

**United States Court of Appeals  
for the Federal Circuit**

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**ATLANTIC RESEARCH MARKETING SYSTEMS,  
INC.,**  
*Plaintiff-Appellant,*

**v.**

**STEPHEN P. TROY, JR. AND TROY INDUSTRIES,  
INC.,**  
*Defendants-Cross Appellants.*

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2011-1002, -1003

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Appeal from the United States District Court for the District of Massachusetts in case no. 07-CV-11576, Judge Patti B. Saris.

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Decided: October 6, 2011

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PAUL J. HAYES, Hayes Bostock & Cronin LLC, of Andover, Massachusetts, argued for plaintiff-appellant. With him on the brief was DEAN G. BOSTOCK.

DAMIAN R. LAPLACA, Donovan Hatem, LLP, of Boston, Massachusetts, and THOMAS P. MCNULTY, Lando & Anastasi, LLP, of Cambridge, Massachusetts, argued for defendants-cross appellants.

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Before PROST, MAYER, and O'MALLEY, *Circuit Judges*.  
PROST, *Circuit Judge*.

Atlantic Research appeals from the grant of summary judgment by the United States District Court for the District of Massachusetts invalidating claims 31-36 of U.S. Reissue Patent No. 39,465 (“465 patent”) for failing to meet the written description and best mode requirements. Because the district court did not err in invalidating these claims on written description grounds, we affirm. We decline to address the best mode issue.

Additionally, Stephen P. Troy, Jr. and Troy Industries, Inc. (collectively, “Troy”) cross-appeal from the district court’s denial of the following motions: Troy’s Motion for Judgment as a Matter of Law regarding state law claims arising from an alleged misappropriation of a trade secret; Troy’s Motion for a Mistrial on the grounds that the court improperly charged the jury and failed to adequately address a jury taint issue; and Troy’s Motion for Remittitur. We affirm the district court’s denial of Troy’s Motion for Judgment as a Matter of Law. But because the district court did not properly address the jury taint issue, we vacate the jury’s verdict and reverse the district court’s denial of Troy’s Motion for a Mistrial. Finally, we decline to address the remittitur issue in light of our decision to vacate the jury verdict.

I

A

This case is about weapons technology and a business relationship gone sour. Atlantic Research is an arms

manufacturing company that focuses on accessories for small arms weaponry, including handguards that attach to military rifles. Richard Swan founded Atlantic Research in 1980, co-owns it with his wife, and is the named inventor of twenty-four patents in the weapons field. Mr. Swan's patents include U.S. Patent No. 6,499,245 ("245 patent") and its reissue, the '465 patent, both of which claim a handguard device. Atlantic Research includes among its customers the United States military.

Mr. Swan met Stephen Troy in early 2002. Mr. Troy soon became a distributor for Atlantic Research. Their business relationship continued to develop, and eventually Mr. Troy became an employee of Atlantic Research. He signed a nondisclosure agreement as part of his employment. Involved in all aspects of Atlantic Research's business, Mr. Troy soon became Mr. Swan's "right-hand man." Mr. Swan familiarized Mr. Troy with Atlantic Research's products and explained to him how and why products were designed as they were. This included showing Mr. Troy the prototypes of each of Atlantic Research's products.

In early 2003, Mr. Troy and Mr. Swan attended a weapons industry show to promote Atlantic Research's products. Sometime prior to the show, Mr. Troy began developing a weapons product for his own company, Troy Industries. Mr. Swan was aware of this and allowed Mr. Troy to promote his product from Atlantic Research's booth at the trade show. Mr. Swan, however, learned at the show that Mr. Troy had registered for a booth of his own for the following year. Things quickly deteriorated after that, and Mr. Swan terminated Mr. Troy's employment with Atlantic Research at the end of February. Almost immediately thereafter, Troy Industries prepared a proposal in response to a broad solicitation from the

Crane Naval Warfare Center. The proposal described a free-floating handguard system for use with rifles.

Free-floating handguards, and the means by which they attach to rifles, are at the heart of this case. The free-floating handguard, as explained in the background of one of the patents at issue, solves to the problem of how to better equip military rifles. Ancillary devices, such as integrated laser systems, could not be attached directly to the barrel of a rifle without potentially damaging both the rifle and the added device; the device could cause the barrel to bend and the extreme heat from the barrel could damage the added device. A handguard that surrounded the barrel of the firearm without touching the barrel avoided these problems.

Troy Industries never submitted the proposal to Crane, deciding it did not have the capability to create physical prototypes at that time. In 2004, however, Troy began offering handguards that attached to rifles solely by clamping to the barrel nut. The barrel nut, which screws onto a threaded receiver on the upper receiver, is used to attach the barrel to the upper receiver. Troy's handguards competed with those of Atlantic Research. Mr. Troy testified that he came up with the idea for the single-clamp handguard in July of 2003 while vacationing with his family in Turkey. Mr. Troy sought a patent for this invention in 2005, and U.S. Patent No. 7,216,451 issued in May of 2007, with Mr. Troy as the named inventor.

Atlantic Research filed a complaint against Troy on August 23, 2007. The complaint consisted of two general categories of claims. First, Atlantic Research alleged that Troy infringed the '465 patent claiming a handguard device. Second, Atlantic Research alleged that Troy

misappropriated its trade secrets, and was liable under various additional related Massachusetts state law claims. The district court bifurcated the case along those lines.

## B

Turning to the patent claims, Atlantic Research accused Troy of infringing the '465 patent, a reissue of the '245 patent. Troy, through its defenses and counterclaims, alleged that the '465 patent was invalid. The district court agreed with Troy, finding claims 31-36 of the '465 patent invalid for failing to meet the written description and best mode requirements at the summary judgment stage. Regarding written description, the court concluded that the '465 patent specification did not disclose a handguard that attached solely to the barrel nut of the gun, but construed the asserted claims (claims 31-36) to cover such an invention. Because the asserted claims covered subject matter not disclosed in the specification, the court invalidated these claims.

Atlantic Research's trade secret claim survived summary judgment, and the court set the matter down for trial. Ultimately, the district court presided over a two week trial addressing whether Atlantic Research possessed a valid trade secret and, if so, whether Mr. Troy wrongly appropriated that trade secret.

Mr. Swan identified a free-floating handguard that attached to a weapon solely at the barrel nut as his alleged trade secret. Mr. Swan testified that he created a handguard prototype incorporating this design on January 20, 1999, at an Atlantic Research facility. Sergeant Major Martin Barreras, a Force Modernization Officer with the Army, was also present when Mr. Swan created

the prototype. Both men described how Mr. Swan created the prototype by altering an existing handguard. Mr. Swan did not further develop the prototype at this time though, believing that the military would not approve of some of the alterations. The actual prototype was introduced at trial.

Mr. Swan alleged that he disclosed the free-floating single-clamp handguard design to Mr. Troy while Mr. Troy was employed by Atlantic Research, and that Mr. Troy later used this information to create his own products. Mr. Troy testified to the contrary, contending that he had come up with the idea for the single-clamp handguard while vacationing in Turkey. The dispute went to the jury, which found in favor of Atlantic Research. The jury concluded that Troy was liable for misappropriation of trade secrets and breach of a fiduciary duty and awarded Atlantic Research \$1,813,465 in damages.

Following the trial, Troy sought to have the jury's verdict set aside, reversed, and altered. Troy first filed a motion for a mistrial on two separate but related grounds. Troy alleged that a mistrial was required because the district court had twice charged the jury with coercive instructions that were contrary to law. Troy also alleged that the district court had failed to properly address potential jury taint arising from the presence of extraneous evidence in the jury room during deliberations. These events are described in detail in Part IV.A of the opinion. The district court denied the motion, concluding that a mistrial was not warranted.

Second, Troy sought a judgment notwithstanding the verdict, renewing the arguments set forth in its Motion for Judgment as a Matter of Law filed prior to the verdict. Troy contended that the court was required to find in its

favor because Atlantic Research had failed to identify a trade secret. Third, Troy filed a Motion for Remittitur, contending that the jury improperly calculated damages. The district court denied both motions.

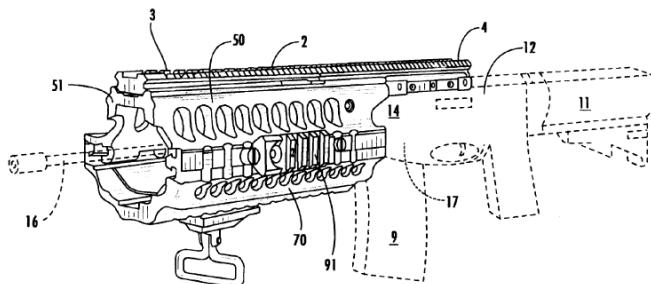
Atlantic Research appealed from the district court's summary judgment decision invalidating claims 31-36 of the '465 patent. Troy cross-appealed from the district court's rulings regarding the trade secret trial. We have jurisdiction over this appeal under 28 U.S.C. § 1295(a)(1).

## II

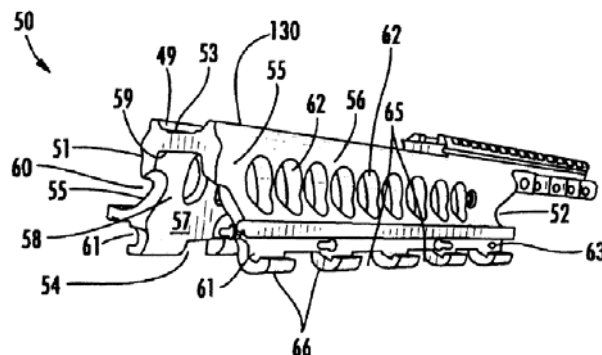
We turn first to Atlantic Research's appeal of the district court's grant of summary judgment invalidating claims 31-36 of the '465 patent under 35 U.S.C. § 112 for failing to meet the written description requirement. *See Atl. Research Mktg. Sys., Inc. v. Troy*, 711 F. Supp. 2d 218, 224 (D. Mass. 2010). As noted above, facing a claim that its product infringed Atlantic Research's '465 patent, Troy contended that this patent was invalid.

The invention disclosed in the '465 patent involves a "sleeve" accessory that attaches to a firearm, as shown below. The accessory consists of three primary components: a receiver sleeve, an upper handguard piece, and a bottom handguard piece. The receiver sleeve, depicted by numbers 2, 3, and 4, attaches through its rear portion (4) to the top of the firearm. The front portion of the receiver sleeve extends down the firearm's barrel. This front portion connects to the upper handguard piece, represented by numbers 50 and 51. The bottom handguard piece, referenced by number 70, attaches to the upper handguard piece. The handguard pieces are not physically connected to the gun barrel. Instead, the receiver sleeve is "self supported" by its connection to the top of

the gun. '465 patent col.2 l.19-20. The area on the top of the gun where the receiver sleeve attaches is called the "receiver top."



Although the receiver sleeve is "self supported" by its connection to the receiver top, "additional support may be provided by . . . a special yoke about the barrel nut of the firearm." *Id.* col.2 ll.30-36. The yoke, also referred to as a "clamp" at trial, provides this additional support by engaging the firearm's barrel nut. *See id.* col.3 ll.3-9. This engagement occurs roughly in the area denoted by numbers 52 and 63 in the drawing below.



The two support points in the invention (at the receiver sleeve and the barrel nut) permit the upper and bottom handguard pieces to surround the barrel of the gun without touching it. As explained earlier, this design enables a firearm user to operate ancillary devices such as integrated laser devices in complete isolation from the



gun barrel, thereby protecting these devices from the heat and shock associated with firing the weapon. *See id.* col.1 ll.38-50. This design also prevents the barrel from bending under the weight of the handguard and attached devices. *See id.* col.1 ll.41-44.

Atlantic Research contends that Troy's Modular Rail Forend ("MRF") product infringes claims 31-36 of the '465 patent. The MRF product, like the disclosures in the '465 patent, is a free-floating handguard accessory (i.e., a handguard accessory that surrounds, but does not touch, the gun barrel). This product, however, attaches to the firearm in only one location: the barrel nut. The MRF product does not have a receiver sleeve attachment point.

Of the asserted claims, claim 31 is the only independent claim, with claims 32-36 depending therefrom. Claim 31 reads:

31. A system for attaching modular enhancements to a firearm, said firearm having a receiver, said receiver having a top and a barrel receiving receptacle at a forward end thereof, said firearm further including a barrel received in said barrel receiving receptacle and a barrel nut received around an outer surface of said barrel receiving receptacle to retain said barrel within said barrel receiving receptacle, said system comprising:

an upper handguard piece having a forward end and a rearward end, and further having a dovetail rail extending longitudinally between the forward end and the rearward end;

a U-shaped supporting yoke removably secured to said rearward end of said upper hand guard, said

U-shaped supporting yoke including engagement surfaces configured to cooperatively engage an outer surface of said barrel nut and thereby support said upper handguard piece relative to said barrel nut, wherein said upper handguard piece extends from said forward end of said upper receiver forwardly above said barrel without engaging said barrel.

While claim 31 explicitly claims a barrel nut support point, it mentions nothing about a receiver sleeve support point. Before reaching the written description question, the district court construed claim 31 as permitting the barrel nut to provide complete support for the handguard accessory.<sup>1</sup> See *Atl. Research Mktg. Sys., Inc. v. Troy*, 616 F. Supp. 2d 157, 168 (D. Mass. 2009). The court then concluded, however, that the '465 specification “does not describe a handguard that can be supported solely by clamping to the barrel nut,” and instead “describes an invention that is supported by both the barrel nut and attachment to the upper receiver via a receiver sleeve.” *Atl. Research Mktg.*, 711 F. Supp. 2d at 221. After construing claim 31 to cover the barrel nut-only attachment design, but then finding that the specification did not disclose such a design, the court invalidated claims 31-36 for failing to meet the written description requirement of 35 U.S.C. § 112. *Id.* at 224.

On appeal, Atlantic Research argues that the district court erred by construing claim 31 to cover a handguard device supported solely by the barrel nut of the gun, asserting that this construction conflicts with the specifi-

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<sup>1</sup> More specifically, the district court construed the “support” claim term to mean “to bear the weight of, or to hold up either completely or partially.”

cation, which does not disclose a barrel nut-only attachment design. Under the claim construction proposed by Atlantic Research, the barrel nut only has to provide *partial* support for the handguard accessory, not *complete* support, which would leave room for the receiver sleeve to provide support as well. According to Atlantic Research, if claim 31 were construed in this manner, it would not fail on written description grounds because the specification does in fact teach an invention where the barrel nut and receiver sleeve each provide partial support for the handguard accessory.

Troy responds that the district court properly construed claim 31 and did not err in invalidating claims 31-36 on written description grounds. In particular, Troy contends that Atlantic Research received the claim construction it requested (i.e., one that permits the barrel nut to provide complete support), emphasizing that Atlantic Research argued at the *Markman* hearing that the handguard is “supported by the barrel nut with or without the receiver sleeve” and that the receiver sleeve “could provide additional support but not necessary support.” According to Troy, Atlantic Research needed this broad construction to mount a colorable charge of infringement against the accused products, which undisputedly attach to and receive support from only the barrel nut.

For the reasons stated below, we conclude that the district court properly granted summary judgment invalidating claims 31-36 for failing to meet the written description requirement. While “[c]ompliance with the written description requirement is a question of fact,” this issue is “amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1307 (Fed. Cir. 2008). A district

court's grant of summary judgment of invalidity for lack of written description is reviewed de novo. *See Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, 635 F.3d 1373, 1380 (Fed. Cir. 2011).

The written description requirement, set forth in 35 U.S.C. § 112, ¶ 1, states: “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same.” An adequate written description “reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). “[T]he hallmark of written description is disclosure.” *Id.* The specification “must describe an invention understandable to [a] skilled artisan and show that the inventor actually invented the invention claimed.” *Id.* “The purpose of the written description requirement is to ensure that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor’s contribution to the field of art as described in the patent specification.” *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1319 (Fed. Cir. 2011) (internal quotation marks omitted).

“[C]laim construction is inherent in any written description analysis.” *Id.*; *see also Koninklijke Philips Elecs. N.V. v. Cardiac Sci. Operating Co.*, 590 F.3d 1326, 1336 (Fed. Cir. 2010) (“A district court must base its analysis of written description under § 112, ¶ 1 on proper claim construction.”). This court reviews a district court’s claim construction de novo. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454-56 (Fed. Cir. 1998) (en banc). “To ascertain the scope and meaning of the asserted claims, we

look to the words of the claims themselves, the specification, the prosecution history, and any relevant extrinsic evidence.” *Retractable Techs. v. Becton, Dickinson & Co.*, No. 2010-1402, 2011 WL 2652448, at \*5 (Fed. Cir. July 8, 2011) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315-17 (Fed. Cir. 2005) (en banc)).

Here, the ’465 specification discloses an invention with two support points, one at the receiver sleeve and one at the yoke/barrel nut. *See* ’465 patent col.10 ll.56-59. The ’465 specification also appears to disclose an invention where the receiver sleeve provides complete support for the handguard accessory. *See id.* col.2 ll.30-36. But as the district court explained and as Atlantic Research admitted at oral argument, the specification does not disclose an invention where the yoke/barrel nut attachment point provides complete support for the handguard accessory. *See* Oral Arg. at 7:32-7:49, *available at* <http://www.cafc.uscourts.gov/oral-argument-recordings/2011-1002/all> (At oral argument, Atlantic Research’s counsel represented that he “agree[d] wholly with the judge’s conclusion that the specification does not disclose supporting the handguard . . . completely with a barrel nut.”).

While the specification does not disclose a handguard accessory completely supported by the barrel nut, the district court properly construed claims 31-36 as covering such a design. To construe the claims otherwise would ignore the plain meaning of the “words of the claims themselves.” *See Phillips*, 415 F.3d at 1314. A comparison between claims 31-36 and the other claims in the ’465 patent (i.e., claims 1-30) clearly indicates that the inventor, Mr. Swan, intended for claims 31-36 to cover a handguard accessory completely supported by a single attachment point at the barrel nut.

Specifically, claims 1-29 explicitly require two attachment points: one at the receiver sleeve and the other at the barrel nut. Claim 30 explicitly requires a receiver sleeve attachment point and provides great detail regarding a “supporting element.” Claims 31-36, however, added on reissue, mention nothing about a receiver sleeve attachment point. Instead, these claims disclose only a yoke/barrel nut attachment point that “support[s]” the upper handguard piece. That claims 1-30 contain a receiver sleeve limitation and claims 31-36 do not is telling, especially in an invention where the support points are such critical features. These “substantive differences” between claims “can be a ‘useful guide in understanding the meaning of particular claim terms.’” *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011) (quoting *Phillips*, 415 F.3d at 1314). Here, the discrepancies between claims 1-30 and 31-36 strongly suggest that Mr. Swan did not want to import a receiver sleeve limitation into claims 31-36. Instead, he attempted through reissue to obtain claims covering a single-attachment design with the yoke/barrel nut attachment providing complete support.

We acknowledge that the specification is “always highly relevant to the claim construction analysis” and “is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1314. In this particular case, however, construing claims 31-36 to only cover subject matter disclosed in the specification would involve permitting the receiver sleeve to provide support for the handguard accessory (in addition to the barrel nut). As explained, such a construction would eviscerate the plain meaning of claim language and ignore substantive differences between claims regarding an issue that is a focal point of the invention. Therefore, importing a receiver sleeve limitation into claims 31-36 is not appropriate.

Moreover, as noted above Atlantic Research argued at the *Markman* hearing that the handguard accessory is “supported by the barrel nut with or without the receiver sleeve” and that the receiver sleeve “could provide additional support but not necessary support.” In other words, Atlantic Research sought a claim construction in district court that would cover a barrel nut-only design, perhaps to support its infringement arguments against the accused products (the accused products undisputedly attach to and receive support from only the barrel nut). Now, however, having lost on written description grounds, Atlantic Research argues for a construction that precludes the barrel nut-only attachment design. We view such tactics with “extreme disfavor.” *See N. Telecom Ltd. v. Samsung Elecs. Co.*, 215 F.3d 1281, 1290 (Fed. Cir. 2000) (“[W]e look with extreme disfavor on appeals that allege error in claim constructions that were advocated below by the very party now challenging them.” (internal quotation marks omitted)). While we do not address whether Atlantic Research is judicially estopped from asserting contradictory claim construction arguments on appeal, we note that these inconsistencies undermine Atlantic Research’s current claim construction argument.

We must now incorporate the barrel nut-only claim construction into the written description analysis. As mentioned, it is undisputed that the written description for the ’465 patent does not disclose to a person of ordinary skill in the art an invention where the yoke/barrel nut attachment point provides complete support for the handguard accessory. *See* Oral Arg. at 7:32-7:49 (At oral argument, Atlantic Research’s counsel represented that he “agree[d] wholly with the judge’s conclusion that the specification does not disclose supporting the handguard . . . completely with a barrel nut.”). Claims 31-36, however, clearly cover such a design. Put differently, claims 31-36

exceed in scope the subject matter that inventor Mr. Swan chose to disclose to the public in the written description. Therefore, we hold that the district court properly granted summary judgment invalidating claims 31-36 for failing to satisfy the written description requirement of 35 U.S.C. § 112. Mr. Swan used the reissue process to impermissibly obtain claims unsupported by the written description. Our holding and the analysis used to reach it are consistent with this court's precedent. *See, e.g., ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1376-1380 (Fed. Cir. 2009).

Our holding is also reinforced by the fact that Mr. Swan viewed his barrel nut-only attachment design as a trade secret when he filed the patent application containing the disclosures that he later relied upon for his reissue claims, as illustrated by the positions taken by Atlantic Research throughout the trade secret portion of the case (discussed in more detail in Part III below). Specifically, Mr. Swan relied on the '245 patent specification for the reissue claims in the '465 patent. The specifications of both patents, with the exception of the claims, are nearly identical. When Mr. Swan filed the application that led to the '245 patent, he was keeping the barrel nut-only attachment design from the public as a trade secret. *See* Trial Tr. vol. 2, 131, June 16, 2009; Trial Tr. vol. 3, p. 89, June 17, 2009. Indeed, Atlantic Research contended at trial, as it had to in order to succeed on its trade secret claim, that the barrel nut-only attachment design was not disclosed in the '245 patent. Mr. Swan cannot now "have it both ways" by reaching back and relying on the disclo-



tures in the '245 patent to claim an invention he was purposely shielding from the public.<sup>2</sup>

### III

Next, Troy contends that the district court erred in denying its Motion for Judgment as a Matter of Law on Atlantic Research's trade secret claims.<sup>3</sup> This court reviews a district court's denial of judgment as a matter of law according to regional circuit law. *See Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1301 (Fed. Cir. 2011). The First Circuit reviews the denial of a motion for judgment as a matter of law de novo, "viewing the evidence in the light most favorable to the nonmoving party." *Marcano Rivera v. Turabo Med. Ctr. P'ship*, 415 F.3d 162, 167 (1st Cir. 2005). We will overturn the jury's verdict only if "the evidence points so strongly and overwhelmingly in favor of the moving party that no reasonable jury could have returned a verdict adverse to that party." *Id.*

Atlantic Research's trade secret claims are a matter of Massachusetts state law, and we therefore apply that law in reviewing the district court's decision. *See Ultimex Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1355 (Fed. Cir. 2009).

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<sup>2</sup> Because claims 31-36 are invalid for failing to satisfy the written description requirement, we decline to reach the district court's best mode ruling.

<sup>3</sup> Troy appeals the denial of both the pre-verdict judgment as a matter of law and the post-verdict judgment notwithstanding the verdict. The standard of review is the same for both motions. *Censullo v. Brenka Video, Inc.*, 989 F.2d 40, 42 (1st Cir. 1993). For simplicity, we refer to them collectively as the judgment as a matter of law.

Under Massachusetts law,

[w]hoever embezzles, steals or unlawfully takes, carries away, conceals, or copies, or by fraud or by deception obtains, from any person or corporation, with intent to convert to his own use, any trade secret, regardless of value, shall be liable in tort to such person or corporation for all damages resulting therefrom.

Mass. Gen. Laws. ch. 93A, § 42.

A trade secret is defined as,

anything tangible or intangible or electronically kept or stored, which constitutes, represents, evidences or records a secret scientific, technical, merchandising, production or management information, design, process, procedure, formula, invention or improvement.

*Id.* ch. 266, § 30. The range of what may be considered a trade secret is broad. The focus is whether what is claimed as the trade secret is in fact secret. *See Jet Spray Cooler, Inc. v. Crampton*, 282 N.E.2d 921, 925 (Mass. 1972).

Troy advances several arguments for judgment as a matter of law in its favor. First, Troy contends that Atlantic Research failed to identify any alleged trade secrets at trial. But Mr. Swan, Atlantic Research's president and founder, testified that "nobody had ever attached directly, and only to the barrel nut for a handguard system that was free-float. That was a trade secret right there." Therefore, Troy's argument is without merit.

Troy next contends that the “concept” of clamping a handguard to a gun at the barrel nut cannot be a trade secret because the ’245 patent discloses this type of device. A trade secret is secret. A patent is not. That which is disclosed in a patent cannot be a trade secret. See, e.g., *On-line Techs., Inc. v. Bodenseewerk Perkin-Elmer GMBH*, 386 F.3d 1133, 1141 (Fed. Cir. 2004); *Prescott v. Morton Int’l, Inc.*, 769 F. Supp. 404, 406 (D. Mass. 1990) (applying Massachusetts law). Indeed, Troy argues that the district court actually adopted Troy’s position as its own at a pretrial hearing.

Troy’s argument illustrates the inherent tension Atlantic Research created by contending that Troy misappropriated trade secrets, while simultaneously asserting that the products Troy developed with the misappropriated trade secrets infringed its patent. In response, Troy contended that Atlantic Research’s patent disclosed the trade secret, but also contended that the patent asserted against it was invalid for failing to disclose a written description of a handguard that attaches solely at the barrel nut. These conflicting positions left little room for either party to prevail on both claims.

The district court recognized that the conflicting positions put the parties on the “horns of a dilemma.” The court correctly concluded that Atlantic Research would have to demonstrate at trial that the alleged trade secret was “something beyond” what was disclosed in the ’245 patent. The district court did not, as Troy contends, explicitly find that the alleged trade secret was disclosed in the ’245 patent. Whether Atlantic Research had a trade secret and whether it was “something beyond” what was disclosed in the ’245 patent were matters for the jury to decide. The court informed the jury that the ’245 patent described a handguard that was supported by

attaching to a weapon at two points. The court then instructed the jury that “[o]nly if you find that the trade secret . . . is not present or disclosed in the ’245 patent may you conclude that such information is a protectable trade secret.” Troy’s second contention, like its first, is without merit.

Troy’s remaining arguments for judgment as a matter of law amount to disagreements with the jury’s view of the weight of the evidence, arguments which need not detain us long. Troy contends that Atlantic Research failed to introduce any evidence of its alleged trade secret. But Atlantic Research introduced into evidence the prototype created on January 20, 1999, which it alleged embodied the trade secret. Mr. Swan’s and Sergeant Major Barreras’s testimonies were in accord. Viewing the evidence in a light most favorable to Atlantic Research, we cannot say that no reasonable jury could have been persuaded that Atlantic Research was in possession of its alleged trade secret. We therefore affirm the district court’s denial of Troy’s Motion for a Judgment as a Matter of Law.

#### IV

Following the jury’s verdict, Troy moved for a mistrial on two grounds. The district court denied the motion, and Troy renews its arguments on appeal. First, Troy contends that the district court erred as a matter of law by giving two improper *Allen* charges, named for *Allen v. United States*, 164 U.S. 492 (1896), and improperly coerced the jury to reach a unanimous verdict. Second, Troy contends that the district court failed to properly investigate and remedy the possibility of jury taint due to the presence of extraneous evidence in the jury room during deliberations.

## A

The events unfolded at trial as follows. At approximately 2pm on the second day of deliberations, the jury sent two questions to the court, and shortly thereafter requested trial transcripts. The first question concerned what could be done about a possible business hardship of one of the jurors. The second question stated:

If we cannot reach a unanimous decision after exhausting all points presented to each other during our deliberation, do we have an idea of how long deliberations will continue if we are still at an impasse every day?

After the question was presented to the court, the judge conferred with both sides as to the proper course. The judge stated, “[s]o I think at this point what I’ll do is I’ll bring them in and tell them we’ll be getting them the transcripts, that it’s not time to give up yet.” Counsel for Troy responded “Great.”

The judge then instructed the jury:

It’s too soon to give up on deliberating. It’s an important case. There’s a lot of time put into it and maybe the transcripts will help break a logjam. I also encourage you, if there are any legal questions or questions to get through to write it out, because that, at times, really helps clarify for people on one side or the other of the dispute what’s holding up—but it may also be that these transcripts do the trick.

Sometime that afternoon, the jury informed the Courtroom Deputy Clerk that it was deadlocked 9-1. The judge and both parties were likewise informed.

The following day, the third day of deliberations, the jury sent another note to the court, which stated:

We are currently stuck in a deadlock. It appears we have argued all points of the case to the best of both sides ability. We firmly feel that an [sic] unanimous decision can not be made.

Also, a juror brought in a clamp from his/her basement trying to make an argument. Is bringing outside items allowed?

Also, some jurors feel another juror is sympathetic to a certain side on this case, and is causing us to not reach an [sic] unanimous decision. How should we proceed?

After receiving the note, the judge again conferred with counsel and informed them that she was going to remove the clamp and give the jury an *Allen* charge. Troy's counsel objected, arguing that the judge had already given an *Allen* charge, but the judge disagreed. The judge stated that she would tell the jurors "they shouldn't decide based on sympathy" and gave the attorneys an opportunity to review the charge she would read.

First, the judge instructed the jury that "I need to take [the clamp] out of the jury room." Second, she stated that "it says here that the one juror—at least some jurors feel, that another juror is sympathetic to a particular side." The judge "remind[ed]" the jury "the case cannot be based on sympathy. It's got to be based on an objective

view of the evidence.” Third, the judge proceeded to give a complete *Allen* charge, reminding the jurors in both the majority and the minority to “re-examine their positions” and give careful consideration to the evidence; that the plaintiff bore the burden of proof to establish each essential element of the claims; and that “it is your right to fail to agree.” Approximately three hours later the jury asked a question related to damages and less than an hour after that the jury returned a verdict in favor of Atlantic Research.

While the jury deliberated the judge conferred with counsel as to what should be done about the presence of the clamp, which, it turned out, had been in the jury room the previous day. The judge was unclear if she could question the jurors on “whether or not it played a role in the process” or if her questions had to be limited to “whether they used it.” Counsel for Atlantic Research questioned whether the inquiry should be “made now or done after.” The court took no action while the jury deliberated.

Following the jury’s verdict, the court proceeded to individually question each juror concerning the clamp. The court limited its questions to:

- (1) “What’s your name?”
- (2) “What was the clamp?”
- (3) “Who brought it in?” and
- (4) “When was it brought in?”

Each juror was able to identify the clamp as a copper clamp of the type used in plumbing. The juror who brought the clamp in was identified, and he explained to the judge that he had brought the clamp in the previous day, but put it away after other jurors objected to its presence.

A few weeks after the verdict was delivered, the judge brought the offending juror back to the court for further questioning. The juror explained that he brought out the clamp for “maybe ten minutes,” and that he showed it to the jurors as an example of what a clamp was. The juror stated that the clamp was not further discussed.

## B

When a “colorable claim of jury taint surfaces during jury deliberations, the trial court has a duty to investigate the allegation promptly.” *United States v. Bradshaw*, 281 F.3d 278, 289 (1st Cir. 2002). The court must then “undertake an adequate inquiry to determine whether the alleged incident occurred and if so, whether it was prejudicial.” *United States v. Bristol-Martir*, 570 F.3d 29, 42 (1st Cir. 2009). If improper evidence was before the jury, the court must determine “whether cognizable prejudice is an inevitable and ineradicable concomitant of that exposure.” *Bradshaw*, 281 F.3d at 290. The First Circuit has emphasized that “the district court, in conducting its investigation, must ensure that jury members can remain impartial when they have been exposed to extrinsic information that is potentially prejudicial.” *Bristol-Martir*, 570 F.3d at 43.

The trial court has “wide discretion” in conducting this inquiry and is reviewed for an abuse of discretion. *Bradshaw*, 281 F.3d at 290. A decision based on an erroneous view of the law, however, “invariably constitutes an abuse of discretion.” *Id.* at 291. A post-verdict inquiry is governed by Federal Rule of Evidence 606(b), which codifies the “common law prohibition against using jury testimony to impeach a verdict,” with the exception where “extraneous influence has allegedly infected” the jury. *United States v. Boylan*, 898 F.2d 230, 259 (1st Cir.



1990). Because the district court failed to conduct an adequate investigation into whether the presence of the clamp in the jury room prejudiced members of the jury, we vacate the jury verdict and reverse the district court's denial of Troy's motion for a mistrial.

Atlantic Research contends, as an initial matter, that Troy waived any argument concerning jury taint by failing to seek a mistrial "promptly upon learning of the presence of the clamp." The district court similarly noted that "Troy did not seek a cautionary instruction or immediate voir dire." The problem with this reasoning, though, is that once a "colorable claim of jury taint surfaces" the court has a "duty to investigate the allegation promptly." *Bradshaw*, 281 F.3d at 289. The district court was aware of the presence of the clamp in the jury room prior to the issuance of the verdict. The alleged trade secret in this case was the ability to attach a handguard to a weapon using a single-clamp mechanism. The term "clamp" was used repeatedly throughout the trial. Without knowing exactly what the extraneous 'clamp' was, the clamp's "acknowledged presence . . . in the jury room gave rise to a colorable claim of actual prejudice." *Id.* Because the district court had notice of the possible prejudice, there could be no "waiver" of the court's duty to investigate.

The question then becomes "whether the trial court investigated the claim appropriately and resolved it in a satisfactory manner." *Id.* The district court failed to take any steps to determine the possible prejudicial effect of the clamp prior to the issuance of the verdict; it never even asked if the jurors could remain impartial after viewing the clamp. By default, the court did not investigate the issue in a "satisfactory manner." This alone warrants a reversal and a grant of a mistrial.

In the alternative, even when examined from a post-verdict perspective, the district court's inquiry was still insufficient as a matter of law. The district court denied the motion for a mistrial because it found that the "clamp's presence did not result in prejudice." Although it is possible that the clamp did not influence any juror, the district court's inquiry was insufficient to allow that court to make such a determination. The district court based its decision on the interview with the offending juror weeks after the incident took place. Importantly, at this subsequent interview, the district court only questioned the juror who brought in the clamp. It never sought to question any of the other jurors in more detail. It is the impact of the extraneous evidence on the other jurors, however, that is the most important fact to determine during this inquiry. By failing to conduct an adequate inquiry, the district court abused its discretion.

The deficiency of the district court's inquiry is evident by looking at another instance of alleged jury taint addressed by the First Circuit. In *Bristol-Martir*, a drug conspiracy case, the jury foreman informed the court that a juror may have conducted outside legal research and brought that information into the jury room. 570 F.3d at 36-38. After dismissing the offending juror, the court determined that the jury could proceed with deliberations. The First Circuit subsequently vacated the defendants' conviction, finding that this inquiry was insufficient and an abuse of discretion. *Id.* at 45. "[C]rucially, the district court did not inquire, either in a group setting or on an individual basis, as to whether jury members had been influenced by the errant juror's improper research and presentation." *Id.* at 43.

Similarly, the district court here failed to take the necessary steps to determine whether members of the

jury had been prejudiced by the presence of the clamp. The court only asked “what” the clamp was, “who” brought it in, and “when” it was present. The court did not inquire as to its effect on the jurors. While discerning what is and is not permissible under Rule 606(b) is “easier said than done,” *Boylan*, 898 F.2d at 259, the First Circuit has made clear that the trial court can and should question the jury “on their ability to render an impartial verdict.” *Bradshaw*, 281 F.3d at 292; *United States v. Hunnewell*, 891 F.2d 955, 960 (1st Cir. 1989) (approving of questions where jurors “all emphatically assured continuing impartiality”). This is true whether the court is inquiring before or after the verdict. *Boylan*, 898 F.2d at 262 (approving the district court’s conclusion regarding the “jurors’ assertions of continued impartiality” in a post-verdict inquiry into jury taint); *see also United States v. Lara-Ramirez*, 519 F.3d 76, 87 (1st Cir. 2008) (“Although the district court has broad discretion to ‘fashion an appropriate procedure for assessing whether the jury has been exposed to substantively damaging information, and if so, whether cognizable prejudice is an inevitable and ineradicable concomitant’ of the jury’s exposure to an improper outside influence, *the judge does not have discretion to refuse to conduct any inquiry at all regarding the magnitude of the taint-producing event and the extent of the resulting prejudice.*” (emphasis added) (citation omitted)).

We conclude, therefore, that the district court did not take adequate steps to determine if the presence of the clamp in the jury room had a prejudicial effect on the jury as a whole. This was an abuse of discretion. This court is cognizant of the judicial resources already spent in trying this case. But the law of the First Circuit is clear. Therefore, we must reverse and grant Troy’s Motion for a Mistrial.

## C

Troy also contends that the district court erred by giving the jury two coercive *Allen* charges. This argument is based on the district court's instructions summarized above in Part IV.A. Troy argues that there are three aspects to the court's instructions that render them invalid: (1) the fact that the court gave more than one *Allen* charge; (2) the fact that the instructions were given with full knowledge that there was only one holdout on the jury—i.e., that the jury was deadlocked at 9-1; and (3) that the charge singled out that one juror, who the jury described as being overly sympathetic to one side or the other.

Despite Troy's arguments, we do not believe there is an absolute prohibition in the First Circuit against giving more than one *Allen* charge, particularly where the first is as cryptic as the one given here. Troy's other objections to the second *Allen* charge have more force. Given our decision to order a new trial for the reason discussed above, however, we do not decide this question. Similarly, we will not address Troy's challenge to the jury's award of damages.

## V

Because the district court did not err in granting summary judgment invalidating claims 31-36 of the '465 patent for failing to meet the written description requirement, we affirm. We also affirm the district court's denial of Troy's Motion for Judgment as a Matter of Law involving the trade secret-based state law claims. But we vacate the jury's verdict and reverse the district court's denial of Troy's Motion for a Mistrial because the district court did not properly address the jury taint issue. Fi-

nally, we decline to address the district court's judgments on the best mode and remittitur matters in light of our other decisions.

**AFFIRMED-IN-PART, REVERSED-IN-PART,  
AND VACATED-IN-PART**