IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
NORFOLK DIVISION

SOUNDCLEAR TECHNOLOGIES LLC, Plaintiff, v. AMAZON.COM, INC.; AMAZON.COM LLC; and AMAZON WEB SERVICES, INC., Defendants.	Case No. 2:24-cv-00320-AWA-LRL **JURY TRIAL DEMANDED**

MEMORANDUM IN SUPPORT OF DEFENDANTS'
MOTION TO DISMISS UNDER RULE 12(b)(6)

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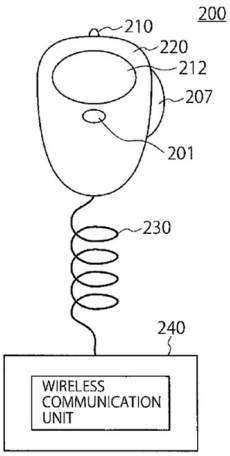
INTRODUCTION

In this patent case, Plaintiff SoundClear Technologies LLC accuses Defendants of infringing three patents. Notably, Plaintiff did not invent the technology and Plaintiff does not manufacture or sell any products that use the patented technology. Rather, Plaintiff is a "non-practicing entity," meaning that it has no products or services of its own. Such entities exist solely to acquire patents—often older patents of questionable validity and bearing little relevance to today's technologies—and assert them in litigation to extract settlement payments or obtain royalty payments, thereby providing a return on the investment made to acquire the patents. That is the case here.

Plaintiff was formed and acquired the asserted patents in 2023. Two of the patents are at issue in this Motion—U.S. Patent No. 9,070,374 (the "'374 patent") and U.S. Patent No. 9,804,819 (the "'819 patent"). The patent applications were filed in 2013 and 2016, respectively, by Japanese electronics maker JVC Kenwood ("JVC"). The '374 patent issued in 2015 and the '819 patent issued in 2017. Despite owning the patents for years, JVC never asserted them against Amazon.

The '374 patent describes a "communication apparatus" such as a walkie-talkie or two-way radio. As shown in Figure 3 of the patent, the radio includes a microphone (201), a speaker (212), an LED indicator light (210), and a push-to-talk button (207), among other conventional walkie-talkie components:



('374 patent (Dkt. 1-2) at Fig 3, 6:64-7:9.)[1]

Given the obvious differences between JVC's walkie-talkie patent and Amazon's modern smart-speaker products like the Echo, it is unsurprising that JVC never asserted the patent against Amazon during the 8 years that JVC owned the patent. But JVC's failure to assert the '374 patent is also unsurprising for another reason: the patent is facially invalid. The patent's claims, which define the scope of the patent rights, can be summarized in three basic steps: (1) collecting sound data; (2) analyzing that sound data to detect speech and evaluate its quality (i.e., whether the speech quality is "good"); and (3) indicating the results of that analysis by turning on or off a light. The inventors did not invent a new way to collect data, analyze sound, or turn on a light. Nor did they invent any new equipment for doing so. Under the Supreme Court's 2014 decision in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014), and the many cases applying that decision over the past decade, patent claims such as those in the '374 patent are invalid as a matter of law. Thus, the Court should dismiss Plaintiff's infringement claims based on the '374 patent.

The Court should also dismiss Plaintiff's infringement claims based on the '819 patent. That patent describes a push-to-talk walkie-talkie device with a mechanical volume wheel and a button that allows the user to lock and unlock the volume level. The device has a "non-locked state" in which a user can control the volume by adjusting the volume wheel, and a "locked" state in which the volume level is "fixed" and does not change when the user adjusts the volume wheel. The locked volume can be changed to a new locked volume by pressing a button, ensuring that the volume wheel is within a predetermined range (e.g., 5%) of the locked value, adjusting the volume wheel to the desired level, and then releasing the button.

[1] Citations to patents are provided in column:line format.

Plaintiff does not plausibly allege that the Amazon devices at issue here—Echo devices through which customers interact with Alexa—have such a volume locking and unlocking mechanism. To the contrary, Plaintiff alleges that an Echo device is in a "locked state" when the user *can* freely adjust the volume, which is the *exact opposite* of how the patent describes a "locked state." Plaintiff also fails to allege any plausible theory as to how Echo devices satisfy several other requirements of the patent claims, including unlocking when the volume is within a predetermined range of the lock value. Because Plaintiff's infringement allegations directly contradict the patent and are facially implausible, they must be dismissed under *Twombly/Iqbal*.

Because the '374 patent is plainly invalid even at this pleading stage, and because Plaintiff cannot set forth a plausible infringement theory for the '819 patent, the Court should dismiss Plaintiff's claims to avoid unnecessary and meritless litigation.

Amazon also moves to dismiss portions of Plaintiff's complaint where Plaintiff (a) fails to identify the allegedly infringing products or explain how those products infringe the asserted patents, and (b) seeks enhanced damages for willful infringement but fails to plead any factual allegations that would support a finding of willful infringement. Granting this Motion would narrow the case to a single patent (the '259 patent) and the specific Echo and Fire TV hardware devices for which Plaintiff at least alleged an infringement theory for that patent.

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ARGUMENT

I. THE COURT SHOULD DISMISS COUNT II BECAUSE THE '374 PATENT CLAIMS ARE INVALID UNDER 35 U.S.C. § 101.[2]

Count II of the complaint alleges infringement of the '374 patent. (Dkt. 1 ¶ 79.) Because all claims of the '374 patent are invalid under § 101 as a matter of law, Count II fails to state a claim upon which relief can be granted. Thus, the Court should dismiss Count II.

A. Brief Summary of the '374 Patent

The '374 patent describes a "communication apparatus," such as a walkie talkie or two-way radio. ('374 patent, Abstract.) The '374 patent explains that, before the alleged invention, it was "typical" for transceivers to be used in noisy environments, such as factories and construction sites, and that there was a demand for "clear voice sounds" in such noisy environments. (*Id.*, 1:22-28.) To meet that demand, the patent admits it was already "known" to use a main microphone for capturing mostly voice sounds, use a sub-microphone for capturing mostly surrounding noise, and use these microphones together to provide an "active noise-cancellation function[.]" (*Id.*, 1:29-32.) However, this arrangement works well only if the main microphone is "oriented towards the user's mouth[.]" (*Id.*, 1:34-36.) If the main microphone is oriented in a different direction (e.g., because the walkie talkie "is held on the user's shoulder"), the noise cancellation function may perform poorly. (*Id.*, 1:43-51.) The patent explains this poor noise cancellation results in "transmission of unclear voice sounds." (*Id.*)

The '374 patent purported to address this problem by flashing a "light-emitting device (LED)" to notify a user when "good quality" speech was picked up by the walkie talkie. (*Id.*, 5:6-20.) Simply put, the inventors' idea was to provide a visible indication (lighting up an LED) if

[2] Amazon maintains that the '819 and '259 patents are also invalid under § 101 and intends to raise those issues at a later date.

detected speech quality was good, much like a friend listening to you in a noisy room might give a head nod or a thumbs up to indicate that they can hear what you are saying.

B. *Alice* Governs Patent Eligibility Under Section 101.

Section 101 of the Patent Act describes the subject matter eligible for patent protection, and "contains an important implicit exception" that prohibits patenting "abstract ideas." *Alice*, 573 U.S. 208, 216 (2014). The Supreme Court's two-step *Alice* framework governs whether patent claims are impermissibly abstract under § 101. *Id.* at 217-227.

Because patent eligibility is a "question of law," it is often resolved "at the motion to dismiss stage based on intrinsic evidence" from the patent itself. *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905 (Fed. Cir. 2017); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018) (patent eligibility "may be, and frequently has been, resolved on a Rule 12(b)(6) or (c) motion"); *Yu v. Apple Inc.*, 1 F.4th 1040, 1046 (Fed. Cir. 2021) ("[P]atent eligibility can be determined at the Rule 12(b)(6) stage without the aid of expert testimony.").

1. *Alice* Step One

At *Alice* step one, the Court determines whether the claims are directed to an abstract idea despite their use of technological components. 573 U.S. at 217-18. To determine whether a claim is "directed to" such an idea, the Court looks at "the focus of the claimed advance over the prior art." *Trinity Info Media, LLC v. Covalent, Inc.*, 72 F.4th 1355, 1361 (Fed. Cir. 2023). The Court may then compare the claims' focus to several "familiar classes" of subject matter that the Federal Circuit has recognized as abstract. *In re Killian*, 45 F.4th 1373, 1382 (Fed. Cir. 2022).

First, the Federal Circuit has recognized that a claim is abstract if it focuses on merely collecting, analyzing, and presenting information. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353-54 (Fed. Cir. 2016). These information-based activities are abstract because "[i]nformation as such is an intangible." *SAP*, 898 F.3d at 1167. Our patent laws protect new

technology—not new ways of manipulating abstract information. Merely using conventional technology to manipulate information is not enough to satisfy § 101.

Second, the Federal Circuit has recognized that a claim is abstract if it provides "only a result-oriented solution, with insufficient detail for how a [machine] accomplishes it." *Intellectual Ventures I LLC v. Capital One Fin. Corp*., 850 F.3d at 1342 (Fed. Cir. 2017); *see also Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1343 (Fed. Cir. 2018) (A "claimed invention must embody a concrete solution to a problem having 'the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.'"). The Federal Circuit routinely invalidates such result-oriented (or "functional") patent claims. *E.g.*, *Two-Way Media Ltd. v. Comcast Cable Commc'ns*, LLC, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (claims are abstract if they recite merely "generic functional language to achieve [the] purported solutions" without claiming "*how* the desired result is achieved"); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d at 1244 (Fed.Cir., 2016) ("a claim that merely describes an 'effect or result dissociated from any method by which [it] is accomplished' is not [patent-eligible]."); *Elec. Power*, 830 F.3d at 1351 (a claim is abstract if it recites "a desirable information-based result" but is "not limited to inventive means of achieving the result").

Third, the Federal Circuit has recognized that patent claims are abstract when they are analogous to activities people previously performed without any electronic components. For example, computer-based data-encoding claims were abstract by analogy to "Paul Revere's 'one if by land, two if by sea' signaling system," which predated computers. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017). The case law is replete with additional examples. *E.g.*, *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (holding check-processing claims abstract because "humans have always

performed these functions"); *Intellectual Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (analogizing customized web pages to location-specific "newspaper inserts"); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1314 (Fed. Cir. 2016) (holding email filtering claims abstract by analogy to practices of "people receiving paper mail"); *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1270 (Fed. Cir. 2016) (holding that claims related to media streaming were abstract by analogy to "dial-a-joke" services, "which were available long before the invention of … the Internet."); *People.ai, Inc. v. Clari Inc.*, No. 2022-1364, 2023 WL 2820794, at *8 (Fed. Cir. Apr. 7, 2023) (invalidating claims where analogy showed they were "directed to automation of a long prevalent manual process").

2. *Alice* Step Two

Once the Court concludes that claims are directed to an abstract idea, it must then consider "what else" the claims recite. *Alice*, 573 U.S. at 217. The elements of each claim are considered "both individually and 'as an ordered combination' to determine whether the additional elements" beyond the abstract idea provide an "inventive concept." *Id.* at 217-18. An inventive concept is an element or combination of elements that "transform the nature of the claim" and ensure that the patent "amounts to significantly more" than just the abstract idea. *Id.* Importantly, any inventive concept must be recited in the claim itself. S*ynopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016). Features described in the specification but absent from the claims are irrelevant to the § 101 analysis. *Id.*

Claim limitations that implement an abstract idea using merely generic components or "well-understood, routine, conventional activities" are not inventive. *Alice,* 134 S. Ct. at 2357-60. Nor are limitations that merely confine the claims to a "particular field of use or technological environment." *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d at 1363-66. Rather, claims contain an inventive concept when they recite a technology-specific solution to a

technology-specific problem. *See Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1351 (Fed. Cir. 2016) (claims reciting "a technology-based solution … to filter content on the Internet that overcomes existing problems with other Internet filtering systems" were inventive).

Alice's second step is designed to ensure that patent-eligibility does not "depend simply on the draftsman's art." *Alice*, 573 U.S. at 224 (quoting *Parker v. Flook*, 437 U.S. 584, 593 (1978)). Allowing patentees to own an abstract idea merely by drafting claims to describe the idea in connection with conventional electronic components would "eviscerat[e] the rule that [l]aws of nature, natural phenomena, and abstract ideas are not patentable." *Id.* (internal quotation marks omitted).

C. Claim 9 of the '374 Patent Is Directed to an Abstract Idea.

Plaintiff asserts claim 9 of the '374 patent. (Dkt. 1 ¶ 79.) The patent purports to provide an advance over the prior art by indicating to the user when the sound captured by a microphone contains good-quality speech. ('374 patent (Dkt. 1-2), 5:33-47.) To that end, claim 9 recites collecting sound data, analyzing the sound data to determine the presence and quality of speech, and presenting the results of that analysis. These information-based steps are performed using entirely conventional electronic components. The claim is reproduced below.

> 9. A communication apparatus comprising:
>
> a first pick-up unit configured to pick up a voice sound;
>
> a transmitter unit configured to transmit the voice sound picked up by the first pick-up unit to outside as a first speech signal;
>
> a communication-mode switching unit configured to switch a communication mode between a standby mode in which the transmitter unit does not transmit the speech signal and a transmission mode in which the transmitter unit transmits the speech signal;
>
> a sound pick-up state determination unit configured to *determine a pick-up state of the voice sound picked up by the first pick-up unit*;
>
> a light emission device configured to emit light;

> a control unit configured to *control the light-emitting device so that the light-emitting device is turned off, turned on or repeatedly turned on and off based on* the communication mode switched by the communication-mode switching unit, and *the pick-up state of the voice sound* picked up by the first pick-up unit and determined by the sound pick-up state determination unit;
>
> a speech-quality evaluation unit configured to *evaluate speech quality of the first speech signal to be transmitted by the transmitter unit*, wherein the sound pick-up state determination unit determines the sound pick-up state of the voice sound picked up by the first sound pick-up unit based on the speech quality of the speech signal evaluated by the speech-quality evaluation unit; and
>
> a speech-segment determination unit configured to *determine whether or not the first speech signal to be transmitted by the transmitter unit is a speech segment*, wherein, the sound pick-up state determination unit determines the sound pick-up state of the sound to be transmitted as the first speech signal based on a determination result at the speech-segment determination unit and an evaluation result at the speech-quality evaluation unit.

('374 patent, 44:6-42 (emphasis added).)

The idea to which claim 9 is directed—collecting sound data, analyzing the sound data to determine the presence and quality of speech, and presenting the results of that analysis—falls into three familiar classes that the Federal Circuit has repeatedly recognized as abstract.

3. Claim 9 Is Directed to Collecting Information, Analyzing the Information, and Presenting Results.

As shown above, claim 9 begins with a "pick-up unit" configured to "pick up a voice sound." ('374 patent, claim 9.) This unit merely collects information of a particular type (i.e., voice information).

Claim 9 then requires a "sound pick-up state determination unit" to "determine a pick-up state" of the voice sound. (*Id.*) The specification explains that "pick-up state" includes (1) whether the sound contains speech and (2) whether the speech quality is good. (*See* '374 patent, Fig. 13.) Each of these aspects of the "pick-up state" assigned to another unit in claim 9. Specifically, the claim requires (1) a "speech-segment determination unit" to "determine whether or not [the sound]

is a speech segment" and (2) a "speech-quality evaluation unit" to "evaluate speech quality of the [sound]." (*Id.*, 44:27-42.) These three units merely analyze the sound information.

Claim 9 also requires a unit for turning a light on, turning it off, or repeatedly turning it on and off, depending on inputs from the other units. (*See id.*, 19:47-20:23; *see also id.*, Fig. 13.) This unit merely presents the results of the other units' analysis. *See Fitbit Inc. v. AliphCom*, No. 16-cv-00118-BLF, 2017 WL 819235, at *9 (N.D. Cal. Mar. 2, 2017) (invalidating claims that required "displaying a representation of [collected] data through … LEDs"). Because claim 9 focuses on merely collecting information, analyzing the information, and presenting the results, it is directed to an abstract idea. *Elec. Power*, 830 F.3d at, 1353-54.

4. Claim 9 Is Directed to Desired Results, Not Ways to Get Them.

Claim 9 is abstract for a second reason: it fails to specify *how* to achieve the results that it recites. *See Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d at 1332-42 ("[T]he claim language here provides only a result-oriented solution, with insufficient detail for how a computer accomplishes it. Our law demands more."). For example, the claim recites a "speech-quality evaluation unit configured to evaluate speech quality," but fails to specify *how* to evaluate speech quality. ('374 patent, 44:27-33.) Rather, the patent claims only the desired result: the speech quality is determined (in some unspecified way) to be good or bad. Likewise, the "speech-segment determination unit" is required to determine whether a sound signal contains a speech segment, but the claim fails to specify *how* to make this determination. (*Id.*, 44:34-42.) Because claim 9 recites bare functions to be performed rather than specific technology for performing them, the claim is abstract. *Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.*, 955 F.3d 1317, 1328 (Fed. Cir. 2020) (holding claims abstract because they recited "functions in general terms, without limiting them to technical means for performing the functions").

5. Claim 9 Is Analogous to Non-Technical Human Activities.

Claim 9 is abstract for a third reason: it has a clear non-technical analog. *Beteiro, LLC v. Draftkings Inc.*, 104 F.4th 1350 (Fed. Cir. 2024) (analogy "to longstanding 'real-world' … activities" showed claims' abstractness); *see also Parus Holdings, Inc. v. Sallie Mae Bank*, 137 F. Supp. 3d 660, 671 (D. Del. 2015), *aff'd*, 677 F. App'x 682 (Fed. Cir. 2017) (claims involving speech recognition held abstract due to "pre-Internet analogs").

Claim 9 is analogous to a listener indicating to a speaker that the speaker's voice is intelligible. For example, a person speaking to a friend at a noisy bar asks, "can you hear me?" The listener picks up the sound with her ears, then mentally analyzes the sound to determine that her friend is speaking and evaluate the speech quality (e.g., by determining whether she can hear her friend well enough to understand what her friend is saying). The listener presents the results of that mental analysis by giving her friend a signal, such as a nod or thumbs up, to indicate that she can hear her friend speaking.

The '374 patent claims focus on the same idea, but recite it in the context of a conventional walkie talkie—using a microphone (instead of ears) to gather the sound and an LED (instead of a thumb) to indicate the results. In short, claim 9 does nothing more than use conventional technology to perform a common mental practice. Such claims are abstract. *Univ. of Fla. Rsch. Found., Inc. v. GE Co.*, 916 F.3d 1363, 1366 (Fed. Cir. 2019).

D. Claim 9 of the '374 Patent Recites No Inventive Concept.

Claim 9 adds nothing to the abstract idea beyond admittedly conventional electronic components such as microphones, transceivers, lights, and push-to-talk buttons. Specifically, the claim's "pick-up unit" is just a microphone, as the specification admits. ('374 patent, 4:1-6.) The "communication-mode switching unit" is just a push-to-talk button. (*Id.*; *see also id.*, 4:63-67.) The "light-emission device" is just an LED indicator light. (*Id.*, 5:9-17.) These components, along

with the "transmitter unit," are all conventional components of a walkie-talkie or two-way radio—even when considered in combination. (*See id.*, 1:22-28 (admitting that audio input apparatuses and transceivers were "typical" and "often used" in places like factories and construction sites).) As a matter of law, such conventional components fail to supply an inventive concept. *See Hawk Tech. Sys., LLC v. Castle Retail*, LLC, 60 F.4th 1349, 1359 (Fed. Cir. 2023) ("[M]erely reciting an abstract idea performed on a set of generic [electronic] components … would not contain an inventive concept."). Thus, claim 9 is invalid under § 101.

E. Claim 9 Is Representative of All Claims in the '374 Patent.

Courts are permitted to use representative claims in the § 101 analysis once the defendant has "explained how the other claims in the Asserted Patents are substantially similar to the representative claims[.]" *Mobile Acuity Ltd. v. Blippar Ltd.*, --- F.4th ---, No. 2022-2216, 2024 WL 3659127, at *7 (Fed. Cir. Aug. 6, 2024). For example, the Federal Circuit recently approved the use of representative claims where the defendant explained that "the other claims' additional limitations only 'tack on generic computer components… or introduce conventional computer activities' – and are all directed to the same abstract idea [that the defendant identified]." *Id.*

Here, claim 9 is representative because all claims in the '374 patent are directed to the same abstract idea and add nothing inventive to it. Specifically, all claims require collecting sound information, analyzing it, and presenting results using conventional electronics.

Although the particular information that is collected, analyzed, or presented varies among different claims, the variations are immaterial. For example, claim 10 requires the light-emitting device to present certain information about the walkie talkie's transmission mode. But presenting information is abstract—"including when limited to particular content." *SAP Am.*, 898 F.3d at 1167. Because information-presenting steps like this one are "themselves abstract," they cannot make the claims patent eligible. *Id.* at 1169.

Other claims add extra conventional electronics and walkie-talkie functionality to the abstract idea. For example, claim 11 requires a second microphone that is used for noise cancellation. But the patent admits that using a second microphone for noise cancellation was "known." ('374 patent at 1:29-32.) Such conventional components and functionality are non-inventive as a matter of law and therefore fail to change the outcome of the § 101 analysis.

Because the patent claims are all substantially similar and linked to the same abstract idea, claim 9 is properly treated as representative unless the patentee makes a "meaningful argument for the distinctive significance of any claim limitations not found in [representative claim 9]." *Mobile Acuity*, 2024 WL 3659127, at *6; *Hawk Tech.*, 60 F.4th at 1353, n.1; *Elec. Power*, 830 F.3d at 1352. Here, the complaint identifies nothing in the '374 patent beyond the limitations already addressed above in connection with claim 9. (Dkt. 1 ¶¶ 41-46.) Thus, claim 9 is representative and the Court should invalidate all claims of the '374 patent.

II. THE COURT SHOULD DISMISS COUNT III FOR FAILURE TO STATE A PLAUSIBLE CLAIM FOR INFRINGEMENT OF THE '819 PATENT.

Amazon moves to dismiss Count III under Rule 12(b)(6). Count III does not include factual allegations that could plausibly support a finding that Amazon infringes the '819 patent. To the contrary, Plaintiff's factual allegations show that Plaintiff's infringement theory is impossible. Because Plaintiff fails to plead a plausible claim of infringement, dismissal is appropriate.

A. The '819 Patent's Volume Control Functionality.

The '819 patent describes a way of controlling the volume of audio output by a conventional push-to-talk walkie-talkie or radio, which it refers to as a "transceiver." ('819 patent (Dkt. 1-3), 2:52-56.)[3] The transceiver includes several physical input keys and switches, including "a

[3] A "transceiver" is "a radio transmitter-receiver that uses many of the same components for both transmission and reception." https://www.merriam-webster.com/dictionary/transceiver.

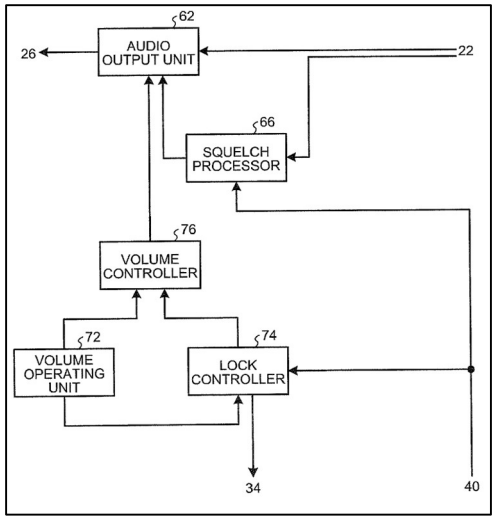
volume key, a push to talk (PTT) switch, a monitor key," and an "operating key group" that includes, for example, a power button. (*Id.*, 2:57-62, 4:15-17.) The volume key is described as a "rotary variable resistor in which the position of a rotary shaft represents the volume level." (*Id.*, 3:52-54.) The device's main control circuit "outputs the value corresponding to the detected angular position [of the volume key] as the operating value." (*Id.*, 5:18-20.) In other words, the volume key may be a traditional volume dial such as those on cassette players and radios from the 1980s, and the value indicated by such a dial is the "operating value."

Two aspects of the patent are relevant to this motion. First, the patented device must have a "non-locked" state, in which the user may freely adjust the volume, and a "locked state," in which the volume is fixed at a constant level and does not vary as a user adjusts the volume dial. Second, the patented device must have a specific way of changing the locked volume level. These two aspects are described below.

1. "Locked" and "Non-Locked" States

The patented invention has "locked" and "non-locked" states. "In the non-locked state, the volume level of audio can be varied" according to the "operating value," i.e., the value set by the user by adjusting the rotary volume dial. (*Id.*, 5:23-25, 3:57-60.) By contrast, "[i]n the locked state, the volume level of audio is fixed at a constant level," regardless of whether the user adjusts the rotary volume control. (*Id.*, 5:25-26.)

A "volume controller," labelled 76 in Figure 2 of the patent, reproduced below, controls the volume level" of audio output by the device. (*Id.*, 5:30-31, FIG 2.)



As shown, the volume controller 76 receives input from the volume operating unit 72 and the lock controller 74. In the "non-locked state, the volume controller 76 causes the audio output unit 62 to output audio having the volume level corresponding to the operating value output by the volume operating unit 72." (*Id.*, 5:32-35.) That operating value from the volume operating unit 72 "indicates the volume level of audio in accordance with the operation performed by the user" which is "achieved by the volume key." (*Id.*, 5:7-10.) In contrast, "[i]n the locked state, the volume controller 76 causes the audio output unit 62 to output audio having the volume level indicated by a lock value registered in the lock controller 74." (*Id.*, 5:38-41.) Thus, when the device is in the locked state, adjusting the rotary volume key does not affect the device's volume because the volume controller is operating based on the lock controller rather than the volume operating unit.

The patent admits that having such locked and non-locked states to control volume in portable devices was not new. (*Id.*, 1:20-28.)

2. The '819 Patent's Technique for Changing the Lock Value.

The patent explains that, without further functionality, unlocking the volume on a device could cause "a high volume level of audio" to be "suddenly output" if the rotary volume key was significantly increased while the volume was locked. (*Id.*, 8:61-63.) The inventors sought to

eliminate that suddenly high volume and provide a simpler mechanism for re-setting the lock volume (i.e., switching from a locked, to an unlocked, and back to a locked state). (*Id.*, 1:29-37.)

The patent explains that its device "switches to the locked state" when a "predetermined operating part," described as the "monitor key," is turned off. (*Id.*, 6:18-26.) When that occurs, the device sets the lock value at "the operating value output by the volume operating unit at the time." (*Id.*, 6:18-22.) The device then outputs audio at the same volume level as at the moment it was locked, regardless of whether the rotary volume key is later changed.

The patent explains that switching back to the non-locked state requires that two conditions are met: (1) the "predetermined operating part" is turned back on; and (2) "the operating value becomes a value that falls within the predetermined range based on the lock value." (*Id.*, 6:8-12.) The range may be, for example, between 95%-105% of the lock value. (*Id.*, 8:31-32.) Thus, to re-set the lock volume, a user must: (1) turn on an operating part (e.g., push a button), (2) move the rotary volume key back within the predetermined proximity of the locked volume if it is not already within the range, and (3) then turn off the operating part (e.g., release the button) to lock the volume at the new level. By requiring an operating part to be on and the volume to be within a specified range of the prior lock value, the system eliminates sudden output of a high-volume level. (*Id.* at 8:57-63.) According to the patent, this also enables the "reset of volume through a simple operation after the volume has been locked." (*Id.* at 10:33-34.)

3. The Asserted Claim

Plaintiff alleges that Amazon infringes claim 8 of the '819 patent. (Dkt. 1 ¶ 101.) Claim 8 recites the technique for re-setting the lock volume described above:

> 8. A control method for a receiving apparatus, the receiving apparatus comprising:
>
> [a] an audio output unit configured to output audio corresponding to an audio signal;
>
> [b] a volume operating unit configured to output an operating value indicating a volume level of the audio according to a user operation; and
>
> [c] a volume controller configured to cause the audio output unit to output the audio having a volume level corresponding to the operating value in a non-locked state in which the volume level of the audio can be varied based on the operating value and to cause the audio output unit to output the audio having a volume level corresponding to the lock value in a locked state in which the volume level of the audio is fixed by a constant lock value for the operating value, the control method comprising:
>
> [d] when a predetermined operating part is turned on in the locked state, switching the locked state to the non-locked state for a period of time that starts when the operating value becomes a value that falls within a predetermined range based on the lock value and ends when the predetermined operating part is turned off; and
>
> [e] when the predetermined operating part is turned off after having switched to the non-locked state, updating the lock value with the operating value and switching the non-locked state to the locked state.

('819 patent (Dkt. 1-3), claim 8.) Claim 8 thus requires that, when the device is in a "locked state," the "volume level of the audio *is fixed by a constant lock value.*" In a "non-locked state," the "volume level of the audio can be varied based on the operating value," i.e., the value may be adjusted by the user. Additionally, the claimed method requires that, when a "predetermined operating part" (such as a monitor key) is turned on, the device switches into the non-locked state when the volume is within a predetermined proximity to the lock value, and then switches into a locked state when the predetermined part is turned off. The new locked state locks the volume at the level it was at when the predetermined part was turned off.

B. The Allegedly Infringing Amazon Products

Plaintiff's complaint alleges that Amazon's Echo products infringe the '819 patent when they output audio in the form of Alexa's voice responses.[4] (Dkt. 1 ¶¶ 101-103.) Plaintiff alleges that a user may control and adjust an Echo device's volume via a "volume dial." (*Id.* ¶¶105-106.)

Plaintiff alleges that an Echo device is in a "locked state" when the "volume level [is] set by the user through a user operation" such as adjusting the volume dial. (*Id.* ¶106.)

Plaintiff alleges that the Echo device is in a "non-locked state" when the device engages "Whisper Mode" or "Adaptive Volume." (*Id.*) Whisper Mode and Adaptive Volume are features of Amazon's Alexa. (*Id.*) According to Plaintiff, "Whisper Mode" and "Adaptive Volume Mode" "permit[] the volume of Alexa's spoken responses to automatically deviate from the volume level that was set by the user." (Dkt. 1 ¶ 107.) "In the Whisper Mode, Alexa's spoken responses are provided at the volume level of a whisper, regardless of the set value of the volume." (*Id.*) "In the Adaptive Volume mode, Alexa's spoken responses are provided at the volume level generally higher than the set value so that the responses may be heard over load [*sic*] ambient noise in the room." (*Id.*)

Plaintiff alleges that an Echo device infringes the lock re-setting method required by the claim because, according to Plaintiff, the device is in a locked state when the volume is adjusted by the user. Plaintiff alleges that a "predetermined operating part" is "turned on" when Whisper Mode or Adaptive Volume Mode activates, which allegedly switches the device from a locked state to a non-locked state for a period of time. (*Id.* ¶ 108.) Plaintiff alleges that that time period starts "when the operating value becomes a value that falls within a predetermined range (e.g., a

[4] Alexa, the "brain" behind Amazon's Echo products, processes and responds to user's voice commands and requests. *See* https://press.aboutamazon.com/2015/6/amazon-echo-now-available-to-all-customers (cited in Dkt. 1 ¶ 65).

value corresponding to a whisper volume level, or a value corresponding to a volume level based on the ambient noise that is higher than the volume level set by the user)" and ends "when the predetermined operating part is turned off (e.g., deactivates)[.]" (*Id.*)

Plaintiff also alleges infringement based on a "Volume Limit" feature. (*Id.* ¶ 110.) According to Plaintiff, the Volume Limit feature "prevents the master volume from being increased beyond a level designed by a user." (*Id.*; *see also id.* ¶ 111.) In this scenario, Plaintiff alleges that the Echo device is in a "locked state" when the Volume Limit feature is activated and a "non-locked state" when Adaptive Volume is activated. (*Id.*; *see also id.* ¶ 111 (the volume limit corresponds to a "locked state" "because the volume level is not permitted to increase beyond the limit despite a user's interaction with the claimed volume operating unit").) Plaintiff alleges that, when the Volume Limit feature is activated (i.e., the device is allegedly in a locked state) and Adaptive Volume is activated, the device will temporarily override the Volume Limit to output audio at a higher volume. (*Id.*; *see also id.* ¶ 112.) In this scenario, Plaintiff alleges that the activation and deactivation of Adaptive Volume meets the claim limitations relating to re-setting the lock value. (*Id.* ¶ 113.)

C. Legal Standard

"To survive a motion to dismiss, a complaint must contain sufficient factual matter, accepted as true, to 'state a claim that is plausible on its face.'" *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). Plausibility requires "more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do." *Twombly*, 550 U.S. at 555. Rather, the complaint must contain "factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Iqbal*, 556 U.S. at 678.

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It is well settled that "each element of a claim is material and essential," and that, to show infringement, a plaintiff must show the presence of every element. *Tegal Corp. v. Tokyo Electron Ltd.*, No. CIV.A. 3:98CV318, 1999 WL 33910703, at *5 (E.D. Va. Feb. 10, 1999) (quoting *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991) (internal quotations omitted). Thus, a patent infringement complaint must: (1) identify the specific claims alleged to be infringed; (2) specify the features of the allegedly infringing product that correspond to each limitation of each asserted claim; and (3) identify with particularity how each allegedly infringing feature infringes any of the named patents. *Jenkins v. LogicMark, LLC*, No. 3:16-CV-751-HEH, 2017 WL 376154, at *3 (E.D. Va. Jan. 25, 2017). Further, the factual allegations must be supported by evidence. *See Cellcontrol, Inc. v. Mill Mountain Cap., LLC*, No. 7:21-CV-246, 2022 WL 598752, at *3 (W.D. Va. Feb. 28, 2022) (patent infringement allegations were implausible where the allegations were inconsistent with the evidence upon which Plaintiff founded its allegations). Courts in this District routinely dismiss complaints that fail to clearly articulate a plausible infringement theory. *See*, *e.g.*, *Macronix Int'l Co. v. Spansion Inc.*, 4 F. Supp. 3d 797, 804 (E.D. Va. 2014); *Mician v. Catanzaro*, No. 2:17-CV-548, 2018 WL 2977398, at *4 (E.D. Va. June 13, 2018); *Asghari-Kamrani v. United Servs. Auto. Ass'n*, No. 2:15-CV-478, 2016 WL 1253533, at *4 (E.D. Va. Mar. 22, 2016).

D. Plaintiff Fails to Plausibly Plead that the Allegedly Infringing Products Have a "Locked State."

In its complaint, Plaintiff alleges that the Echo devices meet the claim limitation requiring a "locked state" because a user may set Echo devices to a desired volume using, for example, a volume dial. (Dkt. 1 ¶ 106.) In other words, Plaintiff alleges that a user adjusting the volume to a desired level—which can be freely adjusted by the user and is neither fixed nor constant—places

the Echo device in a "locked state." (*Id.*) This infringement theory is implausible because it contradicts the patent's explanation of a "locked state."

Asserted claim 8 requires a "locked state" wherein the volume level of the audio is "fixed by a constant lock value." In the locked state, the volume level is fixed and remains at the lock value even when the user adjusts the volume. ('819 patent, 7:61-65; *see also id.*, 5:25-26 ("In the locked state, the volume level of audio is fixed at a constant level."), 5:38-43 (in the locked state, the controller "fixes the volume level" regardless of the value set by the user); 8:63-9:3 (in the locked state, a user's adjustment to the volume "does not result in the volume level being varied").) When the volume level is *not* fixed and can be varied by the user, the device is in a "non-locked state." (*Id.*, 7:55-58; *see also id.*, 9:30-42 (in the non-locked state, the volume level may be "continuously varied" by the user).) Thus, Plaintiff's allegation that Echo devices are in a "locked state" when the volume is set by the user via the volume dial plainly contradicts the patent. This Court cannot reasonably conclude that a device, having a volume level that is freely adjustable by the user and is neither fixed nor constant, is somehow in a "locked state" and therefore infringes the '819 patent. Plaintiff's theory contradicts the patent's disclosure that a locked state requires the volume to be fixed even *when the user operates the volume operating unit* (*id.*, 7:61-65, 5:38-43, 8:63-9:3) and ignores the claim language requiring the locked state to have a volume level that is "fixed by a constant lock value."

Plaintiff also alleges that the Echo devices infringe in a second "scenario" when the Volume Limit feature is activated. (Dkt. 1 ¶ 110.) Plaintiff alleges that Volume Limit "prevents the master volume from being increased beyond a level designated by a user," i.e., setting a maximum volume level. (*Id.*) Accordingly, by Plaintiff's own admission, even when Volume Limit is active, a user can still adjust the volume level ***up to*** the designated value. Thus, even accepting Plaintiff's

factual allegations regarding Volume Limit as true, activating Volume Limit cannot correspond to a "locked state" because the volume is freely adjustable (up and down as long as it is below the limit). Thus, Plaintiff's infringement theory relying on the Volume Limit feature as a "locked state" is also implausible because that feature does not impose a "fixed" and "constant" volume regardless of user adjustment.

E. Plaintiff Fails to Plausibly Plead that the Allegedly Infringing Products Have a "Non-Locked State."

Claim 8 also requires a "non-locked state" in which the "volume level of the audio can be varied based on the operating value," i.e., varied by the user's adjustment of a volume dial. This is consistent with the description of the "non-locked state" in the patent. ('819 patent, 5:23-25, 5:35-38, 7:54-58, 9:30-42.) Here, Plaintiff alleges that an Echo device is in a "non-locked state" whenever "Whisper Mode" or "Adaptive Volume" is active "because the volume is allowed to automatically deviate from the volume level set by the user." This makes no sense. Automatic deviation from the level set by the user is not a non-locked state. Plaintiff pleads no facts suggesting that, when Whisper Mode or Adaptive Volume is active (e.g., when Alexa is responding in a whisper), the volume level is in a "non-locked state," i.e., it can be varied by the user.

F. Plaintiff Fails to Plausibly Allege that "Switching" Occurs When the Operating Value Falls Within a Predetermined Range.

As discussed above, a key aspect of the alleged invention of the '819 patent was the method it uses to re-set the lock when (a) a predetermined part is turned on (e.g., a button is pushed), and (b) the volume is within a range (e.g., 95%-105%) of the locked volume level. This aspect of the invention is reflected in claim limitation 8[d]:

> when a predetermined operating part is turned on in the locked state, switching the locked state to the non-locked state for a period of time that starts when the operating value becomes a value that falls within a predetermined range based on the lock value and ends when the predetermined operating part is turned off;

('819 patent, claim 8.)

The Complaint contains no factual allegations that would allow this Court to conclude that Echo devices switch from a locked state to a non-locked state "when the operating value becomes a value that falls within a predetermined range… based on the lock value[.]" Plaintiff asserts that Echo devices meet this limitation (Dkt. 1 ¶ 108), but never identifies any "predetermined range" analogous to the ±5% range disclosed in the '819 patent. Indeed, Plaintiff alleges no facts that would allow the Court to conclude that Echo devices switch from the alleged "locked state" (in which the user can freely adjust the volume) to the alleged "non-locked" state (Whisper Mode or Adaptive Volume) *only if* the volume in the non-locked state (Whisper Mode or Adaptive Volume) is within a predetermined range of the volume in the locked state (the volume set by the user). Plaintiff's infringement theory is, therefore, implausible.

G. Plaintiff Fails to Plausibly Allege "Updating The Lock Value With The Operating Value" When Switching to the Locked State.

Another key aspect of the alleged invention was updating the lock value (setting the new lock volume) to reflect the value at the time the "predetermined operating part" (i.e., a button) is turned off. This aspect of the invention is reflected in limitation 8[e]:

> when the predetermined operating part is turned off after having switched to the non-locked state, *updating the lock value with the operating value* and switching the non-locked state to the locked state.

('819 patent, claim 8 (emphasis added).) This limitation is consistent with the description in the patent's specification, which repeatedly explains that, when the predetermined part is turned off (i.e., the button is released), the volume at that time becomes the new locked volume:

> When the predetermined operating part is turned off . . . the lock controller 74 updates the lock value with the operating value output by the volume operating unit 72 *at the time at which the predetermined operating part is turned off*, and switches to the locked state. Thus the lock controller 74 can update the lock value.

(*Id.*, 6:18-24 (emphasis added); *see also id.*, 6:58-66, 7:6-11 (lock controller "register[s] the operating value of the volume operating unit 72 at the switching operation as the lock value"), 9:43-53 (when the operating part is turned off, the lock controller registers the operating value "that is currently output" by the volume operating unit 72 as the lock value), 10:25-29 (when the predetermined operating part is turned off, the lock value is updated with "the operating value at the time").) That is, "updating the lock value with the operating value" in claim 8 means setting the new lock value to the operating value selected by the user *at the time at which the predetermined operating part is turned off*.

Plaintiff pleads no facts that would allow this Court to conclude that Echo devices meet this limitation. To the contrary, Plaintiff's allegations show that Echo devices do not work that way and cannot possibly meet this limitation. Specifically, Plaintiff alleges that Echo devices "updat[e] the lock value with the operating value" by "resetting the volume level to the volume level set by the user." (Dkt. 1 ¶ 113.) Thus, Plaintiff alleges that this limitation is met when, for example, Whisper Mode is de-activated and the volume level reverts to the previously set volume. But that is not what the patent requires.

To plausibly plead infringement of this limitation, Plaintiff would have to allege that, when Whisper Mode or Adaptive Volume are de-activated (turned off), the new lock value is fixed at the lower whisper volume (in the case of Whisper Mode) or the higher adaptive volume (in the case of Adaptive Volume). But Plaintiff can make no such allegation because Echo devices do not work that way. Thus, Plaintiff is left with no choice but to allege that, when these modes are de-activated, the lock value is set to a different volume, i.e., the "volume level set by the user." But that is not "updating the lock value with the operating value" as required by claim 8. Thus,

accepting Plaintiff's factual allegation that Echo devices revert the volume level to the volume level set by the user as true, then the accused products *cannot* practice the claimed invention.

* * *

Because Plaintiff's infringement theory contradicts the patent and is facially implausible—indeed, impossible—the Court should dismiss Plaintiff's claim that Amazon infringes the '819 patent.

III. THE COURT SHOULD DISMISS PLAINTIFF'S INFRINGEMENT CLAIMS DIRECTED TO UNIDENTIFIED ACCUSED PRODUCTS.

A patent infringement complaint must include "factual allegations that, when taken as true, articulate why it is plausible that the accused product infringes the patent claim." *Bot M8 LLC v. Sony Corp. of Am.*, 4 F.4th 1342 (Fed. Cir. 2021). The complaint must also "identify which elements of [the infringing] device correspond with which limitations, if any, in the asserted claims." *Mician*, 2018 WL 2977398, at *4.

If a plaintiff identifies such elements for only some accused products, it must also provide "facts to connect" those products to the accused products for which it has not identified elements corresponding to the claim limitations. *Cont'l Circuits LLC v. Intel Corp.*, No. CV16-2026 PHX DGC, 2017 WL 679116, at *6 (D. Ariz. Feb. 21, 2017) (granting-in-part motion to dismiss with respect to products for which no element identification was provided). "In the absence of such facts, Plaintiff has failed to plead a plausible claim of direct infringement with respect to" the products for which it has not identified elements corresponding to claim limitations. *Id.* Pleading "conclusory allegations," such as that identified facts are "representative of . . . each of the Accused Instrumentalities" is insufficient. *Id.* Similarly, a complaint that accuses "unidentified products" is also deficient if it "contains no facts about those unspecified products, and thus sets forth no

plausible basis for infringement by them." *Id.* (also granting-in-part motion to dismiss with respect to unidentified products).

Here, Plaintiff accuses six categories of products and services of infringing each of the three asserted patents: (1) several models of Amazon's Echo smart speaker products and its Fire TV Cube streaming media player product ("Named Products"); (2) Amazon's Alexa cloud-based voice service ("Alexa Voice Service"); (3) any other product that has used the Alexa service or one of the Named Products ("Unidentified Derivative Products"); (4) any service that has used the Alexa service or one of the Named Products ("Unidentified Derivative Services"); (5) combinations of products/and or services comprising two or more of the foregoing ("Unidentified Combinations"); and (6) products and services that operate in a substantially similar manner to the foregoing ("Unidentified Similars"). (Dkt. 1 ¶ 15.) For ease of reference, Amazon refers to the products in categories (3)-(6) as the "Unidentified Products and Services."

The Court should dismiss Plaintiff's infringement allegations—for all patents—for Categories 2-6, and thereby limit Plaintiff's infringement complaint to the devices identified in Category 1. Plaintiff has not made any factual allegation articulating why it is plausible that Alexa Voice Service, or any of the other, unidentified products or services, infringe.

First, Plaintiff fails to offer any contention that would connect its infringement theories from any one device's hardware to a service such as the Alexa Voice Service or to the Unidentified Products and Services. For example, Plaintiff alleges that the Amazon Echo comprises an "audio output unit" because it has a speaker. (Dkt. 1 ¶¶ 103, 105.) But it is unclear how the fact that the Echo has a speaker could support an infringement allegation against purely software services, such as the Alexa Voice Service. Plaintiff has not and cannot plead plausible facts to connect the

accused elements in Amazon Echo to elements in the countless other accused products and services. *See Cont'l Circuits LLC,* 2017 WL 679116, at *6.

Second, the factual allegations in the Complaint are specific to the Named Products, and not to any other unidentified product or service. For example, Alexa can be used to control more than 140,000 smart home devices, including light switches, appliances, TVs, and other devices. https://developer.amazon.com/en-US/alexa/devices. Some, such as the Echo Input, provide access to the Alexa Voice Service but have no speaker at all, let alone locked and unlocked volume states.

Because Plaintiff has not sufficiently pled any allegation against any product or service other than the Named Products, the Court should dismiss all other accused products and services from this case.

IV. THE COURT SHOULD STRIKE SOUNDCLEAR'S PRAYER FOR ENHANCED DAMAGES FOR WILLFUL INFRINGEMENT.

A plaintiff "must plead facts showing willfulness" to avoid dismissal of a willful infringement claim. *Bushnell Hawthorne, LLC v. Cisco Sys., Inc.*, No. 1:18-CV-760, 2019 WL 8107921, at *1 (E.D. Va. Feb. 26, 2019). For example, the complaint must allege that the defendant had knowledge of the patent alleged to be willfully infringed. *Id.* at *1 (citing *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1341 (Fed. Cir. 2016)). The complaint must also allege facts to demonstrate the defendant's behavior was egregious. *Bushnell*, 2019 WL 8107921, at *1 (collecting cases); *Cont'l Circuits*, 2017 WL 679116 at *11 (dismissing willful infringement claim where plaintiff "alleged sufficient facts to show knowledge, but not to show the additional element of egregiousness").

In its Prayer for Relief, Plaintiff requests "enhanced damages for willful infringement." (Dkt. 1 at 28.) However, the complaint contains no allegations of willful infringement and no allegations pertaining to Amazon's knowledge of the patents, intent to infringe, or egregiousness.

Accordingly, the Court should strike Plaintiff's prayer for enhanced damages for willful infringement.

CONCLUSION

For the reasons set forth above, Amazon respectfully requests that the Court:

1. Declare that the '374 patent is invalid under § 101 and dismiss Count II of the Complaint;

2. Determine that Plaintiff failed to state a plausible claim of infringement of the '819 patent and dismiss Count III of the Complaint, with prejudice;

3. Dismiss all claims of infringement directed to any product not identified by name in part (1) of paragraph 15 of the Complaint; and

4. Strike the prayer for enhanced damages for willful infringement and, to the extent necessary, dismiss any claim or allegation of willful infringement.

Respectfully submitted,

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August 26, 2024

CERTIFICATE OF SERVICE

I certify that on August 26, 2024, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will then send notification of such filing (NEF) to all counsel of record.

/s/ William R. Poynter

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