The Temporary Presence Defense to Patent Infringement and Its Applicability to Airline Security Patents

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THE TEMPORARY PRESENCE DEFENSE TO PATENT INFRINGEMENT AND ITS APPLICABILITY TO AIRLINE SECURITY PATENTS

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I. INTRODUCTION

In addition to airport security measures carried out by the Transportation Security Administration (TSA), many foreign-based airlines create their own individual security procedures to ensure flight safety. With the recent increased focus on airline and airport security, inventors have sought and received patents on methods, devices, and systems aimed at increasing commercial flight security. Because these two trends are likely to continue, collisions between U.S. patents and foreign airlines’ security procedures are inevitable. When these disputes arise, the courts should apply the temporary presence defense to the patent infringement claims. This defense protects foreign entities from infringement liability when using patented inventions in connection with vessels, aircraft, and vehicles temporarily within the United States for purposes of participating in international commerce.

A. EL AL’S SECURITY MEASURES

Unlike most U.S.-based airlines that delegate security protocols to the TSA, many foreign-based airlines institute their own procedures. Israel’s El Al, long-considered “the most secure...
airline in the world," is the ultimate example. El Al conducts background checks on each passenger and uses profiling to classify the passengers according to perceived risk: (1) Israelis or foreign Jews as low-risk; (2) non-Jewish foreigners as medium-risk; and (3) anyone of Arabic descent as high-risk. El Al interviews each passenger individually, while subjecting passengers categorized as high-risk to more intense interrogation, as well as body and luggage searches. The interviewers probe for inconsistencies in the passengers’ responses regarding destination, the purpose of travel, occupation, and luggage. Passengers are closely observed, and any interview responses that are inconsistent with observations can lead to more questioning. The interviewers rely on special training to detect “microexpressions,” which are involuntary facial expressions that last just a fraction of a second and reveal emotions that might indicate a dishonest response. Finally, El Al officials inspect all luggage by x-ray, hand searching, and using decompression chambers, which detect explosives that would be triggered by the pressure drop during flight.

However, El Al’s security measures do not end when the airplane pulls away from the gate. At least one armed guard is onboard every flight, and the guards often occupy aisle seats so that they can quickly react to any situation. El Al airplanes have a series of cockpit doors, which are bulletproof and remain locked from before boarding until after the last passenger

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8 Brown, supra note 1.
9 Walt, supra note 7.
10 Brown, supra note 1.
11 See id.
12 Id.
14 Brown, supra note 1.
15 See Gagnon, supra note 5.
16 See id.
17 Brown, supra note 1.
18 Gagnon, supra note 5.
exits the aircraft.\textsuperscript{19} Lastly, El Al equips every aircraft in its fleet with Flight Guard, an Israeli-developed anti-missile system that automatically launches diversionary flares to lead heat-seeking missiles astray if the system detects that the airplane has been targeted.\textsuperscript{20} With such a comprehensive and evolving set of security measures, El Al is nearly certain to encroach on issued U.S. patents in the near future, if it has not already done so.

B. AIRLINE SECURITY PATENTS

While El Al has employed these security measures for decades, 9/11 prompted American inventors to develop methods and systems aimed at increasing airline and airport security.\textsuperscript{21} A search of the United States Patent and Trademark Office (USPTO) database reveals twenty-eight issued patents filed after 9/11 that relate to airport or airline security.\textsuperscript{22} As an example, U.S. Patent No. 7,109,869 provides a method of positively identifying passengers via fingerprint, retinal, or facial scan, and then electronically tracking their movements throughout the airport and onto aircraft.\textsuperscript{23} Additionally, IBM recently applied for twelve patents related to a system that electronically observes and analyzes passengers to identify potential threats based on age, clothing type, and behavior patterns.\textsuperscript{24} These claimed inventions involve technological advancements of the “Israeli-style security” employed by El Al.\textsuperscript{25}

In addition, because any U.S. defense agency can impose secrecy on any patent whose disclosure might threaten national security, the issued and published patents likely represent just a very small sample of the most banal airline security patent applications.\textsuperscript{26} Under 35 U.S.C. § 181, the secretary of a defense department can determine whether granting and publishing a

\textsuperscript{19} Walt, \textit{supra} note 7.


\textsuperscript{21} See Wolfe, \textit{supra} note 2.

\textsuperscript{22} USPTO Patent Full-Text and Image Database, USPTO, http://patft.uspto.gov/netahtml/PTO/search-adv.htm (enter “abst/((airline or airport) and security) and apd/9/11/2001->1/22/2011” into query box, and click “Search”) (last visited May 18, 2011).


\textsuperscript{24} Wolfe, \textit{supra} note 2.

\textsuperscript{25} Id.

patent is detrimental to national security. If the secretary so determines, he can notify the Commissioner of Patents, who then orders that the patent not be granted and that its application be kept secret. Subsequently, a 2003 executive order named the Department of Homeland Security as a defense agency for purposes of § 181. As a result, patents relating to airline security are subject to § 181 secrecy orders if the Department of Homeland Security and its agencies, including the TSA, determine that disclosure would be detrimental to national security interests. Consequently, federal agencies were suppressing over 5,000 patents as of 2007, and each year the number of patent applications subject to secrecy orders continues to grow.

However, these patents will not necessarily remain unenforceable forever. While a § 181 secrecy order may be continuously renewed, it otherwise remains in effect for only one year. Also, the USPTO can extend the term of the patent in order to offset any delays in issuance caused by a secrecy order. Thus, any patent currently subject to a secrecy order will become enforceable as soon as the secrecy order expires, without renewal, no matter how old the application might be. Additionally, if private entities, such as foreign airlines, put the claimed invention into practice, the relevant defense agency might conclude that the secrecy order no longer protects any national security interest; in which case the secrecy order will likely expire without renewal.

Consequently, a collision between U.S. patents and the security procedures employed by foreign-based airlines is almost assuredly on the horizon. In order to avoid infringement, airlines must steer clear of not only the dozens of issued and published patents related to airline security, but also potentially thousands of patents currently subject to secrecy orders. Many of these patents might be properly characterized as heading off the next

27 Id.
28 Id.
35 See More Than 5,000 U.S. Patents Are Now State Secrets, supra note 31.
logical step in the development of security procedures for airlines like El Al because the claims incorporate new technology into the theories and procedures that those airlines already employ. Thus, airlines might suddenly become liable for patent infringement based on their current security measures, and new patents might essentially foreclose the possibility of changing or improving those measures. Because Congress tends to act slowly to problems as they emerge, a court will likely face this issue as a matter of first impression with little or no guidance. When these disputes arise, U.S. courts should apply the temporary presence defense, which is the most effective way to resolve these conflicts while promoting international commerce and the safety and security of air travel.

II. DEVELOPMENT OF THE TEMPORARY PRESENCE DEFENSE TO PATENT INFRINGEMENT

Article I, Section 8 of the U.S. Constitution grants Congress the power to secure to inventors exclusive rights to their discoveries for a limited time in order “[t]o promote the [p]rogress of [s]cience and useful [a]rts.” By including this constitutional provision, the framers recognized that “inventions are public goods,” valuable to society, but “costly to make and . . . difficult to control” once disclosed. Because of this, inventors lack incentive to invest in creating new and useful inventions without any guarantee of marketplace exclusivity. Patent law creates a “market-driven incentive” for innovation by granting to the inventor exclusivity for a limited time. Thus, patents represent “a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time.”

Congress quickly exercised its power under the Patent Clause by passing the first U.S. patent statute in 1790, which granted to inventors the exclusive right to make, construct, use, or sell their

36 See Wolfe, supra note 2.
40 Id.
41 Id.
invention for a period of fourteen years. Subsequently, the patent system continued to develop into today’s statutory scheme, which generally allows a patentee “to exclude others from making, using, offering for sale, or selling the invention throughout the United States or [from] importing the invention into the United States . . . or products made [from it].” Because patent rights are similar to property rights in many ways, infringement is treated as a form of trespass. Thus, remedies often include an injunction to stop the infringing activity, along with “damages adequate to compensate for the infringement.”

U.S. patent law does not apply extraterritorially, as unauthorized use of a patented invention is only infringement if it takes place in the United States. However, this leaves foreign persons within the jurisdiction of the United States, including foreign entities using U.S. airports or seaports, liable for activities that would not be infringing if done in their home countries. It is in this context that the temporary presence defense developed in order to protect vehicles of international commerce that are temporarily within the United States from patent infringement liability that might unduly burden international commerce.

A. English Origins of the Temporary Presence Defense

The temporary presence defense originated in England, where it was first raised in the 1851 case of Caldwell v. Vanvlissengen, before the Chancery Court in England. The invention at issue covered an improved ship propeller, and the accused infringers were Dutch shippers using the propeller on Dutch ships traveling between Holland and England to engage in trade. The defendant Dutch shippers argued that it would be

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45 MERGES ET AL., supra note 39, at 348.
46 Id.
48 See 35 U.S.C. § 271(a), (c), (e), (g) (2006).
49 See id.
50 See Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd., 357 F.3d 1319, 1330 (Fed. Cir. 2004).
52 Caldwell v. Vanvlissengen, (1851) 68 Eng. Rep. 571 (Ch.).
unduly burdensome if a foreign shipper could be liable for having an invention on his vessel, which was unprotected in his home country, and bringing his vessel into an English port. The defendants additionally argued that such a rule might be asserted unfairly against a ship accidentally driven into English waters by a storm. Unfortunately for the defendants, the Chancery Court did not agree and ruled that foreigners are universally held subject to the laws of the country in which they find themselves. The court refused to recognize the proposed defense, calling the adoption of such an exception to infringement a matter of national policy that was best left to the legislature.

In the wake of the Caldwell decision, Parliament feared that the possibility of patent infringement liability would have a chilling effect on commerce between England and other countries. Thus, the legislature amended the English patent law to adopt the temporary presence defense. The first statute recognizing the temporary presence defense provided:

No letters patent for any invention (granted after the passing of this Act) shall extend to prevent the use of such invention in any foreign ship or vessel, or for the navigation of any foreign ship or vessel, which may be in any port of Her Majesty’s dominions, or in any of the waters within the jurisdiction of any of Her Majesty’s Courts, where such invention is not so used for the manufacture of any goods or commodities to be vended within or exported from Her Majesty’s dominions: Provided always, that this enactment shall not extend to the ships or vessels of any foreign state of which the laws authorize subjects of such foreign state, having patents or like privileges for the exclusive use or exercise of inventions within its territories, to prevent or interfere with the use of such inventions in British ships or vessels, or in or about the navigation of British ships or vessels, while in the ports of such foreign state, or in the waters within the jurisdiction of its Courts, where such inventions are not so used for the manufacture of goods or commodities to be vended within or exported from the territories of such foreign state.

53 Id. at 574.
54 Id.
55 Id. at 575–76.
56 Id. at 577.
57 Field, supra note 51, at 34.
58 Id.
59 Id. (quoting Patent Law Amendment Act, 1852, 15 & 16 Vict., ch. 83, § 26 (Eng.)).
In summary, the first recognized version of the defense: "(1) applied to foreign ships temporarily present in [England]," (2) applied to any use of a patented invention in a vessel or for its navigation, (3) excluded any use of a patented invention for manufacturing goods, and (4) required the country from which the foreign ship hailed to also recognize a temporary presence defense for English ships.\textsuperscript{60}

B. Adoption in the United States: Brown v. Duchesne

A few years later, the temporary presence defense made its way across the Atlantic to the United States. In an 1856 decision, the Supreme Court applied the defense in Brown v. Duchesne, a case involving a patented configuration of sails on a ship.\textsuperscript{61} Chief Justice Taney began his opinion by recognizing that the U.S. patent laws apply to foreign defendants within the jurisdiction just as forcefully as they do to citizens.\textsuperscript{62} The Court also noted that a literal interpretation of the patent statute would not find any temporary presence defense.\textsuperscript{63} The Court refused to endorse such a construction, however, because doing so might defeat the purpose that Congress intended to accomplish or might effectively annul a power delineated to the federal government.\textsuperscript{64}

Taney held that Congress intended the patent laws to protect inventors under Article I's Patent Clause, which grants a wholly domestic power.\textsuperscript{65} And, because Congress was acting \textit{solely}

\textsuperscript{60} Id. at 34–35.
\textsuperscript{61} See generally Brown v. Duchesne, 60 U.S. 183 (1857).
\textsuperscript{62} Id. at 194 ("For undoubtedly every person who is found within the limits of a Government, whether for temporary purposes or as a resident, is bound by its laws.").
\textsuperscript{63} Id. ("The general words used in the clause of the patent laws granting the exclusive right to the patentee to use the improvement, taken by themselves, and literally construed, without regard to the object in view, would seem to sanction the claim of the plaintiff.").
\textsuperscript{64} Id. at 194–95 ("But this mode of expounding a statute has never been adopted by any enlightened tribunal—because it is evident that in many cases it would defeat the object which the Legislature intended to accomplish. . . . Neither will the court, in expounding a statute, give to it a construction which would in any degree disarm the Government of a power which has been confided to it to be used for the general good—or which would enable individuals to embarrass it, in the discharge of the high duties it owes to the community—unless plain and express words indicated that such was the intention of the Legislature.").
\textsuperscript{65} Id. at 195 ("The power thus granted is domestic in its character, and necessarily confined within the limits of the United States."); see also U.S. Const. art. I, § 8.
under the authority of the Patent Clause, which does not grant any power to regulate international commerce or the vehicles used in international commerce, Congress must not have intended the patent statutes to reach foreign vessels temporarily harbored in the United States.\textsuperscript{66} The Court held that it should not be assumed that in passing the patent laws, Congress intended to go beyond the power of the Patent Clause and also exercise additional powers, granted elsewhere in the Constitution and completely unrelated to the protection of inventors.\textsuperscript{67}

Next, the Court held that the plaintiff was only minimally injured, and the defendant did not benefit from the accused activity.\textsuperscript{68} Taney stated that if the ship's captain manufactured or sold the invention or products made from the invention from the vessel while it was in a U.S. harbor, then the plaintiff would be injured and the defendant would be liable.\textsuperscript{69} Injury would occur because those activities would be in competition with the patentee and would diminish his right to marketplace exclusivity in the United States.\textsuperscript{70} But, because the allegedly infringing activity only involved limited use of the invention while entering and exiting the harbor, the patentee did not suffer great compensable harm, nor did the defendant receive any great benefit.\textsuperscript{71} Thus, while patent law generally treats such infringements

\textsuperscript{66} Brown, 60 U.S. at 195 ("It confers no power on Congress to regulate commerce, or the vehicles of commerce, which belong to a foreign nation, and occasionally visit our ports in their commercial pursuits. . . . And when Congress are legislating to protect authors and inventors, their attention is necessarily attracted to the authority under which they are acting . . . .")

\textsuperscript{67} Id. ("[A]nd it ought not lightly to be presumed that they intended to go beyond [the Patent Clause], and exercise another and distinct power, conferred on them for a different purpose.")

\textsuperscript{68} Id. at 196 ("Now, it is obvious that the plaintiff sustained no damage, and the defendant derived no material advantage, from the use of an improvement of this kind by a foreign vessel in a single voyage to the United States, or from occasional voyages in the ordinary pursuits of commerce; or if any damage is sustained on the one side, or any profit or advantage gained on the other, it is so minute that it is incapable of any appreciable value.")

\textsuperscript{69} Id. ("If it had been manufactured on her deck while she was lying in the port of Boston, or if the captain had sold it there, he would undoubtedly have trespassed upon the rights of the plaintiff, and would have been justly answerable for the profit and advantage he thereby obtained.")

\textsuperscript{70} Id. ("For, by coming in competition with the plaintiff, where the plaintiff was entitled to the exclusive use, he thereby diminished the value of his property.")

\textsuperscript{71} Id. ("[T]he only use made of it, which can be supposed to interfere with the rights of the plaintiff, was in navigating the vessel into and out of the harbor, when she arrived or was about to depart, and while she was within the jurisdiction of the United States.")
as a form of trespass where damages are presumed, justice did not compel the Court to do so here in light of the competing policy goal of preventing undue burdens on international commerce.\textsuperscript{72}

Finally, the Court held that allowing a patentee to assert his patent against foreign vessels temporarily in the United States for purposes of carrying out international commerce would effectively confer a political power, instead of a property right.\textsuperscript{73} If enforced in this context, the patent would embarrass Congress's treaty-making powers and interfere with its power to regulate commerce.\textsuperscript{74} The Court reasoned that if the congressionally-created patent rights were to extend to foreign ships in U.S. harbors, then in order to grant civil immunity to foreign shippers, Congress would have to condemn a portion of the patentees' property interests and compensate them accordingly.\textsuperscript{75} Because it could not have been Congress's intent to grant a property right that it must repurchase in order to exercise its constitutional powers, the only sound conclusion was that Congress did not intend to grant patentees exclusive rights that extend to foreign vessels in this context.\textsuperscript{76} Thus, the Supreme Court first recognized the temporary presence defense by holding that the patentee's rights did not extend to foreign vessels in U.S. ports and the use of the invention in the construction, fitting out, or equipment of the vessel was not infringing if

\textsuperscript{72} Id. at 196–97 ("[A]lthough no real damage was sustained by the plaintiff, and no profit or advantage gained by the defendant, the law presumes a damage, and that the action may be maintained on that ground. . . . We think these laws ought to be construed in the spirit in which they were made—that is, as founded in justice—and should not be strained by technical constructions to reach cases which Congress evidently could not have contemplated . . . .").

\textsuperscript{73} Id. at 197 ("The construction claimed by the plaintiff would confer on patentees not only rights of property, but also political power. . . .").

\textsuperscript{74} Id. ("The construction claimed by the plaintiff would . . . enable them to embarrass the treaty-making power in its negotiations with foreign nations, and also to interfere with the legislation of Congress when exercising its constitutional power to regulate commerce.").

\textsuperscript{75} Id. at 197–98 ("And in the case [I] have stated, the Government would be unable to carry into effect its treaty stipulations without the consent of the patentee, unless it resorted to its right of eminent domain, and went through the tedious and expensive process of condemning so much of the right of property of the patentee as related to foreign vessels, and paying him such a compensation therefor[e] as should be awarded to him by the proper tribunal. The same difficulty would exist in executing a law of Congress in relation to foreign ships and vessels trading to this country.").

\textsuperscript{76} See id.
it was placed upon the vessel in a foreign port and authorized by the laws of the vessel’s home country.\footnote{Id. at 198–99.}

Eventually, Congress codified the Court’s opinion in Brown by incorporating a temporary presence defense into the patent statues.\footnote{See 35 U.S.C. § 272 (2006).} Nevertheless, over 150 years later Brown remains instrumental in interpreting and applying the defense.\footnote{See Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd., 357 F.3d 1319, 1329 (Fed. Cir. 2004) (“Confronted with an ambiguous statute, we turn to the legislative history to discern Congress’[s] intent . . . . which in turn directs us to Brown . . . .”).}

C. The Temporary Presence Defense in the Paris Convention

The next development in the United States’ temporary presence doctrine came in 1925, when a version of the defense was incorporated into the Paris Convention for the Protection of Industrial Property (Paris Convention).\footnote{Field, supra note 51, at 41.} The Paris Convention, initially signed in 1883, was the first major international treaty aimed at helping individuals protect their intellectual creations from unauthorized exploitation in foreign countries.\footnote{WIPA Treaties—General Information, World Intell. Prop. Org. (WIPO), http://www.wipo.int/treaties/en/general/ (last visited July 28, 2011).} In 1925, the treaty gained a temporary presence defense provision.\footnote{Field, supra note 51, at 41.} Today, 173 nations, including the United States, are signatories to the treaty.\footnote{Contracting Parties, World Intell. Prop. Org. (WIPO), http://www.wipo.int/treaties/en/ShowResults.jsp?country_id=ALL&start_year=ANY&end_year=ANY&search_what=C&treaty_id=2 (last visited May 22, 2011).}

Article 5ter of the agreement provides:

In any country of the Union the following shall not be considered as infringements of the rights of a patentee:

1. the use on board vessels of other countries of the Union of devices forming the subject of his patent in the body of the vessel, in the machinery, tackle, gear and other accessories, when such vessels temporarily or accidentally enter the waters of the said country, provided that such devices are used there exclusively for the needs of the vessel;

2. the use of devices forming the subject of the patent in the construction or operation of aircraft or land vehicles of other countries of the Union, or of accessories of such aircraft or land
THE TEMPORARY PRESENCE DEFENSE

vehicles, when those aircraft or land vehicles temporarily or accidently enter the said country.84

Thus, the Paris Convention’s temporary presence defense: (1) applies to foreign ships, aircraft, or land vehicles temporarily or accidentally in the country; and (2) requires a form of reciprocity in that the country of the foreign ship, aircraft, or vehicle must also be a signatory to the Paris Convention.85 The treaty also requires one of two alternative permissible uses, depending on whether the conveyance at issue is a vessel.86 For vessels, the patented invention may be used in the body, machinery, tackle, gear, or accessories, so long as the invention is used exclusively for the needs of the vessel.87 For aircraft and land vehicles, the patented invention may be used in the construction or operation of the conveyance or its accessories.88

Because the United States is a signatory to the treaty,89 the temporary presence defense laid out in Article 5ter remains valid in the United States. Additionally, like Brown, the Paris Convention continues to play a vital role in interpreting the subsequent statutory temporary presence defense.90

D. A SPECIES OF THE TEMPORARY PRESENCE DEFENSE IN THE CHICAGO CONVENTION

Similarly, a version of the temporary presence defense is included in the Convention on International Civil Aviation (the Chicago Convention).91 The United States is one of fifty-two nations that signed the Chicago Convention in 1944.92 Today, the Chicago Convention remains in effect for the United States and

85 Id.
86 Id.
87 Id.
88 Id.
89 Contracting Parties, supra note 83.
90 See Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd., 357 F.3d 1319, 1329 (Fed. Cir. 2004) (“Confronted with an ambiguous statute, we turn to the legislative history to discern Congress’[s] intent . . . , which in turn directs us to Brown and the Paris Convention.”).
189 other countries that are parties to the agreement.\textsuperscript{93} The treaty's goal is to establish principles and agreements that facilitate safe, orderly, and economical international air transportation services.\textsuperscript{94} Article 27 provides a defense to patent infringement related to civil aviation, which is a close cousin to the temporary presence defense set forth in \textit{Brown} and the Paris Convention:

"(a) While engaged in international air navigation, any authorized entry of aircraft of a contracting State into the territory of another contracting State or authorized transit across the territory of such State with or without landing shall not entail . . . any claim against the owner or operator thereof . . . by or on behalf of such State or any person therein, on the ground that the construction, mechanism, parts, accessories or operation of the aircraft is an infringement of any patent . . . duly granted . . . in the State whose territory is entered by the aircraft . . . ."

* * *

(c) The benefits of this Article shall apply only to such States parties to this Convention, as either (1) are parties to the International Convention for the protection of Industrial Property and to any amendments thereof; or (2) have enacted patent laws which recognize and give adequate protection to inventions made by the nationals of the other States parties to this Convention."\textsuperscript{95}

Thus, the Chicago Convention provides a defense connected to international civil aviation that literally appears broader than what is afforded by the traditional temporary presence defense.\textsuperscript{96} The Article 27 defense's only requirement is that the invention be used in the "construction, mechanisms, parts, accessories or operation" of an aircraft that is (1) of another country that is party to the treaty, (2) authorized to be in the jurisdiction, and (3) engaged in international air travel.\textsuperscript{97}

While the provisions of the Chicago Convention remain valid and in effect, no U.S. patent infringement case has ever turned solely on Article 27.\textsuperscript{98} Because Article 27 only applies in the civil


\textsuperscript{94} ICAO Documents, supra note 92.


\textsuperscript{96} Id.

\textsuperscript{97} Chicago Convention, supra note 91.

\textsuperscript{98} See Cali, 380 F. Supp. at 1124.
aviation context, there have been few opportunities for its use. Consequently, in the one instance where a defense under Article 27 was asserted, the court merely held that Article 27 was valid and not superseded by the subsequent statutory defense. However, the court’s ultimate determination did not rely solely on Article 27, but instead on the statutory defense, Brown, the Paris Convention, and the Chicago Convention.


Finally, Congress enacted the temporary presence defense as part of the Patent Act of 1952, incorporating the defense as the Supreme Court first recognized it in 1856, and as the Paris Convention adopted it in 1925. The legislative history is relatively sparse for § 272, with only two mentions of it in the legislative record. The first reference states that “Section 272 is a new section in the law relating to infringement, but it is of relatively little importance and it follows a paragraph in a treaty to which the United States is a party.” The second provides, “This section follows the requirement of the [Paris Convention], to which the United States is a party, and also codifies the holding of the Supreme Court that use of a patented invention on board a foreign ship does not infringe a patent.” Thus, the legislative history shows, at least relative to the more sweeping changes in the Patent Act of 1952, Congress believed § 272 was a mere formality, codifying the defense already made into law by the Supreme Court’s decision in Brown and bringing the patent statutes into compliance with the Paris Convention. Some commentators have lamented that the legislative history is sparse and relatively dismissive of the importance of the statute. However, the fact that the legislative history specifically references the Paris Convention and the Brown decision, when combined with the overall history of the defense, sheds tremendous light on the statute’s underlying purpose.

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99 See Chicago Convention, supra note 91.
100 Cali, 380 F. Supp. at 1124.
101 Id.
103 Field, supra note 51, at 43–44.
105 Id. at 28.
106 See Field, supra note 51, at 44.
107 Id.
As illustrated in *Brown* and Article 5ter of the Paris Convention, the temporary presence defense grew out of concerns over the excessive burden that would be placed on foreign shippers if they had to insure that their vessels complied with the patent laws of every nation that the vessel might visit during its lifetime.\(^{108}\) Avoiding liability would be difficult, considering that any given invention may be patented in some countries and not in others, and the same invention may be owned by different people from one country to the next.\(^{109}\) In fact, the defendants in *Caldwell*, the first case to address the issue, raised that very argument.\(^{110}\) While the case was ultimately decided against the defendant,\(^{111}\) the English Parliament responded quickly to ensure that the case and its result would not hinder commerce.\(^{112}\) Thus, in passing § 272, Congress intended to join an international movement to make the vehicles of international commerce immune from patent infringement liability in order to avoid an excessive drag on international commerce.\(^{113}\)

The current version of § 272 provides:

The use of any invention in any vessel, aircraft or vehicle of any country which affords similar privileges to vessels, aircraft or vehicles of the United States, entering the United States temporarily or accidentally, shall not constitute infringement of any patent, if the invention is used exclusively for the needs of the vessel, aircraft or vehicle and is not offered for sale or sold in or used for the manufacture of anything to be sold in or exported from the United States.\(^{114}\)

\(^{108}\) Nat'l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd., 357 F.3d 1319, 1330 (Fed. Cir. 2004) ("Both *Brown* and Article 5ter of the Paris Convention demonstrate a concern to leave the channels of international commerce, or more accurately the vessels and vehicles that pass through these channels, free from the excessive burdens that would result if such vessels or vehicles had to conform to the patent laws of all nations that the vessel or vehicle visited during its lifetime.").

\(^{109}\) *Id.* ("Different inventions are likely to be patented in different countries, and the same invention may be owned by different parties in different countries.").

\(^{110}\) *Caldwell v. Vanvlissengen*, (1851) 68 Eng. Rep. 571, 574 (Ch.).

\(^{111}\) *Id.* at 577.

\(^{112}\) Field, *supra* note 51, at 34.

\(^{113}\) *Nat'l Steel Car*, 357 F.3d at 1330 ("In section 272, Congress intended to join an international movement to place foreign-owned means of international transport beyond the reach of domestic patentees' exclusive rights because the cost of complying with multiple, inconsistent rights of exclusion provided by the patent regimes of a large number of countries would likely place an excessive drag on international commerce.").

Thus, the five elements of the defense as codified in § 272 are as follows:

1) Vessel, aircraft, or vehicle – the accused invention must be used in a vessel, aircraft, or vehicle;
2) Reciprocity – the vessel, aircraft, or vehicle must be from another country that provides a similar defense to U.S. vessels, aircraft, or vehicles;
3) Temporary or accidental presence – the vessel, aircraft or vehicle must be present in the United States only temporarily or accidentally;
4) Exclusively for the needs of the vehicle – the accused invention must be used “exclusively for the needs” of the vessel, aircraft, or vehicle; and
5) No U.S. sales or manufacturing activity – the accused infringer must not sell or offer to sell the accused invention, nor use it to manufacture anything to be sold in or exported from the United States.\(^\text{115}\)

III. JUDICIAL INTERPRETATION OF THE TEMPORARY PRESENCE DEFENSE

Despite its importance in preventing potential patent infringement liability from creating an unnecessary drag on commerce, U.S. courts have only interpreted § 272 three times.\(^\text{116}\)

A. \textit{Cali v. Japan Airlines, Inc.}

After Congress enacted § 272 in 1952, no court applied the temporary presence defense until 1974 when the U.S. District Court for the Eastern District of New York decided \textit{Cali v. Japan Airlines, Inc.}\(^\text{117}\). The patent at issue covered an improvement to jet engines, which foreign airlines were using on jets that regularly and frequently carried passengers and freight into and over the United States.\(^\text{118}\) The defendant airlines contended that the use was not infringement under § 272, Article 5ter of the Paris Convention, or Article 27 of the Chicago Convention.\(^\text{119}\)

The patentee first argued that the Patent Clause did not authorize Congress to grant \textit{limited} exclusivity to inventors, nor had

\(^{115}\) Field, \textit{supra} note 51, at 28 (citing Hughes Aircraft Co. v. United States, 29 Fed. Cl. 197, 240 (1993)).


\(^{118}\) \textit{Id.} at 1122.

\(^{119}\) \textit{Id.} at 1122–23.
Congress attempted to limit patents granted under 35 U.S.C. § 154. Consequently, the patentee argued that Article 27 of the Chicago Convention was invalid since it purported to create a wide area of permissible use for patented inventions incorporated into aircraft. The district court rejected this argument by holding that the Patent Clause was not self-executing and that it permitted Congress to grant patent rights without so commanding. Because the source of the patent right is statutory, and not the constitutional provision itself, the court held that "Congress . . . may put such limitations upon it as it pleases." The court went on to cite Brown as an example of permissible limitations imposed on statutory patent grants.

The district court also relied on Brown in addressing the patentee's second argument that because § 272 was enacted after the Chicago Convention, the narrower defense provision in the statute superseded Article 27 of the treaty. The Cali court addressed this contention by pointing out that the Supreme Court held in Brown that patent law must be construed so as not to embarrass the treaty powers of Congress. Thus, holding that § 272 effectively nullified the treaty would be inappropriate. The district court went on to note that Article 27 of the Chicago Convention is not inconsistent with § 272 or Article 5ter of the Paris Convention. The mere fact that all three intersect to some degree in one matter does not mean that one or more must be invalidated.

Finally, the patentee argued that § 272 only extended to foreign aircraft temporarily or accidentally in the United States, and not to aircraft belonging to entities that maintain regular and systematic airline services in the United States. While the district court conceded that the Brown opinion emphasized that the patentee in that case received no damage and that the accused infringer received no benefit, the court did not read Brown as requiring that only trivial uses may be considered non-

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120 Id. at 1124–25.
121 Id. at 1124.
122 Id.
123 Id. (quoting Mast, Foos & Co. v. Stover Mfg. Co., 177 U.S. 485, 494 (1900)).
124 Id. at 1124–25.
125 Id. at 1124.
126 Id. at 1125–26.
127 See id. at 1126.
128 Id. at 1127.
129 Id.
130 Id. at 1124.
infringing.\textsuperscript{131} The eastern district even questioned whether the use in \textit{Brown} was as insignificant as the Supreme Court suggested since it was "presumably indispensable" in entering and leaving port.\textsuperscript{132} The court further held that § 272 should not be interpreted as to only cover trivia but should be understood to create a useful immunity from patent infringement liability.\textsuperscript{133} Deferring to the purpose of § 272 and Article 5ter of the Paris Convention in meeting the needs of international commerce, the district court held that the term "temporarily" must at least cover "entering for the purpose of completing a voyage, turning about, and continuing or commencing a new voyage."\textsuperscript{134} Because this definition applied to the international travels of the aircraft involved, the court held that those aircraft were never more than temporarily present in the United States.\textsuperscript{135} Having addressed all of the patentee's arguments, the district court denied his motion for summary judgment.\textsuperscript{136}

B. \textit{Hughes Aircraft Co. v. United States}

The second case to interpret the temporary presence defense was \textit{Hughes Aircraft Co. v. United States}, decided by the U.S. Court of Federal Claims in 1993.\textsuperscript{137} The plaintiff's patent covered a method and device to control the spin of a spacecraft.\textsuperscript{138} The plaintiff sought compensation after the federal government brought five foreign spacecraft that utilized the invention into the United States and launched them.\textsuperscript{139} The court rejected a § 272 defense as to four of the spacecraft, holding that, unlike the \textit{Cali} and \textit{Brown} cases, the spacecraft were not vessels or aircraft temporarily brought to the United States as a means of conveyance.\textsuperscript{140} Instead, the spacecraft were more accurately categorized as cargo brought to the United States for \textit{use}, and in

\textsuperscript{131} \textit{Id.} at 1126.
\textsuperscript{132} \textit{Id.}
\textsuperscript{133} \textit{Id.}
\textsuperscript{134} \textit{Id.}
\textsuperscript{135} \textit{Id.}
\textsuperscript{136} \textit{Id.} at 1128.
\textsuperscript{137} \textit{See} Hughes Aircraft Co. v. United States, 29 Fed. Cl. 197 (1993).
\textsuperscript{138} \textit{Id.} at 201.
\textsuperscript{139} \textit{Id.} Hughes sought compensation under 14 U.S.C. § 1498, which provides a remedy whenever the United States uses or manufactures a patented invention without a license. \textit{Id.} at 208. While the claim is based on a theory of compulsory taking by eminent domain, the legal standard is generally the same as that for infringement under Title 35. \textit{Id.}
\textsuperscript{140} \textit{Id.} at 232–33.
this case, the use happened to be launching.\textsuperscript{141} Consequently, the first four spacecraft were not vehicles under § 272, and the government was unable to establish the first element of the temporary presence defense, which requires that the invention be used with respect to a vessel, aircraft or vehicle.\textsuperscript{142}

However, as to the fifth spacecraft, which launched in 1984, the court held that it was a vehicle brought to the United States because it was the only spacecraft in question that launched after Congress extended § 272 protection to spacecraft.\textsuperscript{143} The relevant statutory provision, 24 U.S.C. § 2457(k), took effect in 1981\textsuperscript{144} and states that “any object intended for launch, launched, or assembled in outer space shall be considered a vehicle for the purpose of Section 272.”\textsuperscript{145} Thus, the “vehicle” element was satisfied for the fifth spacecraft.\textsuperscript{146}

Next, the court turned to the remaining four elements of the § 272 temporary presence defense for the fifth spacecraft. First, the court held that the “temporarily” element was met because the spacecraft entered the United States only one time for a short duration before launch.\textsuperscript{147} By comparison, even the aircraft in \textit{Calì} were held to be temporarily present in the United States even though their presence was regular and systematic.\textsuperscript{148} Second, the court held that the “reciprocity” element was satisfied because the spacecraft was shipped from England, a country that has long recognized a form of the temporary presence defense, both under its own patent statutes and as a signatory to the Paris Convention.\textsuperscript{149} The plaintiff argued that because England did not have a statute identical to the United States’ provision making the temporary presence defense specifically available for U.S. spacecraft brought into England for launch, the reciprocity element was not satisfied.\textsuperscript{150} However, the court disagreed with the premise that § 272 requires that the other country provide an identical privilege for the given situation, instead requiring only that the other country generally provide a similar

\textsuperscript{141} \textit{Id.}
\textsuperscript{142} \textit{Id.}
\textsuperscript{143} \textit{Id. at} 240.
\textsuperscript{144} \textit{Id.}
\textsuperscript{145} \textit{See id. (quoting 42 U.S.C. § 2457(k)).}
\textsuperscript{146} \textit{Id.}
\textsuperscript{147} \textit{Id.}
\textsuperscript{148} \textit{Id.}
\textsuperscript{149} \textit{Id. at} 240–41.
\textsuperscript{150} \textit{Id. at} 241 n.67.
defense to American vessels, aircraft, and vehicles.\textsuperscript{151} Finally, the court held that the last two elements were satisfied because the invention was exclusively for the needs of the spacecraft and the invention was not offered for sale or used for manufacture in the United States.\textsuperscript{152} With all five of the elements satisfied, the court held that the § 272 defense did apply for use of the invention related to the fifth spacecraft.\textsuperscript{153}

C. \textit{National Steel Car, Ltd. v. Canadian Pacific Railway, Ltd.}

The most recent case involving the temporary presence defense was decided in 2004 by the Federal Circuit.\textsuperscript{154} \textit{National Steel Car, Ltd. v. Canadian Pacific Railway, Ltd.,} a landmark case, represents the first time that the Federal Circuit, which has exclusive appellate jurisdiction in patent infringement cases, interpreted § 272.\textsuperscript{155}

The defendant, Canadian Pacific, was a Canadian railroad company that owned rail lines in the United States and Canada on which it shipped Canadian lumber into the United States.\textsuperscript{156} Canadian Pacific would use Canadian locomotives to move its railcars into the United States as far as Canadian Pacific's rail lines extended.\textsuperscript{157} Then, if the railcar needed to proceed further, it would be interchanged to a U.S. railroad company's rail lines and moved by the U.S. railroad company's locomotives to its final destination before returning, almost always empty.\textsuperscript{158} Canadian Pacific's railcars spent fifty-six to fifty-seven percent of their useful lives in the United States, whether measured in time or total miles traveled.\textsuperscript{159}

\textsuperscript{151} Id.
\textsuperscript{152} Id. at 241.
\textsuperscript{153} Id.
\textsuperscript{154} See Nat'l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd., 357 F.3d 1319 (Fed. Cir. 2004).
\textsuperscript{155} 28 U.S.C. § 1295(a)(1) (2006) (“The United States Court of Appeals for the Federal Circuit shall have exclusive jurisdiction . . . of an appeal from a final decision of a district court of the United States . . . if the jurisdiction of that court was based, in whole or in part, on section 1338 of this title . . . ”). Section 1338 provides that “[t]he district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents.” 28 U.S.C. § 1338(a) (2006).
\textsuperscript{156} Nat'l Steel Car, 357 F.3d at 1323.
\textsuperscript{157} Id. at 1324.
\textsuperscript{158} Id.
\textsuperscript{159} Id.
The plaintiff, National Steel Car, held a U.S. patent for a railroad car with a lower intermediate section between its front and rear wheels. This "drop-deck" car allowed for loads of greater volume and provided more stability by virtue of a lower center of gravity. Defendant Canadian Pacific, a former purchaser of National Steel Car's patented railcars, arranged to buy a new fleet of 525 railcars of the same design from Greenbrier, a U.S. company with a manufacturing facility in Canada, at a cost of over $21 million. National Steel Car filed suit in the U.S. District Court for the Eastern District of Pennsylvania and moved for a preliminary injunction to stop the allegedly infringing activity. In response, the district court held that Canadian Pacific's § 272 defense lacked substantial merit and issued the injunction. Defendant Canadian Pacific immediately appealed.

On appeal, the Federal Circuit thoroughly analyzed the history of the temporary presence defense and concluded that a broader application of the defense was required to be consistent with the statutory scheme, relevant precedents, international obligations, and underlying policies. The appellate court then examined the four elements on which the case depended and held that Canadian Pacific's § 272 defense did have substantial merit and reversed the district court's award of a preliminary injunction.

The first issue that the appellate court attacked was whether the railcar constituted a vehicle of another country under the temporary presence statute. The district court had reasoned that a train, and not the individual railcar, was the relevant vehicle and that the nationality of the locomotive determines the nationality of the entire train. Thus, according to the district court, when an accused railcar is attached to a U.S. locomotive, it ceases to be part of a Canadian vehicle present in the United

160 Id. at 1322.
161 Id.
162 Id. at 1323.
163 Id. at 1324.
164 Id. (noting that neither the § 272 defense nor the invalidity defense raised by Canadian Pacific presented a substantial question precluding a preliminary injunction).
165 Id.
166 Field, supra note 51, at 69–70.
167 Nat'l Steel Car, 357 F.3d at 1334.
168 Id. at 1328.
169 Id.
The appellate court rejected this analysis and referred instead to the definition for "vehicle" in 1 U.S.C. § 4 of the Dictionary Act, which includes "every description of carriage or other artificial contrivance used, or capable of being used, as a means of transportation on land." The court then examined the ordinary meaning of "carriage" and found it to encompass "a wheeled vehicle for people," or "a wheeled support carrying a burden." With this definition, the appellate court determined that an individual railcar may be a foreign vehicle for purposes of § 272, irrespective of the nationality of the train’s locomotive. While the court acknowledged that there may sometimes be difficulty in distinguishing between a vessel, aircraft, or vehicle and its cargo, the railcars at issue in this case did not present any ambiguity.

Next, the appellate court turned to the requirement that the vehicle’s presence in the United States be temporary. The court found that the plain meaning approach it used for deciphering the meaning of "vehicle" was unworkable for the term "temporarily." The appellate court deemed the first definition, "for a brief period," too indeterminate to be useful because "brief" is a relative concept that provides no appropriate meaning in isolation. The court held the second plain meaning definition, "during a limited time," was absurdly broad because presence for any period of time is literally "limited" provided that it is not permanent. With these definitions lacking, the court turned to the history of the statute and its predecessors and gleaned that temporarily should be defined in light of the temporary presence defense’s purpose of promoting international commerce. Thus, temporarily is not defined in relation to the actual duration of the presence. The appellate court

170 Id.
171 Id. (quoting 1 U.S.C. § 4 (2000)).
172 Id. (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 343 (1993)).
173 Id. at 1328–29.
174 Id. at 1328.
175 Id. at 1329.
176 Id.
177 Id. (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY, supra note 172, at 2353).
178 Id. (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY, supra note 172, at 2353).
179 Id. at 1329–30.
180 Id. at 1330–31.
ultimately settled on a test for temporary presence that is satisfied if the vehicle enters the United States for a finite period of time with the sole purpose of participating in international commerce, regardless of the length of its stay.\textsuperscript{181}

Applying its test, the appellate court concluded that because the railcars enter the United States for a finite period with the sole purpose of participating in international commerce, the railcars may be temporarily present under § 272.\textsuperscript{182} However, the court cautioned that if the railcars were used for purposes of domestic commerce once they were in the United States, then the railcars’ presence would cease to be temporary.\textsuperscript{183}

The third element that the appellate court examined was the requirement that the invention be used exclusively for the needs of the vehicle.\textsuperscript{184} The district court had construed the holdings of Brown, Cali, and Hughes Aircraft narrowly and determined that in order to be exclusively for the needs of the vehicle, the invention must help propel the trains, help control their direction, or otherwise help to make them work.\textsuperscript{185} The appellate court summarily rejected this restrictive interpretation and held that inventions used for structural needs are within the plain meaning of the statute, to the same degree as inventions addressing propulsive needs.\textsuperscript{186} The appellate court referred to Brown, where the requirement’s analog was satisfied if the invention was “‘used in the construction, fitting out, or equipment’ of a vessel.”\textsuperscript{187} The appellate court also observed that the Paris Convention’s scope of noninfringing uses includes uses in the construction or operation of vehicles or their accessories.\textsuperscript{188} Because both Brown and Article 5ter of the Paris Convention expressly provide that the invention may be used in the construction of vehicles, the district court erred in construing the § 272 requirement to only include operational needs.\textsuperscript{189}

Finally, the appellate court shed light on the requirement that the invention not be sold or offered for sale in the United

\textsuperscript{181} Id. at 1331.
\textsuperscript{182} Id.
\textsuperscript{183} Id. at 1332. For example, if after reaching their destination in the United States the railcars were then used to carry freight from that location to another within the United States, the presence would cease to be temporary.
\textsuperscript{184} Id.
\textsuperscript{185} Id.
\textsuperscript{186} Id. at 1332–33.
\textsuperscript{187} Id. at 1333 (quoting Brown v. Duchesne, 60 U.S. 183, 198 (1856)).
\textsuperscript{188} Id.
\textsuperscript{189} Id.
States. The district court held that this element was defeated by Greenbrier's offer to sell the railcars to various companies in the United States. The appellate court clarified that it is not any sale or offering for sale that will defeat the temporary presence defense, but only a sale or offering by the defendant. A sale by a third party cannot defeat the defendant's temporary presence defense under § 272. The court invoked Chief Justice Taney's illustration in Brown where use of the invention would have become infringing if the ship's captain had sold the invention himself while his ship was harbored in a U.S. port. The appellate court also addressed the fact that Canadian Pacific might have sold the railcars to a U.S. finance company as part of a leaseback agreement. The appellate court agreed with the district court that such an arrangement with a U.S. financier would defeat the temporary presence defense. Not only would the sale by Canadian Pacific in the United States be a sale that nullifies § 272, but passing title to a U.S. corporation would transform the railcars into a vehicle of the United States thus defeating the requirement that the vehicles be of another country. However, because Canadian Pacific had not reached a decision on the ownership structure for the railcars, it was improper to hold that the § 272 defense lacked substantial merit based on what Canadian Pacific might do.

In its analysis, however, the Federal Circuit failed to address the reciprocity requirement of § 272, presumably because reciprocity was assumed to be met by virtue of the fact that Canada is a signatory to the Paris Convention. Furthermore, expounding on the requirement would only provide limited guidance in future cases because the laws and treaties of the other country must be examined on a case-by-case basis to determine whether reciprocity is met. However, not discussing the reciprocity requirement...
procity element left Hughes Aircraft as the sole authority on what is required for the reciprocity element to be satisfied. Accordingly, the element is satisfied if the other country generally offers similar protections to vessels, aircraft, and vehicles of the United States, regardless of whether that privilege would be applicable to the specific situation.202

IV. THE TEMPORARY PRESENCE DEFENSE AND ITS APPLICATION TO AIRLINE SECURITY PATENTS

From its inception in the 1850s until today, the bedrock principle of the temporary presence defense has remained: international commerce should not be burdened by requiring its "vehicles . . . to conform to the patent laws of all nations [it might visit] during its lifetime."203 The defense continues to grow in importance as commerce becomes more global in nature.204 This globalization of commerce is especially evident in the realm of commercial air travel, where conflict will inevitably arise between U.S. patentees and the security procedures of foreign airlines. As a solution, application of the § 272 defense will not only serve the long-recognized policy of supporting international commerce,205 particularly air travel in this context, but it will also further goals of increasing flight safety and security. Additionally, the application of § 272 recognizes the reality that many services and activities are necessarily incidental to moving a vehicle through various nations for purposes of engaging in international commerce.

A. VESSEL, AIRCRAFT, OR VEHICLE OF ANOTHER COUNTRY

Section 272 applies to vessels, aircraft, or vehicles.206 In National Steel Car, the Federal Circuit used the Dictionary Act and plain meanings to construe the term "vehicle" broadly.207 The Dictionary Act does not provide a definition for the word "aircraft."208 However, one plain meaning is "[a] machine or device, such as an airplane, a helicopter, a glider, or a dirigible,

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202 Id. at 241 n.67.
203 Nat'l Steel Car, 357 F.3d at 1330.
204 See Field, supra note 51, at 29.
205 See Nat'l Steel Car, 357 F.3d at 1330.
207 Nat'l Steel Car, 357 F.3d at 1328.
that is capable of atmospheric flight.” That the word “airplane” appears within the given definition tends to show that regardless of which definition is chosen, the airplanes utilized by commercial airlines will surely be included. In fact, a properly broad definition of “aircraft” would likely include almost any kind of flying machine imaginable.

The next inquiry under this element is whether the patented invention is used “in any vessel, aircraft or vehicle.” None of the cases interpreting § 272 focused on the requirement that the invention be used in the vessel, aircraft, or vehicle because the cases up to this point have all dealt with inventions made part of the conveyance for the purpose of somehow improving it, rather than processes used to ensure safe or efficient operation of the conveyance. Taken literally, the statute would seem to draw a needless distinction between security measures practiced onboard the airplane and ones practiced in the terminal, because an airport terminal is not an aircraft or vehicle. Under such a construction, § 272 would allow a foreign airline that conducts its own security measures in the United States to use a patented security process designed to detect bombs hidden on one’s person, but only once the passengers were onboard the aircraft. The optimal time to use such a process, however, is before all of the passengers are congregated aboard the airplane because at that point the danger is already realized. Such a formalistic rule is of little use to foreign airlines that would like to maintain the safety and security of their operations, or to patentees who, if they choose, would have the right to force airlines to use the invention only within the cramped quarters of the airplane.

A more sensible construction of the statute would recognize that because the drafters had tangible devices in mind when § 272 and its antecedents were penned, the language is

\[\text{Id.}\]
\[\text{Id.}\]
\[\text{See 35 U.S.C. § 272.}\]
\[\text{See supra Part II.}\]
slightly unwieldy when applied to inventions that cover methods or processes. For tangible items, such as the configuration of sails on a ship, the invention necessarily travels onboard or attached to the vessel, aircraft, or vehicle. But for method patents, such as a process for loading cargo, the invention might be practiced in very close relation to the conveyance but still not directly in or on it. A better reasoned approach would avoid absurd results, such as permitting the use of a patented method for loading cargo, but only if the loading method is used entirely within the vehicle. Consequently, the proper interpretation would allow use of a patented invention to fall within § 272 if the use is "closely-related" to the vessel, aircraft, or vehicle. Under this rule, pre-boarding security measures conducted in the airport terminal would be included as closely-related to the aircraft because the measures are conducted in close proximity to the aircraft for the purpose of ensuring flight safety. This result would allow foreign airlines to use their security procedures in the most optimal manner, which ensures airline safety and promotes international commerce in the airline industry.

Alternatively, courts could consider the airport terminal to be an extension of the aircraft as a matter of law. Previously, courts have treated areas outside of an airplane as an extension of the airplane in certain contexts, even when the connection to the aircraft seems to be tenuous when compared to the connection between an airplane and the airport terminal. Under this rule, any security measures conducted in the terminal would be presumed by the law to have taken place in the aircraft for purposes of § 272. Like the rule that would allow for uses closely-related to the aircraft, this solution avoids drawing needless distinctions between security measures conducted in the aircraft and those conducted in the airport terminal. Additionally, it carries the advantage of carving out a narrow exception for using patented method inventions related to airline security within the airport terminal. Thus, the risk of unintended consequences is diminished, as the rule would not sanction the use of patented inventions in close relation to vessels and vehicles in other contexts. Regardless of whether courts opt for the closely-related approach or choose to treat the terminal as an extension of the aircraft, the goals of promoting airline security and avoid-

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United States v. Lueck, 678 F.2d 895, 902 (11th Cir. 1982) ("Because some of the contents of the [air]craft . . . were transferred to the appellant's auto upon his first landing in the United States, the car constituted an extension of the airplane" for purposes of a border search.)
ing undue burdens on international air commerce will be served.

B. Temporary or Accidental Presence in the United States

The next requirement under § 272 is that the vessel, aircraft, or vehicle must have entered the United States “temporarily or accidentally.”\(^{218}\) The Federal Circuit adopted a broad test by holding that entering “temporarily” means “entering for a period of time of finite duration with the sole purpose of engaging in international commerce.”\(^{219}\) While the duration of the stay is irrelevant, the court did warn, however, that once the foreign vessel, aircraft, or vehicle enters the United States, engaging in any domestic commerce will defeat the “temporarily” element.\(^{220}\) Under this definition, foreign aircraft sent into and out of the United States for the purposes of completing international commercial flights would qualify as entering temporarily, so long as they do not complete any domestic flights. Commercial airliners that enter the United States to unload passengers, reload, and depart for another destination outside of the United States have obviously entered for a finite period with the purpose of participating in international commerce.

Courts have already rejected the argument that foreign airlines’ airplanes cannot be temporarily present because their presence is frequent and systematic in nature. Even before the Federal Circuit announced its broad test for “temporarily,” the U.S. District Court for the Eastern District of New York recognized that § 272’s underlying purpose was to meet the realities of international trade.\(^{221}\) Consequently, that court held that at a minimum temporary presence must allow for a commercial aircraft to “comple[e] a voyage, turn[ ] about, and continu[e] or commenc[e] a new voyage.”\(^{222}\) Thus, aircraft of foreign airlines may be present temporarily despite the fact that the airlines maintain a continuous presence in the United States and despite the frequency and regularity of the individual incidents of temporary presence within the United States.\(^{223}\)

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\(^{219}\) Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd., 357 F.3d 1319, 1331 (Fed. Cir. 2004).

\(^{220}\) Id. at 1331–32.


\(^{222}\) Id.

\(^{223}\) Id.
C. OF A COUNTRY THAT AFFORDS SIMILAR PRIVILEGES

The third element of § 272 is the requirement that the vessel, aircraft, or vehicle be from another country that affords a similar defense to vessels, aircraft, or vehicles from the United States. This reciprocity element requires examining the laws and treaties of the vessel, aircraft, or vehicle's home country in order to determine whether that country affords a similar privilege to the vessels, aircraft, and vehicles of the United States. This element does not pertain to the general applicability of § 272 to airline security patents because the inquiry will depend entirely on the country from which the specific aircraft hails. The element is satisfied only if the country provides a privilege similar to the § 272 defense to vessels, aircraft, or vehicles from the United States.

However, the inquiry into the reciprocal treatment by the other country's laws is not a specific one. In Hughes Aircraft, the patentee unsuccessfully argued that to satisfy § 272, the foreign country must interpret its temporary presence provisions to be applicable to the specific situation before the court. In that case, the patentee argued that because the United Kingdom's patent statutes would not recognize spacecraft as a "vehicle" for purposes of its temporary presence defense, the § 272 privilege should not extend to English spacecraft entering the United States. The Court of Federal Claims rejected this argument, holding that the inquiry into reciprocity need only determine whether the other country generally provides a privilege similar to the § 272 defense to U.S. vessels, aircraft, and vehicles. This holding is consistent with the policy preference of broadly applying § 272 as later set forth in National Steel Car. Indeed, the Federal Circuit's refusal to address the issue in National Steel Car indicates tacit approval for the rule adopted in Hughes Aircraft.
While the specificity of the inquiry into reciprocity might not bear directly on whether § 272 is generally applicable to airline security patents, the fact that the looser test prevails further establishes a policy of widely applying the defense. The adopted rule ensures that the defense applies to vehicles from more countries, including ones whose reciprocal defense might be underdeveloped or underinclusive, in order to foster international commerce. The same underlying purpose of encouraging international commerce supports applying § 272 to airline security patents. Plus, expanding the defense to apply to airline security measures supports safety and security of international flights.

D. EXCLUSIVELY FOR THE NEEDS OF THE VESSEL, AIRCRAFT, OR VEHICLE

The fourth requirement of § 272 is that the invention be “used exclusively for the needs of the vessel, aircraft or vehicle.” The Federal Circuit held that this element’s requirements must comport with Brown and Article 5ter of the Paris Convention. The temporary presence defense first recognized in Brown extended to uses “in the construction, fitting out, or equipment of [a] vessel.” Article 5ter of the Paris Convention requires that the invention must be used in the body, machinery, tackle, gear, or accessories of a vessel when such use is exclusively for the needs of the vessel. Alternatively, in the case of an aircraft or land vehicle, Article 5ter requires that the invention must be used in the construction or operation of the aircraft or land vehicle, or of its accessories. Under these guidelines, the Federal Circuit held that the qualifying needs under § 272 include at least propulsive and structural needs. However, many items beyond propulsive and structural needs, such as the heating and air conditioning system, could easily be included within § 272’s scope. Furthermore, because the needs vary depending on the kind of conveyance and its use, the type of vessel, aircraft, or vehicle at issue will bear on whether an invention is exclusively for its needs.

235 Nat’l Steel Car, 357 F.3d at 1332–33.
237 Paris Convention, supra note 84.
238 Id.
239 Nat’l Steel Car, 357 F.3d at 1332–33.
240 Field, supra note 51, at 91.
241 Id. at 91–92.
Based on this framework, the use of airline security inventions would almost certainly be a use exclusively for the needs of the aircraft. There is little doubt that inventions aimed at improving the safety of a vessel, aircraft, or vehicle will similarly be exclusively for the needs of the conveyance. For example, an automobile’s safety belts, air bags, and anti-lock brake system seem to plainly be used exclusively for the needs of the vehicle. Because needs vary according to the vehicle and its use, today a commercial jetliner traveling internationally certainly has an elevated need for security measures to ensure the safety of its passengers.242 To meet the “exclusively for the needs of” element, the use must satisfy Article 5ter, which, in the case of aircraft, requires that the invention be used in the construction or operation of the aircraft or its accessories.243 Inventions pertaining to security measures would qualify because security measures are absolutely critical to the safe and efficient operation of commercial aircraft today, particularly on international flights.244 The need for safety on these flights not only satisfies this particular element, but it also supports the broader proposal of applying § 272 to airline security patents.

E. No Sales or Manufacturing Activity

Finally, § 272 requires that the invention must not be “offered for sale or sold in or used for the manufacture of anything to be sold in or exported from the United States.”245 The Federal Circuit clarified that the sales or manufacturing activity must be perpetrated by the defendant for the “no sales” element of § 272 to be defeated.246 A third party cannot unilaterally defeat the defendant’s privilege under § 272 by engaging in infringing sales activity in the United States.247 In fact, the Supreme Court’s illustration in Brown supports this proposition because it was only sales activity by the ship’s captain that would defeat his temporary presence defense and make his use infringement.248

Sales or manufacturing activity will hardly be an issue when applying the temporary presence defense to airline security pat-

242 See id.
243 Nat’l Steel Car, 357 F.3d at 1332–33.
246 Nat’l Steel Car, 357 F.3d at 1333.
247 Id.
ents. Airlines are not in the habit of selling their security methods, and such processes are incapable of manufacturing or producing any good that might be sold or exported. The unlikelihood of these sales further supports applying § 272 to airline security patents because the chance of an infringing sale that would cause actual harm to the patentee by violating his right to marketplace exclusivity is very remote. Thus, the risk of harm is miniscule, especially in comparison to the advancement of the policy aims for safer air travel and robust international commerce free from burdens.

F. The Chicago Convention

Additionally, Article 27 of the Chicago Convention provides a temporary presence defense specifically applicable to aircraft engaged in international air travel.249 However, because no case has been decided solely based on Article 27, it is unclear whether a court would treat the Article 27 defense as substantially different from § 272.250 In fact, Cali is the only case to specifically mention the Article.251 In that case, the only relevant holdings were that the treaty is valid,252 and that, while Article 27 appears to literally allow broader uses to still fall under the defense, the language may be problematic.253 Therefore, Article 27 could be construed as implicitly limited to the bounds set out by § 272 and its precedents, Brown and Article 5ter of the Paris Convention. In that event, the analysis and result under the Chicago Convention would be the same as if the defendant invoked § 272, and the courts could properly apply the defense to the context of airline security patents under either law.

On the other hand, Article 27 of the Chicago Convention might be applied exactly as it reads. If a literal interpretation applies, the aircraft must be (1) of a country that is party to the treaty, (2) authorized to be in the United States, and (3) en-

249 Chicago Convention, supra note 91.
251 Id. at 1123.
252 Id. at 1124 (“It is concluded . . . Article 27 of the Chicago Convention, Article 5ter, of the Paris Convention, and Section 272, are constitutionally valid as applied to the defendants’ uses of plaintiff’s patented engines, and, therefore, accord defendants a complete defense to the claims against them for patent infringement.”).
253 Id. at 1123 (“The Chicago Convention on International Civil Aviation, at least in form, seems much more inclusive in defining the exempted uses, although its language presents some difficulty.”).
gaged in international air travel.\(^{254}\) If those three conditions are met, which would be the case for foreign airlines flying in and out of U.S. airports, the only remaining requirement is that the patented invention must be used in an aircraft's parts, mechanisms, accessories, or operation.\(^{255}\)

Thus, under a literal interpretation, a foreign airline's aircraft is entitled to use any patented invention in the parts, mechanisms, accessories, and operation of the aircraft. Paradoxically, this so-called broader defense might not be as readily applicable as § 272 for patents related to airline security. While § 272 is satisfied if the airline security invention is used exclusively for the operating needs of the aircraft, Article 27 provides a defense if the invention is used in the operation of the aircraft.\(^{256}\) Consequently, under § 272, security measures might be exclusively for operation of the aircraft, even if "operation" refers only to flying, because the security measures are provisions intended to ensure the safety of those flying operations. However, if operation of an aircraft is restricted to its actual flying, security measures may be too remote from actual flying to qualify as being used in those operations. If a literal approach to Article 27 is required, courts should interpret operation of the aircraft broadly in order to reach the correct result. Thus, operation of the aircraft would include important pre-flight procedures, especially those concerning the ultimate safety of the flight. In that case, security procedures would be used in operation of the aircraft because they serve an important role in ensuring that the aircraft's flight is safe. Construing operation of the aircraft broadly allows the courts to apply Article 27's defense to airline security patents, serving the aims of the defense itself by promoting international commerce in the air travel context and encouraging foreign airlines to protect flights in the United States by utilizing security procedures.

V. CONCLUSION

With increasing numbers of patents on airline security being issued, and perhaps thousands more lying in wait while subject to secrecy orders, a collision between an issued patent and the security procedures of a foreign-based airline is almost assuredly on the horizon. When the courts have to resolve these disputes,

\(^{254}\) Chicago Convention, supra note 91.

\(^{255}\) Id.

they should employ the temporary presence defense. Doing so will serve the doctrine’s underlying purpose of preventing patent infringement liability from hindering international commerce. Applying the defense to airline security patents will avoid placing undue burden on airlines engaged in international commerce, who would otherwise have to ensure that their airline security procedures comply with the patent laws of every nation they may fly into. Furthermore, with the untold number of airline security patents currently subject to secrecy orders, avoiding liability for infringement in this area is akin to negotiating a minefield.

Beyond the principles that traditionally justify the temporary presence defense, the United States should adopt a policy that encourages, rather than discourages, foreign airlines in conducting extra security measures for international flights. Doing so will not only increase the safety and security of those flights, but it will help develop state of the art airline security.