after at least two additional sales seasons have passed. Complainants claim that they will be required to reduce their labor force due to the harm caused by Respondents' actions.

Complainants claim that price erosion has already occurred and will be exacerbated if temporary relief is not granted. Complainants state that due to the competition from Respondents' accused products, Complainants were forced to design and offer a low-end product – the Impact product line – that it could not equip with the patented breech plug technology. Complainants claim that the domestic industry suffered because there were lost sales of Complainants' products that practice the '694 patent. Complainants assert that their weighted

PUBLIC VERSION

average in-line muzzle-loading firearm prices eroded by a significant amount per unit, representative of mix-driven price erosion.

Complainants assert that they have only included the patented technology in their premium products, and charged a price premium for firearms including the patented technology. Complainants state that Respondents, by placing the patented technology in lower end products without any corresponding price increase, have taken away the premium nature of the patented technology. Complainants thus believe the exclusivity of the technology claimed in the '694 patent has been eroded.

Complainants assert that because Respondents' products with the patented breech plugs sell for so much less than Complainants' products with the patented breech plugs, consumers will conclude that they are being overcharged when purchasing Complainants' firearms and replacement breech plugs. Complainants state that this will harm their goodwill and reputation in the industry. Complainants argue that their reputation has further suffered because Respondents have won awards for their "innovations," which are actually Complainants' patented innovations. According to Complainants, TSG has used these awards as an integral part of their marketing campaign.

Complainants assert that they will suffer unquantifiable lost sales and market share. Complainants state that given the uncertainty of their response to Respondents' alleged infringement, and any subsequent competitive response from Respondents, it is very difficult to prospectively quantify the extent of the negative effect on Complainants' revenues if Respondents' alleged infringement is allowed to continue. Complainants also note that they have seen a drop in sale of "convoyed products," which are ancillary products that are sold as a result of the sale of a firearm.

PUBLIC VERSION

Finally, Complainants argue that their lost profits have reduced the investments that they can make in the domestic industry. Complainants claim that their reduced profits have influenced their decisions to lay off domestic employees, relocate and consolidate facilities, and reduce investments in research and development.

Respondents' Position: Respondents contend that Complainants have not, and cannot, prove irreparable harm. Respondents claim that any harm suffered by Complainants is easily quantifiable and thus not irreparable.

Respondents assert that damages due to price erosion are easily calculable. According to Respondents, only in narrow circumstances can price erosion be irreparable. Respondents claim that because irreparable price erosion requires more than just a difference in price, it is typically only found in the pharmaceutical industry due to the industry's intricate pricing scheme. Respondents claim that Complainants have failed to show that the prices of individual models have declined. Respondents state that Complainants have not shown that the price of any particular model would be higher, but for the accused products. Respondents note that Complainants claim that the weighted average of Thompson's in-line muzzle-loading firearm price has eroded. Respondents explain that this is due to the fact that the Thompson now sells relatively more low-end models – especially its newer Impact model – and fewer high-priced models. Respondents argue that this is not price erosion and is more indicative of Complainants' successful entry into the low-end muzzle-loading firearm market.

Respondents argue that Complainants failed to make a case for "exclusivity erosion." Respondents note that Complainants do not cite any cases to support such a concept. Respondents state that Complainants based their argument on a comparison of aftermarket (replacement) breech plugs. Respondents claim that such a comparison is not relevant because

PUBLIC VERSION

once a user purchases a firearm, the user is locked into purchasing any replacement breech plug from the same company.

Respondents assert that Complainants' arguments regarding loss of goodwill and reputation are speculative. Respondents note that Complainants argue that consumers will conclude that Complainants are overcharging for its patented breech plug when comparing the replacement costs of a Thompson Speed Breech plug and the lower-priced Traditions Accelerator breech plug. Respondents assert that this argument suffers from three flaws. First, most consumers are unlikely to ever know the cost of a replacement breech plug, as a speed breech plug is designed as a permanent feature of the product and is only replaced if lost or damaged. Second, a user becomes locked-in to either a Thompson breech plug or Traditions breech plug through his choice of which firearm to purchase, meaning that the user would have no need to compare prices. Third, there are other breech plugs made by Thompson and other companies that are comparable in price to Respondents' Traditions breech plug, which shows that Thompson does charge a large premium for its patented breech plug.

Respondents note that Complainants cite to awards given to Respondents for their firearms. Respondents claim that the awards have nothing to do with the breech plug, and are instead focused on shooting performance. Further, Respondents argue that Complainants have not demonstrated how an increase in reputation for Respondents results in a decrease in reputation for Complainants. Respondents note that there is evidence that some reviewers have found that the patented breech technology actually diminishes the value of the firearms that incorporate such a technology.

Respondents assert that Complainants have not offered any evidence of lost sales and lost marketshare, and that even if they did, such injuries can be compensated with monetary

PUBLIC VERSION

damages. Respondents claim that Complainants' argument regarding convoyed sales is without merit because purchasers are not locked into convoyed products when they purchase a firearm. Respondents assert that there is no evidence that the purchase of a firearm from a particular manufacturer would influence a consumer to purchase convoyed products from that same manufacturer. Respondents claim that Complainants have not demonstrated that their research and development budget will suffer due to the alleged infringement.

Respondents argue that even if Complainants could demonstrate any of the alleged harms, Complainants cannot show that they are caused by Respondents' products. Respondents note that the other respondents in this investigation have enjoyed more than 40% of the market share since 2005. Respondents claim that Complainants offer no explanation regarding why Respondents will cause irreparable harm, but the other respondents will not. Respondents argue that because there are multiple competitors in the market, any harm done to Complainants cannot be directly attributed to Respondents.

Respondents claim that there are multiple features on the firearms at issue, and that Complainants have not shown that any particular feature is more or less important to a consumer. Respondents claim that there are many other features beyond the breech plug that could influence a consumer's purchase decision.

Staff's Position: Staff contends that Complainants have not set forth sufficient facts to support their claim of irreparable harm. Staff believes that Complainants have not sufficiently demonstrated that the alleged price erosion is due to the featured protected by the '694 patent.

Discussion and Conclusions: Based on the evidence in the record, I find that Complainants have failed to demonstrate the irreparable harm necessary to grant their motion for

PUBLIC VERSION

temporary relief. Complainants raise five different ways that they believe they are being irreparably harmed by Respondents' actions. I address each of these five issues below.

Price Erosion

Complainants allege that they have suffered price erosion due to Respondents' alleged infringement. Before addressing that issue, it helps to have a general understanding of the pricing in the relevant muzzle-loading firearm market. Complainants' expert Wayne Hoerberlein divided the market into the following categories: {

} (CX-196C at Q. 127.)

Mr. Hoerberlein defines { } products as products with a base model Manufacturer's Suggested Retail Price ("MSRP") of { } (CX-196C at Q. 128.) The products that fit into this category are Thompson/Center's Triumph Bone Collector models, Thompson/Center's Omega SST, and CVA's⁷ Apex product line. (*Id.*) The { } products are products with a base model MSRP of { }. (*Id.* at Q. 130.) These products include the Thompson/Center Triumph and Omega Z5 models, Traditions' Vortek product line, most of Traditions' Pursuit product line, and CVA's Accura product line. (*Id.*) The { } products are products with a base model MSRP of { }. (*Id.* at Q. 131.) These products include Thompson/Center's Impact product line, CVA's Optima and Wolf product lines, and Traditions' Pursuit UL models and Buckstalker product line. (*Id.*) Finally, the { } products are products with a base model MSRP of less than { }. (*Id.* at Q. 134.) These products include CVA's Buckhorn model line and Traditions' Tracker 209 model line. (*Id.*)

Complainants allege that the Thompson Speed Breech plug and Speed Breech XT plug practice the '694 patent. (CX-196C at Q. 87.) The Speed Breech plug and Speed Breech XT

⁷ "CVA" stands for Connecticut Valley Arms. CVA is a named respondent in this investigation, but was not included in Complainants' motion for temporary relief.

PUBLIC VERSION

plug can only be found on Thompson's { } products. (*Id.* at Q. 212.) Thompson does not include the Speed Breech or Speed Breech XT plugs on its { } Impact model line. (*Id.* at Q. 213.) Complainants allege that Traditions' Accelerator breech plug infringes the '694 patent. (*Id.* at Q. 103.) The Accelerator breech plug can be found on Traditions' { } products. (*Id.* at Q. 220-228.) This includes the { } Buckstalker Accelerator product line, with suggested retail prices ranging from { }. (*Id.* at Q. 231.)

In addition, consumers can purchase replacement breech plugs. Thompson's Speech Breech and Speed Breech XT plugs sell at MSRPs ranging from { } (CX-196C at Q. 235.) Traditions' Accelerator breech plug is sold at an MSRP of { } (*Id.* at Q. 236.)

Price erosion refers to the concept that "but for" the infringement, a patentee would have sold its product at a higher price. *See Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369,1378 (Fed. Cir. 2003); *Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1357 (Fed. Cir. 2001). Respondents' expert aptly describes price erosion as {

} (RX-436C at Q. 24.) A patentee may recover monetary damages in district court due to price erosion. *Ericsson*, 352 F.3d at 1378; *Crystal Semiconductor*, 246 F.3d at 1357. In the context of preliminary injunctions, the Federal Circuit has found that irreversible price erosion may constitute evidence of irreparable harm. *See, e.g., Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1382 (Fed. Cir. 2006) (affirming district court's grant of a preliminary injunction). Complainants allege that there is evidence of what Mr. Hoerberlein has termed "mix-driven price erosion." (CX-196C at Q. 254.) Mr. Hoerberlein explains that this is the result of Complainants' attempt to compete with Respondents' infringing, comparably equipped { } inline

PUBLIC VERSION

muzzle-loading firearms with lower list prices. (*Id.* at Q. 251.) Specifically, Complainants sought to compete with the Traditions Vortek line, the Pursuit XLT Accelerator, Pursuit LT Accelerator, Pursuit II XLT, and Pursuit XLT Extreme models. (*Id.*) In order to do that, Complainants developed the Impact product line as a { } product that does not include the patented technology from the '694 patent. (*Id.* at Q. 253.) Complainants did not include the patented breech plug technology in the Impact product line because the pricing of the Impact {

} (*Id.*) As Mr. Hoerberlein explains:

Due to competition from accused products listed at prices lower than its { } product offers, Thompson/Center had to design and offer a product so low in price that it could not equip that product with the '694 patented technology – thereby failing to expand the domestic industry by selling more inline muzzle-loading firearms with the '694 patented technology. However framed, the Impact product line was listed at prices lower than Thompson/Center's other inline muzzleloaders and, as the Impact product line grew to represent a larger portion of Thompson/Center's inline muzzleloader unit volume in 2010, Thompson/Center's weighted average inline muzzleloader prices eroded by approximately { } per unit (i.e., mix-driven price erosion)[.]

(*Id.* at Q. 254.) Mr. Hoerberlein also described “mix-driven price erosion” in the following manner:

Price erosion caused on a collective basis of all the various products. Really, mathematically, it's because you're selling a lower priced item, selling more of a lower priced item, in terms of the mix that you have in your overall sales.

(Tr. at 254:6-11.)

While Mr. Hoerberlein uses the term “price erosion” in his analysis, he is not actually claiming that Complainants' products would sell at a higher price but for Respondents' alleged infringement. (*See* Tr. at 198:8-12, 199:21-200:1.) Instead, Mr. Hoerberlein asserts that the weighted average price of Complainants' products dropped due to the introduction of the { } Impact product line and the large sales of the Impact products. (CX-196C at Q. 254; Tr. at

PUBLIC VERSION

241:11-19; CDX-40C.) Mr. Hoerberlein terms this “mix-driven price erosion,” but admits that he and his team coined that term, and that this concept is not commonly understood or used in financial accounting or damages accounting. (Tr. at 193:19-195:12.)

I do not find that Complainants have demonstrated price erosion. Complainants fail to show that they have reduced the prices of their products that allegedly practice the ‘694 patent due to Respondents’ alleged infringement. (RX-436C at Q. 27; CDX-42C; Tr. at 198:8-12, 199:21-200:1.) In fact, the evidence shows that the prices of Complainants’ products have held relatively steady since 2005. (*Id.*) As Dr. Kaplan notes, {

} (RX-436C at Q. 27.)

I find that the fact that Complainants’ average price of its muzzleloaders has decreased due to the introduction and sale of the { } Impact model line does not amount to a showing of irreparable harm. As described *supra*, Complainants have not shown any past, current, or future price erosion. Complainants have merely demonstrated that in 2010, Complainants’ customers purchased the { } Impact model rather than Complainants’ other, more expensive muzzleloaders. (RX-436C at Q. 29-30.)

Even if Complainants could demonstrate that they have suffered or would suffer price erosion, which they have not done, there still remains the question of causation. Complainants must demonstrate that Respondents’ alleged infringement caused the asserted “mix-driven price erosion.” Therefore, Complainants would need to demonstrate that it was Respondents’ alleged infringement that caused them to introduce the low-end Impact model line that reduced the average price of Complainants’ products.

PUBLIC VERSION

Respondents offered the Smith & Wesson Holding Corporation's 10K form for the fiscal year ending April 30, 2009. In that document, the company acknowledged that the domestic consumer firearm market experienced a decline in demand beginning in 2007 due to the subprime loan crisis, a tightening in the credit markets, the continued worsening of the housing market, increasing fuel prices, less than robust employment growth, and generally weak economic conditions. (RX-427 at 14.) In particular, the document notes a significant decline for the company's hunting products. The decline was attributed to the weak economy, unseasonably warm weather, excess levels of hunting product inventory in the sporting goods distribution channel, and the premium nature of the hunting products that Smith & Wesson offers. (*Id.*) The document notes that Smith & Wesson has taken a number of actions to reduce its losses, including "the introduction of lower price-point products in an effort to reach a larger segment of the market[.]" (*Id.*) Very similar statements can be found in Smith & Wesson's 10K form for the fiscal year ending on April 30, 2010. (RX-390 at 17.) Mr. Hoerberlein acknowledged the statements made in these documents, and confirmed that he did not consider these documents when rendering his opinion. (Tr. at 207:8-212:25.)

These 10K documents provide evidence that there are reasons other than the alleged infringement for Complainants' decision to introduce the { } Impact model line. This is consistent with Dr. Kaplan's opinion that the introduction of the Impact product was in response to the economic conditions of the muzzleloader industry. (RX-436C at Q. 31.) Because Complainants have failed to demonstrate the necessary causation for any price erosion, I find that Complainants cannot prove irreparable harm.

Finally, even if Complainants had been successful in demonstrating price erosion, Complainants have failed to explain why such price erosion could not be remedied through

PUBLIC VERSION

monetary damages. As Dr. Kaplan notes, the mere existence of price erosion is not sufficient to demonstrate irreparable harm. (RX-436C at Q. 37.) Patentees may recover monetary damages in district court due to price erosion. *Ericsson*, 352 F.3d at 1378; *Crystal Semiconductor*, 246 F.3d at 1357. Complainants offer no evidence that the alleged price erosion cannot be quantified, or that the price erosion is irreversible in nature. Without such evidence, any price erosion, even if it was proven, would not result in irreparable harm.

Exclusivity Erosion

Complainants next allege what they term “exclusivity erosion.” Complainants state that they have not licensed the ‘694 patent to any non-affiliated companies. (CX-195C at Q. 17-18.) Complainants state that they have attempted to exercise their exclusive patent rights by marketing the breech plug technology of the ‘694 patent as a “premium” feature suitable only for { } products. (CX-196C at Q. 204.) Complainants note that Respondents have equipped their { } products with the ‘694 patent technology. (*Id.* at Q. 205.) Complainants claim that by infringing the ‘694 patent, Respondents have eroded Complainants’ ability to exercise exclusive rights to the patented technology. (*Id.*)

I do not concur that Complainants have suffered irreparable harm due to “exclusivity erosion.” The concept is not well-defined by Complainants and Mr. Hoerberlein, and they fail to cite to any case law or treatises discussing the issue of “exclusivity erosion.” I note that Dr. Kaplan also expressed confusion regarding the exact nature of “exclusivity erosion,” and how it differs from price erosion and lost sales volume. (RX-436C at Q. 41.)

Complainants assert that they have { } not { } license the ‘694 patent, and therefore their exclusive rights have been eroded by Respondents’ infringement. If such an argument was enough to demonstrate irreparable harm, then any patentee that { } not to license its patent

PUBLIC VERSION

would be able to prove irreparable harm in the face of alleged infringement. “A patent grants its owner the right to exclude others from making, using, or selling the patented invention.”

Carborundum Co. v. Molten Metal Equip. Innovations, Inc., 72 F.3d 872, 878 (Fed. Cir. 1995).

Any violation of that right does not automatically result in irreparable harm, even if the patentee has made the conscious choice not to license the patent.

Mr. Hoerberlein also discusses the relative prices of the replacement breech plugs sold by Complainants and Respondents. Mr. Hoerberlein explains that Complainants list their patented breech plugs at a { } premium above the prices of their unpatented breech plugs. (CX-196C at Q. 206.) Specifically, Mr. Hoerberlein notes that the replacement Speech Breech and Speed Breech XT plugs are listed at MSRPs ranging from approximately { } while an unpatented breech plug sold by Complainants is listed at an MSRP of approximately { }. (*Id.* at Q. 209.) Mr. Hoerberlein explains that this price differential represents Complainants’ view of the value added by the ‘694 patent technology. (*Id.* at Q. 210.) Mr. Hoerberlein states that Respondents’ accused replacement Accelerator breech plug is listed at a MSRP of { }, which is even less than the MSRP for Complainants unpatented, { } breech plug. (*Id.* at Q. 215.) From this, Mr. Hoerberlein attempts to draw the conclusion that there has been “exclusivity erosion” of the ‘694 patent because Respondents “give[] away for free” what Complainants value dearly. (*Id.* at Q. 218.)

The fact that the MSRP of Complainants’ replacement breech plugs is so much more than the MSRP of TSG Respondents’ accused replacement breech plug does not demonstrate any irreparable harm due to “exclusivity erosion.” Complainants have not demonstrate the irreparable harm caused by the fact that Respondents’ sale of replacement breech plugs at a low

PUBLIC VERSION

price contradicts Complainants' attempts to market the '694 patent technology as a "premium" feature.

Furthermore, Dr. Kaplan describes the multiple flaws in Mr. Hoerberlein's analysis. (RX-436C at Q. 42-45.) In particular, using the price of a replacement breech plug as a proxy for the value of the patented technology is not accurate because, among other reasons, a customer is locked in to buying a particular brand of breech plug based on the brand of muzzleloader he owns. (*Id.* at Q. 44.) So, for example, a customer who purchases a firearm from Complainants must buy a replacement breech plug made by Complainants. (*Id.*) Mr. Hoerberlein acknowledged the phenomenon of "lock in" during cross examination. (Tr. at 228:10-229:7.)

Loss of Goodwill & Reputation

Complainants argue that they are suffering a loss of goodwill and reputation due to Respondents' infringement. Complainants' first argument on this issue relates to the cost difference between Complainants' replacement breech plugs that are alleged covered by the '694 patent, and Respondents' replacement breech plugs that allegedly infringe the '694 patent. Mr. Hoerberlein testifies that Complainants' customers may conclude that {

} (CX-196C at Q. 240.) According to Mr. Hoerberlein, this conclusion may lead to Complainants' customers forming a negative impression about Complainants and deciding not to purchase Complainants' products in the future. (*Id.*)

I find this argument to be wholly speculative. Mr. Hoerberlein does not cite to any actual evidence of customers forming a negative opinion of Complainants after comparing the price difference for the replacement breech plugs; he merely hypothesizes that this is one way that

PUBLIC VERSION

customers may react when comparing prices. (CX-196C at Q. 240.) Such speculation cannot support a finding of irreparable harm.

Dr. Kaplan identifies further problems with this argument. He asserts that, because customers are locked in to buying replacement breech plugs made by the same company that makes the firearm, there would be no reason for customers to compare prices of breech plugs made by different companies. (RX-436C at Q. 48.)

Breech plugs are not intended to be regularly replaced. Dr. Kaplan states that for every { } Triumph muzzleloaders sold by Complainants from 2007 through 2010, Complainants sold less than { } replacement Speed Breech plugs for use in the Triumph muzzleloaders. (RX-436C at Q. 48.) Even if every purchaser of Complainants' replacement breech plugs formed a negative opinion due to the price differential, it would still amount to a small percentage of Complainants' customers. (*Id.*)

Additionally, Complainants argue that they are suffering a loss of goodwill and reputation due to the fact that Respondents are winning awards for their "innovations," which are actually the innovations found the '694 patent. (CX-101; CX-102; CX-103.) Complainants fail to explain how an increase in Respondents' reputation causes a decrease in Complainants' reputation. Furthermore, while the awards mention the Accelerator breech plug, there is no indication that the awards were given due to the technology claimed in the '694 patent. (*Id.*) In sum, I do not find that these awards given to Respondents provide evidence of irreparable harm to Complainants' reputation.

Unquantifiable Lost Sales & Market Share

Complainants assert that they have seen a loss in sales and market share due to the alleged infringement by Respondents. Complainants further assert that they have seen a decrease

PUBLIC VERSION

in sales of “convoyed products,” which are accessories or services sold in conjunction with the sale of the patented firearm. Mr. Hoerberlein testifies that this loss in sales would be difficult to quantify. Specifically, he opines:

[G]iven the uncertainty of Thompson/Center’s response to Traditions’ expanded infringement and any subsequent competitive response from Traditions or CVA – it would be very difficult to prospectively quantify the extent of the negative effect on Thompson/Center’s revenues if Traditions’ alleged infringement is permitted to continue or expand.

(CX-196C at Q. 272.)

Alone, lost sales or lost market share do not give rise to irreparable harm because damages due to these injuries are calculable. *See Presidio Components Inc. v. American Technical Ceramics Corp.*, 723 F. Supp. 2d 1284, 1338 (S.D. Cal. 2010) (stating that the patentee failed to show irreparable harm because it failed to explain why money damages would not compensate it for any lost market share); *Mike’s Train House, Inc. v. Broadway Ltd. Imports, LLC*, 708 F. Supp. 2d 527, 532 (D. Md. 2010) (“Because potential lost sales revenue is compensable through damages, evidence of such losses is insufficient by itself to support a finding of irreparable harm.”); *Albany Molecular Research, Inc. v. Dr. Reddy’s Labs., Ltd.*, 2010 WL 2516465, at *10 (D.N.J. June 14, 2010) (“[I]t has been held that loss of market share and price erosion do not by themselves amount to irreparable harm.”) In addition, the law allows for the recovery of damages due to the sale of convoyed products. *See American Seating Co. v. USSC Group, Inc.*, 514 F.3d 1262, 1268 (Fed. Cir. 2008) (describing the standard for the recovery of lost profits due to convoyed sales).

Instead, Complainants must show that the damages from lost sales are somehow immeasurable. I find that Complainants have failed to make that showing. They offer Mr. Hoerberlein’s statement that damages would be difficult to prospectively quantify. (*Id.*) But,

PUBLIC VERSION

there is no requirement that the damages must be prospectively quantifiable. If Complainants can calculate the damages due to lost sales during the TEO period after the fact, then there is no irreparable harm. (RX-436C at Q. 39.) As Dr. Kaplan explains, “[t]he tools of Industrial Organization Economics are well equipped to identify and quantify lost sales, if such lost sales exist, in cases such as this... Thus, any damages, were they to occur over the TEO period, are calculable.” (*Id.*) Because Complainants have failed to show that any damages due to lost sales cannot be measured, their argument regarding lost sales and lost market share fails.

Reduced Investment

Finally, Complainants allege that any reduced profits would likely lead to reduced investment in the employment of labor, capital, and in research and development/engineering. Complainants claim that the reduced profits are due to the lost sales and price erosion caused by Respondents’ alleged infringement. Complainants note that they have already seen the effects of lost profits, as they have laid off skilled domestic workers and consolidated their facilities. Mr. Hoerberlein echoes Complainants when he states that reduced profits would likely lead to reduced investment by Complainants. (CX-196C at Q. 274.)

I find Complainants’ argument to be speculative and unsupported. Complainants and Mr. Hoerberlein claim that reduced profits due to the alleged infringement will “likely” lead to less domestic investment by Complainants, but offer no evidence to substantiate those allegations. Complainants in no way demonstrate that the profits received from the sale of muzzleloaders is directly proportional to the amount of investment Complainants make in labor, capital, research, and engineering.

The evidence also demonstrates that at least during the TEO period, Complainants’ research and development budget is not contingent on the outcome of this motion for temporary

PUBLIC VERSION

relief. Virginia Chandler, the Vice President for New Product Development for Smith & Wesson Holding Corp., testified that the research and development budget for Complainants' products that practice the '694 patent is approximately { }, and the number of research and development personnel involved is about { }. (CX-195C at Q. 22.) On cross examination, Ms. Chandler acknowledged that funds are already dedicated for research and development through { }. (Tr. at 72:18-24.) Ms. Chandler agreed that the research and development budget is in no way contingent on Complainants obtaining temporary relief. (*Id.* at 72:25-73:3.)

Further, while Complainants offer evidence that they have laid off employees and consolidated their facilities, they fail to tie those actions directly to the alleged infringement by Respondents. (*See, e.g.*, CX-195C at Q. 25; CX-193C at Q. 28-33.) As described *supra*, there are other factors, noted by Complainants themselves in their 10K filings, that have contributed to the decreased market for muzzleloaders.

VI. BALANCING THE HARDSHIPS

A. Applicable Law

Assuming that both the first and second factors⁸ are met, the third factor to be considered in deciding whether or not to award temporary relief relates to the balance of hardships. This factor requires the balancing of "the harm that will occur to the moving party from the denial of the preliminary injunction with the harm that the non-moving party will incur if the injunction is granted." *Hybritech Inc. v. Abbott Labs.*, 849 F.2d 1446, 1457 (Fed. Cir. 1988).

B. Analysis

Complainants' Position: Complainants contend that the balancing of the hardships

⁸ Those factors, discussed *supra* are a showing of likelihood of success on the merits and a showing of irreparable harm in the absence of temporary relief.

PUBLIC VERSION

favors awarding temporary relief.

Complainants assert that Respondents manufacture and sell numerous products that are not the subject of the motion for temporary relief. Thus, Complainants claim that in the event that a temporary exclusion order is entered, Respondents will still be able to maintain their business selling non-accused products. Complainants state that the potential harm to Respondents is limited to the loss of revenue from the sales of products subject to a temporary exclusion order.

Complainants allege that contrary to the limited economic harm suffered by Respondents should Complainants' motion be granted, Complainants will suffer irreparable harm should the motion be denied. Complainants refer back to their discussion of irreparable harm and note that they will suffer harm in the form of price erosion, exclusivity erosion, loss of goodwill and reputation, unquantifiable lost sales and market share, and reduced profits available to invest.

Respondents' Position: Respondents contend that the potential harm suffered by Respondents should a temporary exclusion order issue far outweighs any harm to Complainant should Complainants' motion be denied.

Respondents assert that both Traditions and Ardesa are small, family-owned companies. Respondents explain that { } of Traditions' business comes from selling Ardesa firearms manufactured by Ardesa, and over { } of Ardesa products are sold to Traditions. Respondents claim that the accused products comprise { } of their business. Respondents assert that {

..}

Respondents further claim that granting a temporary exclusion order would {

}

PUBLIC VERSION

{ } Respondents
state that Ardesa {
} could resume
manufacturing and sales.

Respondents argue that Complainants would suffer minimal hardship should their motion be denied. Respondents note that Smith & Wesson is a large, publicly traded company with \$406.18 million in sales for fiscal year 2010. Respondents state that Complainants hold a 31% share of the market, and Respondents account for only { }. Respondents assert that any damage caused to Complainants could be remedied by monetary damages in district court.

Staff's Position: Staff contends that the balance of the harms factor tips in favor of Respondents. Staff notes that Respondents assert that the issuance of temporary relief would destroy their business, forcing Respondents to { } Staff further notes that { } of Ardesa's profits come from sales of the accused products. In view of these facts, Staff believes the potential harm to Respondents if the motion is granted outweighs the potential harm to Complainants if the motion is denied.

Discussion and Conclusions: Because Complainants have not demonstrated irreparable harm, I find that the balancing of the hardships analysis will not affect the outcome of the motion. *Amazon.com*, 239 F.3d at 1350. Therefore, the following analysis is solely contingent on the Commission determining that Complainants have proven both of the first two preliminary injunction factors. Under this scenario, I find the third factor does not weigh for or against the granting of temporary relief.

Traditions and Ardesa also offer evidence that they will suffer harm if temporary relief is granted. Susana Lameiras, General Manager for Ardesa, testified that Ardesa is a family-owned

PUBLIC VERSION

manufacturer located in Spain. (RX-437C at Q. 8-9.) Ardesa { } Traditions, and Traditions is the { } U.S. distributor for Ardesa products. (*Id.* at Q. 11.) Ardesa sells a { } of its firearms to Traditions. For example, in 2010, Ardesa manufactured { } firearms and sold { } of those firearms to Traditions. (*Id.* at Q. 13-17; RX-364C; RX-370C.) Ms. Lameiras estimated that in any year, { } of the firearms made by Ardeas are sold to Traditions. (RX-437C at Q. 20.)

Ms. Lameiras testified that from January 2011 to June 2011, { } of the firearms sold by Ardeas to Traditions include the accused Accelerator breech plug. (RX-437C at Q. 25-26.) Based on current sales data, Ms. Lameiras has estimated that if Ardesa is unable to sell the accused products to Traditions from November 2011 until October 2012, Ardesa will lose { } and be forced to shut down. (*Id.* at Q. 28-36; RX-363C.) Ms. Lameiras claims that the projected financial loss would also cause Ardesa to { }. (RX-437C at Q. 41.)

Tom Hall, President of Traditions, testified that Traditions is a small, family-owned and operated business that employs { } people. (RX-438C at Q. 4, 7.) Mr. Hall explained that { } of Traditions' business flows from the sale of muzzle-loading firearms, { } of which are purchased from Ardesa. (*Id.* at Q. 10-13.) Mr. Hall believes that Traditions' U.S. market share for muzzle-loading firearms is approximately { }. (*Id.* at Q. 19-20.)

Mr. Hall testified that about { } of Traditions' muzzle-loading firearms sales come from products containing the accused Accelerator breech plug. (RX-438C at Q. 31-32; RX-428C.) Mr. Hall explained that the inability to sell the accused products during the relevant timeframe would result in a loss of over { } to Traditions, and that Traditions could not withstand such a loss. (*Id.* at Q. 37-40; RX-428C.) Mr. Hall further claimed that the loss of revenue would

PUBLIC VERSION

force Traditions { } (RX-438C at Q. 41; RX-302C.) Mr. Hall stated that Traditions' inability to sell the accused products from November 2011 to October 2012 would permanently damage Traditions' relationship with the retailers and distributors that purchase Traditions' products. (RX-438C at Q. 44-45.)

Because so much of Respondents' business centers on the products subject to a potential temporary exclusion order, I find that Respondents will suffer significant harm if a temporary exclusion order is granted. Specifically, Respondents have offered credible testimony that Ardesa will lose { } due to a temporary exclusion order.

Notwithstanding the foregoing, the testimony of Ms. Lameiras and Mr. Hall does not support a conclusion that Respondents will be forced out of business as a result of the issuance of a temporary exclusion order. For example, Staff elicited cross examination testimony that Traditions has not inquired about a bridge loan to prevent its business from becoming insolvent in the event that a temporary exclusion order is issued. (Tr. at 403:1-4.)

Based upon all of the foregoing, I find that the balancing of the hardships does not favor either Complainants or Respondents.

VII. PUBLIC INTEREST

A. Applicable Law

The fourth factor centers on the public interest. "Typically, in a patent infringement case, although there exists a public interest in protecting rights secured by valid patents, the focus of the district court's public interest analysis should be whether there exists some critical public interest that would be injured by the grant of preliminary relief." *Hybritech*, 849 F.2d at 1458.

PUBLIC VERSION

B. Analysis

Complainants' Position: Complainants contend that there would be no harm to the public interest if temporary relief is granted.

Complainants assert that the products involved in this investigation, muzzle-loading firearms used in hunting, are not the type of products that typically raise public interest concerns. Complainants allege that they have the capacity to supply the market if temporary relief is granted.

Respondents' Position: Respondents contend that the issuance of a temporary exclusion order would negatively impact the public interest.

According to Respondents, if temporary relief was awarded, Thompson would need to supply the market with an additional { } units to compensate for Respondents' absence from the market. Respondents claim that Thompson does not have the capabilities to meet such added consumer demand.

Staff's Position: Staff is not aware of any evidence that the public interest would be substantially affected by the issuance of a temporary exclusion order.

Discussion and Conclusions: Because Complainants have not demonstrated both of the first two preliminary injunction factors, I find that consideration of the public interest analysis will not affect the outcome of Complainants' motion. *Amazon.com*, 239 F.3d at 1350. Therefore, the following analysis is solely contingent on the Commission determining that Complainants have proven both of the first two preliminary injunction factors.

I find that there is no "critical public interest" that would be injured if Complainants are awarded temporary relief. The products at issue in this investigation are muzzle-loading firearms used by hunters. (CX-191C at Q. 51; RX-438C at Q. 8-10.) "Where products do not relate to a

PUBLIC VERSION

significant compelling public interest, such as health or safety, this factor weighs in favor of an injunction.” *Mass Engineered Design, Inc. v. Ergotron, Inc.*, 633 F. Supp. 2d 361, 394 (E.D. Tex. 2009). Muzzle-loading firearms are not the type of products that implicate a critical public interest that would weigh in favor of denying temporary relief. Therefore, regardless of the parties’ arguments concerning Complainants’ manufacturing capacity in view of a temporary exclusion order, I find that the fourth and final factor would not preclude the issuance of a temporary exclusion order.

VIII. BONDING

A. Applicable Law

Section 337 provides that “[t]he Commission may require the complainant to post a bond as a prerequisite to the issuance of [a temporary relief] order under this subsection.” 19 U.S.C. § 1337(e)(2). The Commission requires the parties to address whether the complainant should be required to post a bond as a prerequisite to the issuance of temporary relief, and the appropriate amount of any such bond. 19 CFR § 210.52(b); 19 CFR § 210.59(b)(4). The Commission Rules provide that “[i]n determining whether to require a bond as a prerequisite to the issuance of temporary relief, the Commission will be guided by practice under Rule 65 of the Federal Rules of Civil Procedure.” 19 CFR § 210.52(c). Rule 65 of the Federal Rules of Civil Procedure provides, *inter alia*:

The court may issue a preliminary injunction or a temporary restraining order only if the movant gives security in an amount that the court considers proper to pay the costs and damages sustained by any party found to have been wrongfully enjoined or restrained. The United States, its officers, and its agencies are not required to give security.

Fed. R. Civ. P. 65(c).

“[T]he burden is on the party seeking security to establish a rational basis for the amount

PUBLIC VERSION

of the proposed bond.” *Int’l Equity Inv., Inc. v. Opportunity Equity Partners Ltd.*, 441 F. Supp. 2d 552, 566 (S.D.N.Y. 2006) “In fixing the amount of security required, a court is not required to order security in respect of claimed economic damages that are no more than speculative.” *Id.*

B. Analysis

Respondents’ Position: Respondents seek the imposition of a bond equal to the value of Ardesa and Traditions. Respondents assert that even if temporary relief is granted, Complainants’ case is tenuous and subject to review by the Commission. Respondents assert that the imposition of a bond would impose almost no hardship on Complainants because Smith & Wession Holding Corp. is a large company that \$406.18 million in sales in fiscal year 2010. Respondents assert that the grant of temporary relief would cause them to cease operations. Therefore, Respondents believe that the adequate bond amount is the value of the two companies, Ardesa and Traditions, which bond amount would be in the range of {
} (RX-436C at Q. 59.)

Complainants’ Position: Complainants assert that they should not be required to post a bond. If they are required to post a bond, Complainants argue that the bond amount should be “very small.” Complainants base this assertion on the alleged strength of their case against Respondents.

Staff’s Position: Staff takes no position on the issue of bond.

Discussion and Conclusions: Because Complainants have not demonstrated both of the first two preliminary injunction factors, I find a bond is unnecessary. *Amazon.com*, 239 F.3d at 1350. Therefore, the following analysis is solely contingent on the Commission determining that Complainants are entitled to a temporary exclusion order.

PUBLIC VERSION

Respondents seek a bond amount equal to the combined value of their respective companies under the claim that a temporary exclusion order will force them both out of business. Complainants offer no analysis on the issue of bonding, except to claim that any bond amount should be small due to Complainants' alleged strong case for a temporary exclusion order. As detailed in Section VI.B *supra*, I found that while there is a possibility that Respondents will default on their loans and be forced to close if temporary relief is granted, such a conclusion is not a certainty. Therefore, I find that the proper bond amount should be equal to the amount of monetary harm that Respondents have demonstrated they will suffer if temporary relief is granted. This bond amount does not involve the speculation required by the bond amount sought by Respondents. Ardesa has shown that it will lose approximately { } and Traditions has shown that it will lose approximately { } (RX-437C at Q. 28-36; RX-438C at Q. 37-40.)⁹ Thus, the bond amount should be set at the U.S. dollar equivalent of the sum of { }.¹⁰

IX. MATTERS NOT DISCUSSED

This Initial Determination's failure to discuss any matter raised by the parties, or any portion of the record, does not indicate that it has not been considered. Rather, any such matter(s) or portion(s) of the record has/have been determined to be irrelevant, immaterial or meritless. Arguments made on brief which were otherwise unsupported by record evidence or legal precedent have been accorded no weight.

XI. ORDER

Based on the foregoing, and the record as a whole, it is my Initial Determination that

⁹ Pursuant to 19 CFR § 210.66(a), this Initial Determination does not address the separate issues of remedy, the public interest, and bonding by Respondents pursuant to 19 U.S.C. § 1337(e)(1), (f)(1), and (j)(3).

¹⁰ I have not calculated that sum because of the possibility that the exchange rate between Euros and U.S. dollars may change between now and the time a bond is actually set.

PUBLIC VERSION

Complainants' Motion for Temporary Relief is hereby **DENIED**.

I hereby **CERTIFY** to the Commission my Initial Determination together with the record consisting of the exhibits admitted into evidence. The pleadings of the parties filed with the Secretary, and the transcript of the pre-hearing conference and the hearing, as well as other exhibits, are not certified, since they are already in the Commission's possession in accordance with Commission rules.

It is further **ORDERED** that:

In accordance with Commission Rule 210.39, all material heretofore marked *in camera* because of business, financial and marketing data found by the administrative law judge to be cognizable as confidential business information under Commission Rule 201.6(a), is to be given *in camera* treatment continuing after the date this investigation is terminated.

This Initial Determination, issued pursuant to Commission Rule 210.66, shall become the determination of the Commission 30 calendar days after the 120-day deadline imposed by Commission Rule 210.66(a), unless the Commission modifies, reverses, or sets aside the Initial Determination in whole or part within that period.

Within ten (10) days of the date of this document, each party shall submit to the office of the Administrative Law Judge a statement as to whether or not it seeks to have any portion of this document deleted from the public version. The parties' submissions must be made by hard copy by the aforementioned date and must include a copy of this document with red brackets indicating any portion asserted to contain confidential business information to be deleted from the public version. The parties' submission concerning the public version of this document need

PUBLIC VERSION

not be filed with the Commission Secretary.

SO ORDERED.

Issued: 8/31/2011
DATE



Robert K. Rogers, Jr.
Administrative Law Judge


**CERTAIN MUZZLE-LOADING FIREARMS
AND COMPONENTS THEREOF**

Inv. No. 337-TA-777

PUBLIC CERTIFICATE OF SERVICE

I, James R. Holbein, hereby certify that the attached **ORDER** was served upon **Rett Snotherly, Esq.**, Commission Investigative Attorney, and the following parties via first class mail delivery on

November 9, 2011


James R. Holbein, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, D.C. 20436

**FOR COMPLAINANTS THOMPSON/CENTER ARMS COMPANY, INC. AND
SMITH & WESSON CORP.:**

J. Kevin Grogan, Esq.
MCCORMICK, PAULDING & HUBER LLP
1350 Main Street
Sovereign Bank Building 5th Floor
Springfield, MA 01103

Via Hand Delivery
 Via Overnight Mail
 Via First Class Mail
 Other: _____

**FOR RESPONDENTS ARDESA, S.A. d/b/a ARDESA FIREARMS and TRADITIONAL
SPORTING GOODS, INC., d/b/a TRADITIONS SPORTING FIREARMS:**

Andrew F. Pratt, Esq.
ADDUCI, MASTRIANI & SCHAUMBERG, LLP
1200 Seventeenth Street NW
Washington, DC 20036

Via Hand Delivery
 Via Overnight Mail
 Via First Class Mail
 Other: _____

**FOR RESPONDENTS BLACKPOWDER PRODUCTS INC. and DIKAR SOCIEDAD
COOPERATIVA LIMITADA:**

Scott J. Pivnick, Esq.
ALSTON & BIRD, LLP
950 F Street NW
Washington, DC 20004

Via Hand Delivery
 Via Overnight Mail
 Via First Class Mail
 Other: _____

**CERTAIN MUZZLE-LOADING FIREARMS
AND COMPONENTS THEREOF**

Inv. No. 337-TA-777

PUBLIC CERTIFICATE OF SERVICE PAGE 2

RESPONDENTS:

Bergara Barrels Europe
Urarte, 26 Bergara 20570
SPAIN

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- INTERNATIONAL

Connecticut Valley Arms
1685 Boggs Road
Suite 300
Duluth, GA 30096

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- Other: _____

Bergara Barrels North America
1685 Boggs Road
Suite 300
Duluth, GA 30096

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- Other: _____

PUBLIC CERTIFICATE OF SERVICE PAGE 3

PUBLIC MAILING LIST

Heather Hall
LEXIS – NEXIS
9443 Springboro Pike
Miamisburg, OH 45342

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- Other: _____

Kenneth Clair
THOMAS WEST
1100 Thirteenth Street NW, Suite 200
Washington, DC 20005

- Via Hand Delivery
- Via Overnight Mail
- Via First Class Mail
- Other: _____