#### IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF OHIO EASTERN DIVISION

ELECTRONIC SCRIPTING PRODUCTS, INC.,

Civil Action No.: 1:23-cv-01232

Plaintiff,

TRIAL BY JURY DEMANDED

v.

KICHLER LIGHTING LLC,

Defendant.

#### **COMPLAINT FOR PATENT INFRINGEMENT**

Comes now Plaintiff, ELECTRONIC SCRIPTING PRODUCTS, INC. ("ESPi"), and for its Complaint against Defendant KICHLER LIGHTING LCC ("KICHLER"), alleges as follows:

## THE PARTIES

- 1. ESPi is a company organized under the laws of the State of Delaware, having its registered business address located at 446 Old County Road, Suite 201, Pacifica, CA 94044 and its mailing address at 555 Bryant Street #142, Palo Alto, CA 95301.
- 2. On information and belief, KICHLER is a limited liability company organized under the State of Delaware with its principle place of business located at 30455 Solon Road, Solon, OH 44139. Upon information and belief KICHLER may be served with process c/o CT Corporation System, 4400 Easton Commons Way, Suite 125, Columbus, OH 43219.

## JURISDICTION AND VENUE

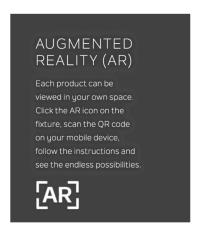
3. This is an action for patent infringement in violation of the Patent Act of the United States, 35 U.S.C. §§ 1 *et seq*.

- 4. This Court has original and exclusive subject matter jurisdiction over the patent infringement claims for relief under 28 U.S.C. §§ 1331 and 1338(a).
- 5. This Court has personal jurisdiction over KICHLER because it maintains a regular and established place of business in this District. On information and belief, KICHLER has transacted and is continuing to transact business in this District that includes, but is not limited to, committing acts of patent infringement giving rise to this action by use and sale of products and systems that practice the subject matter claimed in the patent involved in this action.
- 6. Venue is proper in this district under 28 U.S.C. § 1400(b) because KICHLER has a regular and established place of business in this District. Upon information and belief, KICHLER has committed acts of infringement in this district.

#### **FACTS**

- 7. On January 29, 2019, United States Patent No. 10,191,559 B2 entitled "Computer Interface For Manipulated Objects With An Absolute Pose Detection Component" was duly and legally issued. A true and correct copy of United States Patent No. 10,191,559 B2 ("the '559 Patent") is attached hereto as Exhibit A and incorporated herein by this reference.
- 8. Plaintiff is the assignee of the entire right, title and interest in and to the '559 Patent, including all rights to enforce the '559 Patent and to recover for infringement.
  - 9. Claim 1 of the '559 Patent claims:
  - 1. A manipulated object cooperating with a first plurality of high optical contrast features disposed in a real three-dimensional environment, said manipulated object comprising:
  - a) a photodetector configured to detect said first plurality of high optical contrast features and generate photodetector data representative of the positions of said first plurality of high optical contrast features;
  - b) a controller configured to identify a derivative pattern of said first plurality of high optical contrast features from said photodetector data, wherein said derivative pattern is indicative of the position of said photodetector; and

- c) at least one component selected from the group consisting of an auxiliary motion detection component, an active illumination component and a scanning component.
- 10. On information and belief, KICHLER infringes Claim 1 of the '559 Patent by making, using, selling and/or offering to sell in the United States, including in this District, through its augmented reality that it offers to view its products ("Accused Products"). Specifically:



## 11. KICHLER infringes each element of Claim 1 as follows:

"A manipulated object cooperating with a first plurality of high optical contrast features disposed in a real three-dimensional environment, said manipulated object comprising:"

— To the extent that the preamble is included in an infringement analysis, below demonstrates the various elements -- KICHLER uses as manipulated object a mobile device such as an iPhone or an Android phone.



The device cooperates with high contrast features in the real three-dimensional environment:



In cases where KICHLER uses an iPhone the Apple ARKit or equivalent looks for features:

scene visible to the device's camera. ARKit recognizes notable features in the scene image, tracks differences in the positions of those features across video frames, and compares that information with motion sensing data. The result is a high-precision model of the device's position and motion.

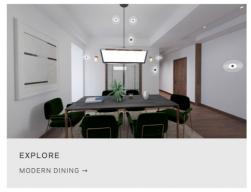
In cases where KICHLER uses an Android phone, the Google ARCore or equivalent looks for features:

ARCore is constantly improving its understanding of the real world environment by detecting feature points and planes.

"a) a photodector configured to detect said first plurality of high optical contrast features and generate photodetector data representative of the positions of said first plurality of high optical contrast features;" – KICHLER uses a camera of an iPhone or Android phone as the photodector to detect the high optical contrast features and generate data representative of the positions of these features:



"b) a controller configured to identify a derivative pattern of said first plurality of high optical contrast features from said photodetector data, wherein said derivative pattern is indicative of the position of said photodetector; and" – KICHLER uses the iPhone or Android phone processing unit(s) as controller(s) that identify the derivative pattern and this derivative pattern is indicative of the position of the photodetector here by the phone's camera:



- "c) at least one component selected from the group consisting of an auxiliary motion detection component, an active illumination component and a scanning component." KICHLER uses at least one of the iPhone's or Android phone's auxiliary motion detection components such as inertial device (Inerterial Measurement Unit or IMU or motion sensing unit), using the Apple ARKit, Google ARCore.
  - 12. Similarly, KICHLER also infringes Claims 6, 7, 10, 15, 16, 19, 24, and 25.
- 13. On November 2, 2010, United States Patent No. 7,826,641 B2 entitled "Apparatus And Method For Determining An Absolute Pose Of A Manipulated Object In A Real Three-Dimensional Environment With Invariant Features" was duly and legally issued. A true and correct copy of United States Patent No. 7,826,641 B2 ("the '641 Patent") is attached hereto as Exhibit B and incorporated herein by this reference.
- 14. Plaintiff is the assignee of the entire right, title and interest in and to the '641 Patent, including all rights to enforce the '641 Patent and to recover for infringement.

#### 15. Claim 1 of the '641 Patent claims:

- 1. An apparatus for processing absolute pose data derived from an absolute pose of a manipulated object in a real three-dimensional environment, said apparatus comprising:
- a) at least one invariant feature in said real three-dimensional environment;
- b) an optical measuring means for optically inferring said absolute pose from on-board said manipulated object using said at least one invariant feature and expressing said inferred absolute pose with absolute pose data ( $\phi$ ,  $\theta$ ,  $\psi$ , x, y, z) representing Euler rotated object coordinates expressed in world coordinates ( $X_0$ ,  $Y_0$ ,  $Z_0$ ) with respect to a reference location;
- c) a processor for preparing said absolute pose data and identifying a subset of said absolute pose data; and
  - d) a communication link for transmitting said subset to an application.
- 16. On information and belief, KICHLER infringes Claim 1 of the '641 Patent by making, using, selling and/or offering to sell in the United States, including in this District, through its augmented reality that it offers to view its products ("Accused Products").

#### 17. KICHLER infringes each element of Claim 1 as follows:

"An apparatus for processing absolute pose data derived from an absolute pose of a manipulated object in a real three-dimensional environment, said apparatus comprising:" – To the extent that the preamble is included in an infringement analysis, below demonstrates the various elements: KICHLER has an apparatus for processing absolute pose data derived from an absolute pose of a manipulated object that is a mobile device such as an iOS (e.g., iPad/iPhone) or an Android device:



"a) at least one invariant feature in said real three-dimensional environment;" – KICHLER uses at least one invariant feature in the real three-dimensional environment that can include special markings such as QR codes:

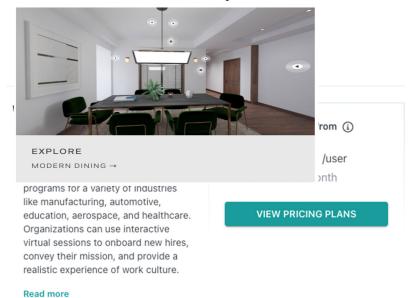


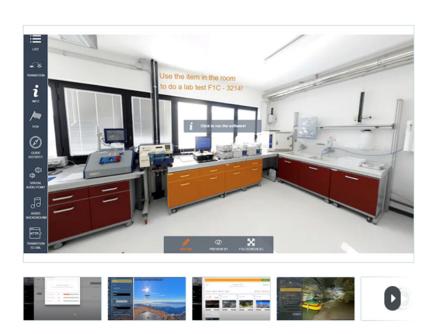
"b) an optical measuring means for optically inferring said absolute pose from on-board said manipulated object using said at least one invariant feature and expressing said inferred absolute pose with absolute pose data  $(\phi, \theta, \psi, x, y, z)$  representing Euler rotated object coordinates expressed in world coordinates  $(X_o, Y_o, Z_o)$  with respect to a reference location;" – KICHLER uses a camera of iPhone or Android phone as the optical measuring means for optically inferring said absolute pose from onboard an iPhone or an Android phone:



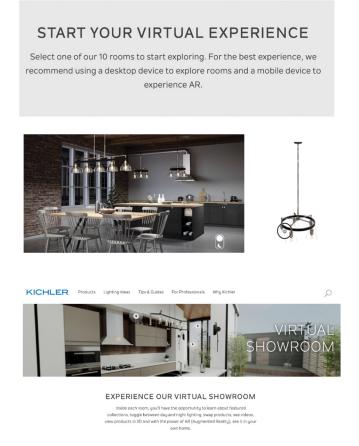
Further, it uses the at least one invariant feature and expressing the absolute pose data by rotation angles (pitch, yaw, roll) expressing the orientation and (x,y,z) expressing the position portions of the absolute pose with respect to a reference location.

"c) a processor for preparing said absolute pose data and identifying a subset of said absolute pose data; and" – KICHLER uses an iOS device's or an Android device's processing unit(s) as controller(s) for preparing the absolute pose data and identifying a subset of the absolute pose data where the subset can include all the pose data.





"d) a communication link for transmitting said subset to an application" – KICHLER uses a communication link internal to the manipulated object such as an iPhone or an Android phone for transmitting the subset to an application, e.g., a virtual showroom:



18. Similarly, KICHLER also infringes Claim 29.

## FIRST CLAIM FOR RELIEF (Direct Infringement of the '559 in Violation of 35 U.S.C. § 271(a))

- 19. ESPi refers to and incorporates herein by reference paragraphs 1-17.
- 20. The '559 Patent is valid and enforceable.
- 21. KICHLER has infringed and continues to infringe at least Claims 1, 6, 7, 10, 15, 16, 19, 24, and 25 of the '559 Patent under 35 U.S.C. 271(a), either literally or under the Doctrine of Equivalents, by making, using, selling or offering to sell the Accused Products.

- 22. KICHLER has had knowledge and notice of the '559, as well as of its own infringement of the '559, since at least the date of the filing of this Complaint.
- 23. ESPi has been and continues to be damaged by KICHLER's infringement of the '559.
  - 24. KICHLER's infringement of the '559 has been and continues to be willful.

## <u>SECOND CLAIM FOR RELIEF</u> (Inducing Infringement of the '559 Patent, in Violation of 35 U.S.C. § 271(b))

- 25. ESPi refers to and incorporates herein by reference paragraphs 1-23.
- 26. KICHLER is also liable for indirect infringement under 35 U.S.C. §271(b), because KICHLER knowingly induced and continues to induce the direct infringement of one or more of the Claims by end-users and other third parties (i.e. wholesalers, retailers, customers, etc.) in the United States.
- 27. Said-users and other third parties have directly infringed at least Claims 1, 10 and 19 of the '559 Patent by using or operating the Accused Products, in the manner for which such Accused Products were and are designed and marketed; that is when the Accused Products are used as KICHLER intends them to be used, the user and the act of usage thereof necessarily directly infringe the '559 Patent.
- 28. KICHLER knowingly took active steps to induce end-users and other third parties in the United States to engage in direct infringement of the '559 Patent since KICHLER knew that when the Accused Products are used for their intended purpose by third parties and end users, such third parties and users directly infringe the claims of the '559 Patent. For example, to induce such third parties' and users' infringement, KICHLER, on information and belief, provided, sold, or promoted the Accused Products to end-users or other third parties along with specific instructions or training regarding the use of those products, which instructions or training actively induced said

end-users and other third parties to practice one or more of the Claims and said instructions or training caused direct infringement of such Claims.

- 29. KICHLER possessed the specific intent to induce direct infringement of the Claims by end-users and other third parties which intent was manifested, inter alia, by its instructions and/or training for using the Accused Products to end users and third parties, and sale of the Accused Products to end users and third parties, and its knowledge of the '559 Patent and its knowledge that any use of the Accused Products by end-users and other third parties would necessarily directly infringe one or more of the claims of the '559 Patent.
- 30. KICHLER knew or should have known that testing, demonstrating, marketing, making, using, offering to sell, selling, and/or importing the Accused Products constituted infringement of one or more of the claims of the '559 Patent, based on, among other things, the reasons alleged in the foregoing paragraph.
- 31. By reason of the acts of KICHLER alleged herein, ESPi has suffered damage in an amount to be proved at trial.

# THIRD CLAIM FOR RELIEF (Direct Infringement of the '641 in Violation of 35 U.S.C. § 271(a))

- 32. ESPi refers to and incorporates herein by reference paragraphs 1-30.
- 33. The '641 Patent is valid and enforceable.
- 34. KICHLER has infringed and continues to infringe at least Claims 1 and 29 of the '641 Patent under 35 U.S.C. 271(a), either literally or under the Doctrine of Equivalents, by making, using, selling or offering to sell the Accused Products.
- 35. KICHLER has had knowledge and notice of the '641, as well as of its own infringement of the '641, since at least the date of the filing of this Complaint.

- 36. ESPi has been and continues to be damaged by KICHLER's infringement of the '641.
  - 37. KICHLER's infringement of the '641 has been and continues to be willful.

#### FOURTH CLAIM FOR RELIEF

(Inducing Infringement of the '641 Patent, in Violation of 35 U.S.C. § 271(b))

- 38. ESPi refers to and incorporates herein by reference paragraphs 1-36.
- 39. KICHLER is also liable for indirect infringement under 35 U.S.C. §271(b), because KICHLER knowingly induced and continues to induce the direct infringement of one or more of the Claims by end-users and other third parties (i.e. wholesalers, retailers, customers, etc.) in the United States.
- 40. Said-users and other third parties have directly infringed at least Claims 1 and 29 of the '641 Patent by using or operating the Accused Products, in the manner for which such Accused Products were and are designed and marketed; that is when the Accused Products are used as KICHLER intends them to be used, the user and the act of usage thereof necessarily directly infringe the '641 Patent.
- 41. KICHLER knowingly took active steps to induce end-users and other third parties in the United States to engage in direct infringement of the '641 Patent since KICHLER knew that when the Accused Products are used for their intended purpose by third parties and end users, such third parties and users directly infringe the claims of the '641 Patent. For example, to induce such third parties' and users' infringement, KICHLER, on information and belief, provided, sold, or promoted the Accused Products to end-users or other third parties along with specific instructions or training regarding the use of those products, which instructions or training actively induced said end-users and other third parties to practice one or more of the Claims and said instructions or training caused direct infringement of such Claims.

- 42. KICHLER possessed the specific intent to induce direct infringement of the Claims by end-users and other third parties which intent was manifested, inter alia, by its instructions and/or training for using the Accused Products to end users and third parties, and sale of the Accused Products to end users and third parties, and its knowledge of the '641 Patent and its knowledge that any use of the Accused Products by end-users and other third parties would necessarily directly infringe one or more of the claims of the '641 Patent.
- 43. KICHLER knew or should have known that testing, demonstrating, marketing, making, using, offering to sell, selling, and/or importing the Accused Products constituted infringement of one or more of the claims of the '641 Patent, based on, among other things, the reasons alleged in the foregoing paragraph.
- 44. By reason of the acts of KICHLER alleged herein, ESPi has suffered damage in an amount to be proved at trial.

#### **PRAYER FOR RELIEF**

WHEREFORE, ESPi prays for relief as follows:

- A. Judgment that KICHLER has directly infringed, and induced others to infringe, the '559 Patent either literally and/or under the doctrine of equivalents;
- B. Judgment that KICHLER has directly infringed, and induced others to infringe, the '641 Patent either literally and/or under the doctrine of equivalents;
- C. Judgment awarding ESPi general and/or specific damages, including a reasonable royalty and/or lost profits, in amounts to be fixed by the Court in accordance with proof, including enhanced and/or exemplary damages, as appropriate, as well as all of KICHLER's profits or gains of any kind from its acts of patent infringement.

- D. Judgment awarding ESPi all of its costs, including its attorneys' fees, incurred in prosecuting this action, including, without limitation, pursuant to 35 U.S.C. § 285 and other applicable law;
  - E. Judgment awarding ESPi pre-judgment and post-judgment interest; and
- F. Judgment awarding ESPi such other and further relief as the Court may deem just and proper.

### **JURY DEMAND**

Pursuant to Federal Rule of Civil Procedure 38(b), ESPi hereby demands a trial by jury on all issues triable to a jury.

Dated: June 22, 2023 Respectfully submitted,

SAND, SEBOLT & WERNOW CO., LPA

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