IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

DENTAL MONITORING,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No._____
	)	
GET-GRIN INC.,	)	**JURY TRIAL DEMANDED**
	)	
Defendant.	)	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Dental Monitoring brings this complaint for patent infringement against Defendant Get-Grin Inc. ("Get-Grin" or "Defendant"). Plaintiff, on personal knowledge as to its own acts, and on information and belief as to all others based on investigation, alleges as follows:

NATURE OF THE ACTION

1.   This is a civil action for infringement of United States Patent Nos. 11,314,983 ("the '983 patent") and 10,755,409 ("the '409 patent") (collectively, the "patents-in-suit"), directed to methods of analyzing an image of a dental arch of a patient, under the patent laws of the United States, 35 U.S.C. § 1, *et seq.*

2.   Plaintiff seeks judgment that Defendant has infringed, and continues to infringe, the patents-in-suit arising out of Defendant's commercialization of teledental services in the United States prior to the expiration of the patents-in-suit.

THE PARTIES

3.   Plaintiff Dental Monitoring is a corporation organized and existing under the laws of France with its principal place of business at 75 Rue de Tocqueville, 75017, Paris, France.

4.   On information and belief, Defendant Get-Grin Inc. is a corporation organized and existing under the laws of the State of Delaware and may be served through its registered agent, Paracorp Inc., located at 2140 S. DuPont Hwy., Camden, DE 19934.

5.   On information and belief, Get-Grin offers a teledental platform that connects patients with orthodontists via the patients' smart devices.

6.   On information and belief, orthodontists enter into agreements with Get-Grin to receive services for their patients in exchange for a fee that is paid periodically ("the Get-Grin Service"). An orthodontist that has entered into such an agreement will then offer the Get-Grin Service to his/her patients.

7.   On information and belief, Get-Grin sends a patient who signs up for the Get-Grin Service a Grin Scope to facilitate scanning the patient's mouth from time-to-time.

JURISDICTION AND VENUE

8.   Plaintiff incorporates each of the preceding paragraphs 1-7 as if fully set forth herein.

9.   This is a civil action arising under the patent laws of the United States, 35 U.S.C. §§ 1 et seq., including 35 U.S.C. § 271, for infringement of the patents-in-suit.

10.   The Court has subject matter jurisdiction over the matters pleaded herein under 28 U.S.C. §§ 1331 and 1338(a).

11.   Upon information and belief, Defendant is a corporation organized and existing under the laws of the State of Delaware and, because Defendant is at home in this judicial district, this Court has personal jurisdiction over Defendant.

12.   Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391 and 1400(b) because Get-Grin is a Delaware corporation and thus resides in this district.

FACTUAL BACKGROUND

Dental Monitoring's AI-Powered Remote Dental Solution

13.   Dental Monitoring was founded in 2014 with the vision to help the dental industry automate and virtualize everything outside of the clinical side of care. Dental Monitoring is committed to empowering dental professionals with solutions that utilize Artificial Intelligence ("AI") and help dental professionals provide more frequent, individualized patient care, virtually. Dental Monitoring's AI can analyze, detect, and report on 130 oral events using images taken with a smartphone. Dental Monitoring built its proprietary AI by processing over half a billion photographs, creating the largest database of images for training AI algorithms in the dental technology space.

14.   An orthodontist using Dental Monitoring's services offers the Dental Monitoring service to his/her patients. A patient who decides to use the service downloads the Dental Monitoring app onto the patient's cellphone. The patient also receives a Dental Monitoring Scan-Box, and uses it to take pictures in accordance with a personalized treatment monitoring schedule. Dental Monitoring can monitor the patient's treatment progress based on the periodic scans it receives from the patient. Dental Monitoring may also communicate with the patient regarding the patient's condition through the app, which can avoid the inconvenience of booking an in-practice appointment.

15.   A leading online dentistry website, dentistry.co.uk, has called Dental Monitoring's product the "wonderful everyday solution for modern orthodontics." Quoting an orthodontist, it states:

> We operate an appointment on demand system. Dental Monitoring calls it OWN: Only When Needed. So we do not see patients in a line of treatments for routine reviews. But only see them in-practice when we need to see them and to put our hands in their mouths.

For that reason we've significantly reduced the number of routine reviews on an annual basis.

This has saved us a huge amount of time.

The combination of those two things has saved us tens and tens of hours a month and hundreds and hundreds of hours a year from our existing diary. It allows us to grow, which allows us to work in a more calm and more measured manner with those physical appointments, which still have to happen.

16.   Another leading dentistry website describes Dental Monitoring's service as "a newly modernised and innovative way to treat and monitor patient dental treatment remotely through the incorporation of a smartphone application." It further states that:

Dental monitoring was developed in France and its purpose was to develop an artificial intelligence (AI) to identify not only various different dental structures and diseases such as cavities, gingivitis, and gum recession, but also to track dental movement with the overall objective being to help doctors remotely monitor patients undergoing an Invisalign procedure . . . .

The main benefit of dental monitoring is that it allows both the doctor and patient to avoid any unnecessary appointment. All Invisalign patients can use the dental monitoring application to upload their dental photos on a weekly basis. This dental monitoring app lets the patients know if they can change to the next aligner or not. It picks up poor wear issues and actually sends them an automatic message without asking [the orthodontist] to approve.

Dental monitoring can also detect a slight unseating of the aligner for the lower left second premolar.

17.   Dental Monitoring extensively uses advanced artificial intelligence techniques in providing its services. This artificial intelligence analyzes images and 3D files, estimates tooth movement, and creates photo-realistic simulations using a patient's own teeth. Dental Monitoring constantly tests, validates and trains its AI to build new neural networks with its global team of over 170+ developers, scientists, dentists and orthodontists. Dental Monitoring is the leading

innovator in this area, and has filed for more than 200 patents, many of which have already been granted.

The Patents-in-Suit

18.   On April 26, 2022, the United States Patent and Trademark Office ("USPTO") duly and legally issued the '983 patent, titled "Method for Analyzing an Image of a Dental Arch," naming Philippe Salah, Thomas Pellissard, Guillaume Ghyselinck and Laurent Debraux as inventors. A true and correct copy of the '983 patent is attached hereto as Exhibit A.

19.   Dental Monitoring owns the entire right, title, and interest in and to the '983 patent, including the right to sue and recover damages, including damages for past infringement.

20.   On August 25, 2020, the USPTO duly and legally issued the '409 patent, titled "Method for Analyzing an Image of a Dental Arch," naming Philippe Salah, Thomas Pellissard, Guillaume Ghyselinck and Laurent Debraux as inventors. A true and correct copy of the '409 patent is attached hereto as Exhibit B.

21.   Dental Monitoring owns the entire right, title, and interest in and to the '409 patent, including the right to sue and recover damages, including damages for past infringement.

Get-Grin's Infringing Products and Services

22.   Get-Grin offers a teledental platform that connects patients with orthodontists via the patients' smart devices. On information and belief, orthodontists enter into agreements with Get-Grin to receive services for their patients in exchange for a fee that is paid periodically ("the Get-Grin Service"). An orthodontist who has entered into such an agreement will then offer the service to his/her patients. If a patient signs up for the Get-Grin Service, then the patient is sent a scope (the "Grin Scope") to facilitate scanning the patient's mouth from time-to-time.

23.   Get-Grin offers a remote teledental service that involves the use of a scope that it sends to patients. Get-Grin thus offers a service similar to that of Dental Monitoring, and is thus a direct competitor of Dental Monitoring in the market for teledental services.

24.   On information and belief, the Grin Scope has a cylindrical shape. According to material on Get-Grin's website discussed in this Complaint below, one end should be attached to the patient's cellphone and the other end should be inserted into the patient's mouth. The material on Get-Grin's website indicates that during a self-scan, the patient should move the Grin Scope in the patient's mouth to obtain a complete view of the patient's dental arches. The patient's cellphone that is attached to one end of the Grin Scope records a video (*i.e.*, a film) while the Grin Scope is moved in the patient's mouth.

25.   On information and belief, and based on the material on Get-Grin's website, to use the Get-Grin Service, the patient must download an app onto the patient's cell phone ("the Grin App"). On information and belief, the Grin App provides a communication interface between each of (i) the patient, and (ii) the orthodontist's office and/or a server operated by Get-Grin ("the Grin Server"). The Grin App and Grin Server, in combination, instruct and guide the patient during the self-scan process using audio prompts. Upon information and belief, the Grin App transmits video images to the Grin Server for analysis that identifies the best views from specific angles.

26.   In particular, a patient guide available on Get-Grin's website directs the patient to first download the Grin App, then connect the Grin Scope by attaching the patient's cell phone to it, and then follow self-scan instructions of the Grin App:

1 Download the Grin App

Download the Grin App using the email sent from your specialist, or with the QR code to the right.

2 Connect Your Scope

Launch the Grin App and follow the self-scan instructions.

The App will prompt you to position the scope over the phone's camera and tighten the strap.

3 Self-Scan

When you start a scan in the App, you will be guided to turn your phone horizontally. Then, stand in front of a mirror and place the scope in your mouth to complete your scan.

Source: "Get Started Self Scanning with the Grin Remote Monitoring App," *available at* https://get-grin.com/wp-content/uploads/2020/10/Patient-How-To.pdf (last accessed May 16, 2022)

27. Get-Grin CEO Dr. Adam Schulhof provides information regarding the Get-Grin

Service and instructs a patient on how to use the Grin Scope in an online video that Get-Grin links

to from its website. In particular, this video shows how the Grin Scope is used to take images of dental arches of the patient during a scan. Screenshots from this video are reproduced below.
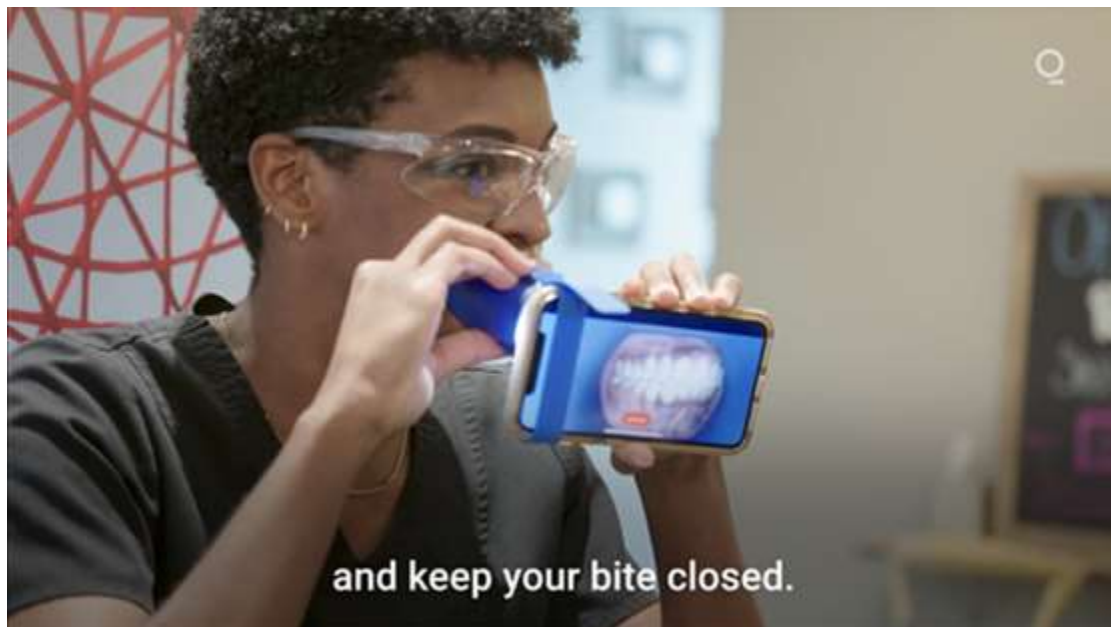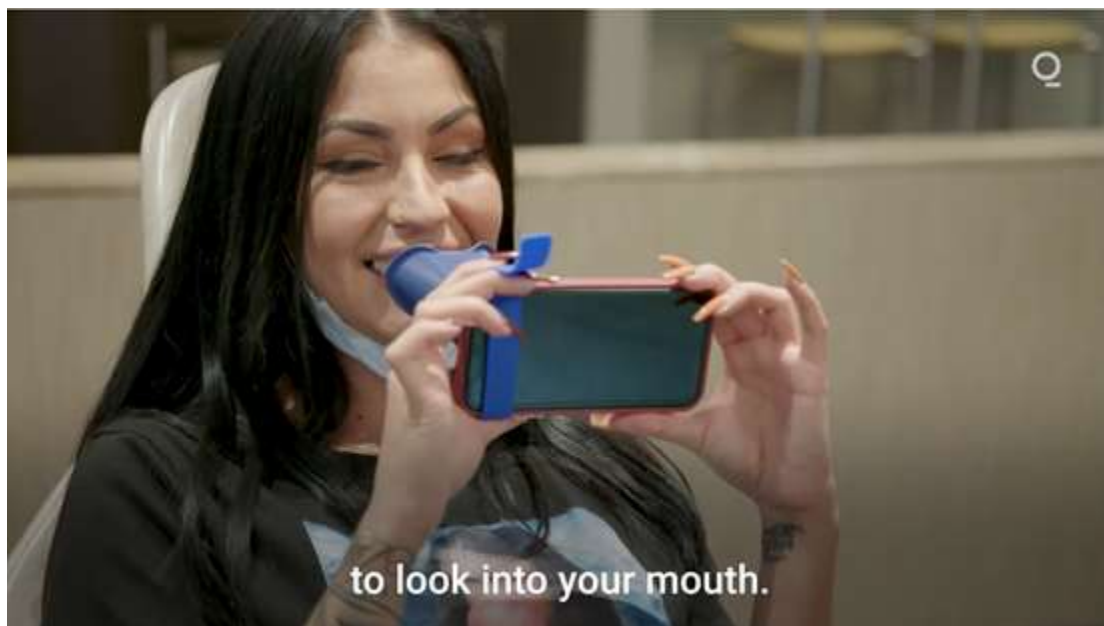
Source: *Orthodontia Goes Remote During Covid-19*, Bloomberg.com (Nov. 19, 2020)*, available at* https://get-grin.com/press/ and https://www.bloomberg.com/news/videos/2020-11-19/orthodontia-goes-remote-during-covid-19-video (last accessed May 16, 2022)

28.   In the video, Get-Grin CEO Dr. Schulhof instructs the patient to use the Grin Scope as follows:

> Attach this to your phone just like that. And then we're now going to be able to use this to look into your mouth. The magic behind Grin is in the software side.

29.   Later in the video, the Grin App directs a patient to move the scope around in the patient's mouth to take a scan. The Grin App is heard instructing the patient as follows, while the patient moves the scope around in her mouth to take a scan:

> Move slowly all the way to the right, and keep your bite closed. Now move slowly all the way to the left, while keeping your bite closed. Well done, scan complete.

30.   On information and belief, the Grin App and/or Grin Server use AI techniques, such as machine learning or deep learning, to analyze the images for tracking treatment outcomes. For example, and on information and belief, the Grin App and/or Grin Server implement an "AI-enhanced Scan Guide" that uses computer vision and machine learning to identify the five optimal

Grin Scope positions required by care teams. Further, the technology alerts users when the scope

is capturing an ideal angle, and instructs patients when to continue with their scans. For example,

a page on Get-Grin's website includes the following description of Get-Grin's "AI-enhanced Scan

Guide":

> The AI-enhanced Scan Guide augments the Grin Scope and self-scan process to create the most comprehensive orthodontist-ready video of a patient's mouth. This is achieved by using computer vision and machine learning (ML) algorithms to identify the five optimal Grin Scope positions required by care teams for an examination. While patients now scan from their home, the technology alerts users when the scope is capturing an ideal angle, and informs patients when to continue with their scan.

Source: "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries" (Nov. 18, 2021), *available at* https://get-grin.com/blog/grin-smart-scans-utilize-ai/ and https://www.businesswire.com/news/home/20211118005605/en/Grin-Smart-Scans-Utilize-AI-for-Precision-Scanning-Intelligent-Treatment-Summaries (last accessed May 16, 2022); attached as Exhibit C.

31.   Additionally, as set forth in the same page on Get-Grin's website, the Get-Grin

Service analyzes images comprising the scan (which may be a 34-second clip, *i.e.*, film, taken by

the patient), and identifies five images corresponding to five ideal scan moments:

> With patient scan accuracy improving, these inputs create optimal conditions for AI to be used in the Grin doctor webapp. In addition to doctors receiving a 34 second scan provided by patients, Grin AI technology ingests the video and automatically extracts the five scan moments from each major jaw position: front, lower, upper, left, and right. Grin then creates images out of these ideal moments and displays them for doctors to view. While doctors may choose to view the entire video, they now have AI highlighting the most advantageous angle.

Source: *See supra* ¶ 30, "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries"

32.   Upon information and belief, a machine learning process identifies the five special

images from among the other images comprising the self-scan film by selecting an optimal value

for a quality parameter characterizing each of the images. Moreover, upon information and belief,

Get-Grin's machine learning process for doing so implements a neural network, which is the most commonly used technique for machine learning analysis of image data.

33.   For example, and on information and belief, the Grin App and/or Grin Server also implement an "AI Scan Summary" that uses deep-learning to automatically select the best intraoral visuals from patients' scans. For example, Get-Grin's website includes the following description:

> The AI Scan Summary uses deep-learning to automatically select the best intraoral visuals from patients so doctors can determine treatment priorities. It utilizes the same algorithm as NASA to sharpen images. Together, these new cutting-edge features employ AI to provide patients with even more convenience and peace of mind while doctors can expand their reach and increase the quality of their offerings.
>
> …
>
> With patient scan accuracy improving, these inputs create optimal conditions for AI to be used in the Grin doctor webapp. In addition to doctors receiving a 34 second scan provided by patients, Grin AI technology ingests the video and automatically extracts the five scan moments from each major jaw position: front, lower, upper, left, and right. Grin then creates images out of these ideal moments and displays them for doctors to view. While doctors may choose to view the entire video, they now have AI highlighting the most advantageous angle. The Grin AI Scan Summary also limits variability and sharpens the scan's focus with sophisticated algorithms used in astronautical science. With these algorithms in place, the AI Scan Summary exceeds 90% accuracy.

Source: *See supra* ¶ 30, "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries"

34.   Upon information and belief, any neural network or deep learning process for analyzing medical image data needs to be trained based on a large library of training images (i.e., historical images). Upon information and belief, such training is necessary for accurate prediction and identification of the five images corresponding to the five optimal Grin Scope positions referenced above. Upon information and belief, the number of such training images, which

comprise a learning base, exceeds 1,000 for the relevant machine language processes to work correctly.

35.   Upon information and belief, a deep learning imaging process predicts properties of a candidate image based on a probability-based calculation. The calculated value of an attribute of a candidate image corresponds to a probability that, for example, the candidate image corresponds to the best-quality image taken from that angle. Therefore, upon information and belief, the Grin AI Scan Guide and the AI Scan Summary include a deep learning process that determines, as a function of probability, a value for the relevant attribute for each of the candidate images.

36.   Upon information and belief, a machine learning process that determines an ideal angle of image capture and informs a patient whether to continue with the scan does so by (i) assigning a value for an attribute of each image taken, and (ii) selecting the best image based on the set of values corresponding to the images. Upon information and belief, the value corresponding to the best image is compared to a setpoint that indicates, for example, a minimum acceptable quality. If the comparison is favorable, the best image is selected as the optimal image for that view. If the comparison is not favorable, then the determination is that none of the images taken so far were satisfactory. Under such circumstances, the patient is informed regarding whether to continue with a scan. In particular, the Get-Grin Service uses machine learning processes to alert the patient when the Grin Scope is capturing an ideal angle, and informs the patient regarding whether to continue the scan:

>The AI-enhanced Scan Guide augments the Grin Scope and self-scan process to create the most comprehensive orthodontist-ready video of a patient's mouth. This is achieved by using computer vision and machine learning (ML) algorithms to identify the five optimal Grin Scope positions required by care teams for an examination. While patients now scan from their home, the

technology alerts users when the scope is capturing an ideal angle,
and informs patients when to continue with their scan.

Source: *See supra* ¶ 30, "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries"

37.   Additionally, in the video referenced above (¶ 27), the Grin App directs a patient to move the scope around in the patient's mouth to take a scan. The Grin App is heard to instruct the patient, while the patient moves the scope around in her mouth to take a scan:

> Move slowly all the way to the right, and keep your bite closed. Now move slowly all the way to the left, while keeping your bite closed. Well done, scan complete.

38.   Thus, upon information and belief, the Get-Grin Service sends an information message to the patient as a function of its analysis, where the information message is related to the quality of the image acquired. However, in a scenario in which the scan quality is poor and the acquired images are not acceptable (for example, for not satisfying the threshold indicated by a setpoint, as discussed above), the Get-Grin Service would instead guide the patient to restart the scan to acquire new images.

39.   Get-Grin extols the benefits of using the Get-Grin Service as described above. For example, in the video referenced above (¶ 27), Get-Grin CEO Dr. Schulhof instructs a patient to use the Grin Scope and states:

> Many of these patients would say to me, "between my work and my social life, I don't have the time to come to an orthodontist every month." And that was when I really understood that I need to be able to give patients solutions that fit much more comfortably within their lifestyle. And that's how Grin was born.
>
> So what we're actually going to do is we're going to use Grin so that even when you're not here, we're able to actually communicate back and forth and see exactly what's going on in your mouth.
>
> The Grin Scope is an innovative new device that attaches to their mobile phone and allows the orthodontist to be able to see into their mouth in a way that we never could have done before remotely.

Attach this to your phone just like that. And then we're now going to be able to use this to look into your mouth. The magic behind Grin is in the software side.

Every week the app would ping the patient and say it's time for your next scan.

40.   Additionally, the document entitled "Why Grin" that Get-Grin distributed at the OrthoPreneurs Summit in Denver during October 7-10, 2021, touts the benefit of the Get-Grin Service as including:

- Seamless 2-way communication with care team

- Innovative one-piece Grin Scope device

- Easy to use platform for both doctor and patient, designed by Orthodontists for Orthodontists

- Full patient self-scan visibility including intraoral occlusal views

- Straightforward and scalable pricing that works for every practice

41.   Furthermore, the document entitled "Grin Remote Monitoring" that Get-Grin distributed at the OrthoPreneurs Summit in Denver during October 7-10, 2021 asserts:

Invite your patients to start remote monitoring: viewing patient scans, and communicating remotely.

Grin offers a scalable Remote Monitoring solution that directly addresses your challenges as a clinician and the needs of your patients. Accessible and remote orthodontic care is now made possible with Grin.

The Grin Remote Monitoring Platform provides excellent intraoral visibility, allowing doctors to virtually see into a patient's mouth as if they were seated for an in-person appointment. Stay connected to your patients and monitor their treatment from anywhere, anytime.

Convenient for you and your patients.

Patient benefits:

Safe and effective

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Convenient – fewer office visits

Easy scheduling

Can reduce treatment time

Cost effective

Stay connected to your care team at all times

Doctor benefits:

Increases your revenue

Boosts your practice efficiency

Reduces overhead, chairtime and & PPE costs

Expands your reach

Keeps you connected & at the center of your patient's remote treatments plans

Improves your patient's oral health & ensures compliance

CLAIMS FOR PATENT INFRINGEMENT

42.   The allegations provided below are exemplary and without prejudice to Plaintiff's infringement contentions provided pursuant to the Court's scheduling order and local rules.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 11,314,983

43.   Plaintiff incorporates by reference the allegations set forth in paragraphs 1 through 41 as though fully set forth herein.

44.   The use of Get-Grin's devices and services, as exemplified by but not limited to the AI-enhanced Scan Guide, AI Scan Summary, the Grin Scope, the Grin App and Grin Server, and services utilizing these (the "Get Grin Devices and Services"), to acquire images of a patient's dental arches and to analyze them is covered by one or more of the claims of the '983 patent. The

Get Grin Devices and Services meet each and every limitation of at least claims 12-14 of the '983 patent (see paragraphs 22-35).

45. Get-Grin's commercial manufacture, use, marketing, sale, and/or offer for sale of the Get Grin Devices and Services in the United States directly infringes one or more claims of the '983 patent under 35 U.S.C. § 271(a). Get-Grin conditions alleged benefits of the Get Grin Devices and Services, such as those mentioned above (¶¶ 39-41), on patients, dentists, orthodontists, clinics, healthcare professionals, and/or other end users performing method steps recited in one or more claims of the '983 patent.

46. The foregoing actions by Get-Grin constitute direct infringement of the '983 patent under 35 U.S.C. § 271(a).

47. The claim chart below exemplifies Get-Grin's infringement of claim 12 of the '983 patent based on information currently available to the Plaintiff:

Claim 12 of the '983 patent	Get Grin Devices and Services
A method for analyzing an image, called 'analysis image', of a dental arch of a patient, method comprising the following steps:	A patient guide available on Get-Grin's website states, for example, that the patient should download the Grin App and use the Grin scope by attaching the patient's cell phone to it and then following self-scan instructions:

Claim 12 of the '983 patent	Get Grin Devices and Services
	Self-Scan When you start a scan in the App, you will be guided to turn your phone horizontally. Then, stand in front of a mirror and place the scope in your mouth to complete your scan.

Source: "Get Started Self Scanning with the Grin Remote Monitoring App," *available at* https://get-grin.com/wp-content/uploads/2020/10/Patient-How-To.pdf (last accessed May 16, 2022)

A YouTube video depicting usage of a Grin scope shows images of dental arches taken during such a scan:

and keep your bite closed.

Source: *Orthodontia Goes Remote During Covid-19*, BLOOMBERG.COM (Nov. 19, 2020), *available at* https://www.bloomberg.com/news/videos/2020-11-19/orthodontia-goes-remote-during-covid-19-video (last accessed May 16, 2022)

A page on Get-Grin's website states that images from the patient's self-scan are analyzed to identify the five optimal Grin scope positions of the dental arches in the patient's mouth:

> The AI-enhanced Scan Guide augments the Grin Scope and self-scan process to create the most comprehensive orthodontist-ready video of a patient's mouth. This is achieved by using computer vision and machine learning (ML) algorithms to identify the five optimal Grin Scope positions required by care teams for an examination. While patients now scan from their home, the technology alerts users when

Claim 12 of the '983 patent	Get Grin Devices and Services
	the scope is capturing an ideal angle, and informs patients when to continue with their scan. With patient scan accuracy improving, these inputs create optimal conditions for AI to be used in the Grin doctor webapp. In addition to doctors receiving a 34 second scan provided by patients, Grin AI technology ingests the video and automatically extracts the five scan moments from each major jaw position: front, lower, upper, left, and right. Grin then creates images out of these ideal moments and displays them for doctors to view. While doctors may choose to view the entire video, they now have AI highlighting the most advantageous angle. Source: "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries" (Nov. 18, 2021), *available at* https://get-grin.com/blog/grin-smart-scans-utilize-ai/ (last accessed May 16, 2022)
acquisition, with a cellphone, by the patient, of the analysis image, the analysis image being a photograph or an image taken from a film, and representing the dental arch of the patient,	See above entry in this chart.
submission of the analysis image to a neural network, in order to determine at least a value of an image attribute relating to the analysis image said method also comprising the following steps:	See above entries in this chart. Additionally, the page on Get-Grin's website states that Get-Grin implements deep-learning in analyzing images: [. . .] Grin's suite of Remote Monitoring and Consultation capabilities now benefit from advanced AI technology that enriches patient experiences and accuracy, doctor insights, and practice efficiencies. The Grin AI Scan Guide is the first real-time scan system designed to improve the quality of a patient's mouth scan. the AI Scan Summary uses deep-learning to automatically select the best intraoral visuals

Claim 12 of the '983 patent	Get Grin Devices and Services
	from patients so doctors can determine treatment priorities. Source: "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries" (Nov. 18, 2021), *available at* https://get-grin.com/blog/grin-smart-scans-utilize-ai/ (last accessed May 16, 2022)
1') creation of a learning base comprising more than 1000 images of dental arches, or 'historical images', each historical image comprising an attribute value for at least one image attribute, or 'image attribute value';	See above entry in this chart. *See supra* ¶¶ 33-34.
2') training of at least one deep learning device, by means of the learning base;	See above entry in this chart. *See supra* ¶¶ 33-34.
3') submission of the analysis image to the deep learning device for it to determine, for said analysis image, at least one probability relating to said image attribute value, and determination, as a function of said probability, of a value for said image attribute for the analysis image.	See above entry in this chart. *See supra* ¶¶ 33-35.

48.   Plaintiff has been and will be damaged as a result of Get-Grin's infringing conduct.

COUNT II
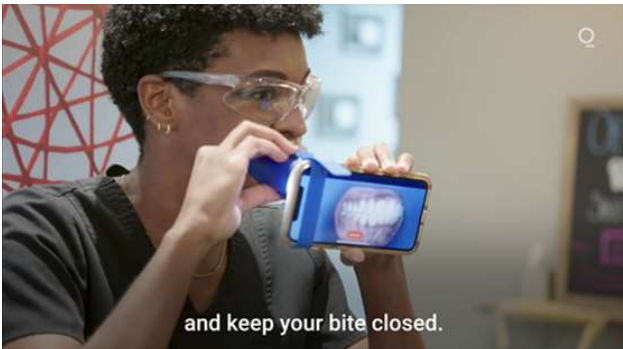## INFRINGEMENT OF U.S. PATENT NO. 10,755,409

49.   Plaintiff incorporates by reference the allegations set forth in paragraphs 1 through

41 as though fully set forth herein.

50.   The use of Get-Grin's devices and services, as exemplified by but not limited to the Get Grin Devices and Services, to acquire images of a patient's dental arches and to analyze them is covered by one or more of the claims of the '409 patent. The Get Grin Devices and Services meet each and every limitation of at least claims 1, 7, 11, 13-15 of the '409 patent (see paragraphs 22-38).

51.   Get-Grin's commercial manufacture, use, marketing, sale, and/or offer for sale of the Get Grin Devices and Services in the United States directly infringes one or more claims of the '409 patent under 35 U.S.C. § 271(a). Get-Grin conditions alleged benefits of the Get Grin Devices and Services, such as those mentioned above (¶¶ 39-41), on patients, dentists, orthodontists, clinics, healthcare professionals, and/or other end users performing method steps recited in one or more claims of the '409 patent. The foregoing actions by Get-Grin constitute direct infringement of the '409 patent under 35 U.S.C. § 271(a).

52.   The claim chart below exemplifies Get-Grin's infringement of claim 1 of the '409 patent based on information currently available to the Plaintiff:

Claim 1 of the '409 patent	Get Grin Devices and Services
A method for acquiring an image of a dental arch of a patient, said method comprising the following steps:	A patient guide available on Get-Grin's website states, for example, that the patient should download the Grin App and use the Grin scope by attaching the patient's cell phone to it and then following self-scan instructions: **1 Download the Grin App** Download the Grin App using the email sent from your specialist, or with the QR code to the right.

Claim 1 of the '409 patent	Get Grin Devices and Services

Source: "Get Started Self Scanning with the Grin Remote Monitoring App," *available at* https://get-grin.com/wp-content/uploads/2020/10/Patient-How-To.pdf (last accessed May 16, 2022)

A YouTube video depicting usage of a Grin scope shows images of dental arches taken during such a scan:

Source: *Orthodontia Goes Remote During Covid-19*, BLOOMBERG.COM (Nov. 19, 2020), *available at* https://www.bloomberg.com/news/videos/2020-11-19/orthodontia-goes-remote-during-covid-19-video (last accessed May 16, 2022)

A page on Get-Grin's website states that images from the patient's self-scan are analyzed to identify the five optimal Grin scope positions of the dental arches in the patient's mouth: |

Claim 1 of the '409 patent	Get Grin Devices and Services
	The AI-enhanced Scan Guide augments the Grin Scope and self-scan process to create the most comprehensive orthodontist-ready video of a patient's mouth. This is achieved by using computer vision and machine learning (ML) algorithms to identify the five optimal Grin Scope positions required by care teams for an examination. While patients now scan from their home, the technology alerts users when the scope is capturing an ideal angle, and informs patients when to continue with their scan. With patient scan accuracy improving, these inputs create optimal conditions for AI to be used in the Grin doctor webapp. In addition to doctors receiving a 34 second scan provided by patients, Grin AI technology ingests the video and automatically extracts the five scan moments from each major jaw position: front, lower, upper, left, and right. Grin then creates images out of these ideal moments and displays them for doctors to view. While doctors may choose to view the entire video, they now have AI highlighting the most advantageous angle. Source: "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries" (Nov. 18, 2021), *available at* https://get-grin.com/blog/grin-smart-scans-utilize-ai/ (last accessed May 16, 2022)
activation of an image acquisition apparatus so as to acquire an image, called "analysis image", of said arch;	See above entry in this chart.
analysis of the analysis image by means of a deep learning device trained by means of a learning base;	See above entries in this chart. Additionally, the page on Get-Grin's website states that Get-Grin implements deep-learning in analyzing images: [. . .] Grin's suite of Remote Monitoring and Consultation capabilities now benefit from advanced AI technology that enriches patient experiences and accuracy, doctor insights, and practice efficiencies. The Grin AI Scan Guide

Claim 1 of the '409 patent	Get Grin Devices and Services
	is the first real-time scan system designed to improve the quality of a patient's mouth scan. the AI Scan Summary uses deep-learning to automatically select the best intraoral visuals from patients so doctors can determine treatment priorities. Source: "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries" (Nov. 18, 2021), *available at* https://get-grin.com/blog/grin-smart-scans-utilize-ai/ (last accessed May 16, 2022)
determination, for the analysis image, as a function of the results of the analysis in the preceding step, of a value for an image attribute;	See above entries in this chart. *See supra* ¶¶ 33-36.
comparison of said image attribute value with a setpoint;	See above entries in this chart. *See supra* ¶¶ 33-36.
sending of an information message as a function of said comparison, the information message being related to the quality of the image acquired or to the position of the acquisition apparatus in relation to said arch or to the setting of the acquisition apparatus or to the opening of the mouth or to the wearing of a dental appliance, or to a combination thereof,	See above entries in this chart. Additionally, the page on Get-Grin's website indicates that Get-Grin alerts the patient regarding the scan: The AI-enhanced Scan Guide augments the Grin Scope and self-scan process to create the most comprehensive orthodontist-ready video of a patient's mouth. This is achieved by using computer vision and machine learning (ML) algorithms to identify the five optimal Grin Scope positions required by care teams for an examination. While patients now scan from their home, the technology alerts users when the scope is capturing an ideal angle, and informs patients when to continue with their scan. Source: "Grin Smart Scans Utilize AI for Precision Scanning & Intelligent Treatment Summaries" (Nov. 18, 2021), *available at* https://get-grin.com/blog/grin-smart-scans-utilize-ai/ (last accessed May 16, 2022)

Claim 1 of the '409 patent	Get Grin Devices and Services
	Additionally, the YouTube video discloses that the Grin App directs a patient to move the scope around in the patient's mouth during a scan: Move slowly all the way to the right, and keep your bite closed. Now move slowly all the way to the left, while keeping your bite closed. Well done, scan complete. Source: *Orthodontia Goes Remote During Covid-19*, BLOOMBERG.COM (Nov. 19, 2020), *available at* https://www.bloomberg.com/news/videos/2020-11-19/orthodontia-goes-remote-during-covid-19-video (last accessed May 16, 2022)
to check whether the analysis image respects the setpoint and, if it does not respect the setpoint, to guide the operator in order for him or her to acquire a new analysis image.	See above entries in this chart. *See supra* ¶ 38.

53.   Plaintiff has been and will be damaged as a result of Get-Grin's infringing conduct.

JURY DEMAND

54.   Dental Monitoring demands a jury trial as to all issues that are triable by a jury in this action.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully prays for relief against Get-Grin as follows:

(a)   For judgment that Get-Grin has directly infringed and continues to directly infringe one or more claims of the '983 patent;

(b)   For judgment that Get-Grin has directly infringed and continues to directly infringe one or more claims of the '409 patent;

(c)   For an order permanently enjoining Get-Grin's infringing acts;

(d)   For an accounting of all damages sustained by Plaintiff as a result of Get-Grin's infringing activities;

(e)   For actual damages in an amount according to proof, and in any event no less than a reasonable royalty, together with prejudgment interest;

(f)   For an award of attorneys' fees and costs pursuant to 35 U.S.C. § 285 or as otherwise permitted by law;

(g)   Costs and expenses; and

(h)   For such other and further relief that the Court deems just and proper.

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May 16, 2022

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