

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SHENZHEN LIOWN ELECTRONICS CO., LTD.,  
Petitioner,

v.

DISNEY ENTERPRISES, INC.,  
Patent Owner.

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Case IPR2016-01834  
Patent 8,727,569 B2

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Before J. JOHN LEE, WILLIAM M. FINK, and JESSICA C. KAISER,  
*Administrative Patent Judges.*

KAISER, *Administrative Patent Judge.*

DECISION  
Institution of *Inter Partes* Review  
35 U.S.C. § 314 and 37 C.F.R. § 42.108

Shenzhen Liown Electronics Co., Ltd. (“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–19 requesting an *inter partes* review of claims 1, 2, 4, 5, 17, 20, 21, 24, and 25 of U.S. Patent No 8,727,569 B2, issued on May 20, 2014 (Ex. 1001, “the ’569 patent”). Paper 2 (“Pet.”). Luminara Worldwide, LLC, acting under authority of Disney Enterprises, Inc. (collectively, “Patent Owner”), filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we grant Petitioner’s request and institute an *inter partes* review of all challenged claims.

## I. BACKGROUND

### A. The ’569 Patent (Ex. 1001)

The ’569 patent relates to “simulating a flickering flame providing kinetic light movement,” such as the simulation of a single candle flame. Ex. 1001, 1:24–30. Figure 1 of the ’569 patent is reproduced below:

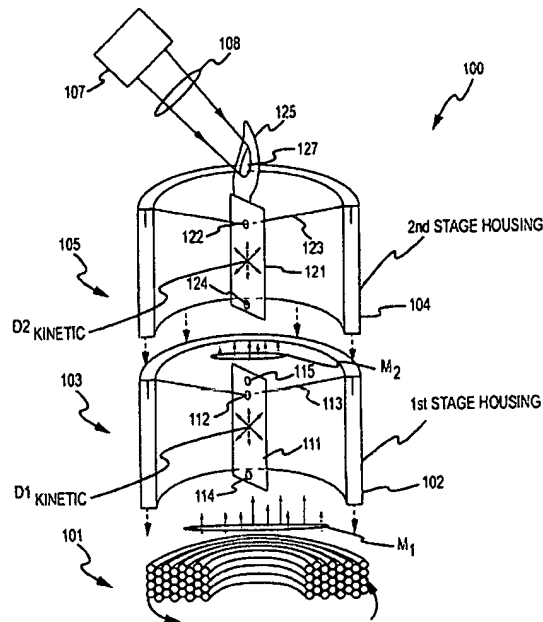


FIG.1

Figure 1 illustrates an embodiment of the kinetic flame device, in accordance with the claimed invention, resembling a conventional wax candle. Ex. 1001, 3:65–67, 5:20–25. As shown in Figure 1, coil 101 may be distributed about the central axis of the device to act upon upper and lower pendulum members 111 and 121. *Id.* at 5:33–36, 5:56–63. Specifically, energized coil 101 produces a time-varying magnetic field, which acts upon magnet 114 on lower or first-stage pendulum 111 to produce kinetic motion  $D1_{\text{Kinetic}}$ . *Id.* at 6:13–15, 6:22–27. First-stage pendulum 111 is “pivotally supported” by support 113, which may be a rod, axle, wire, or the like, and which passes through hole 112 to allow the kinetic motion about the pivot point. *Id.* at 7:14–22. The second stage 105 is similar in construction and operation to the first stage, with second-stage pendulum 121 pivotally mounted on support element 123. *Id.* at 8:66–9:13. Flame silhouette 125 extends from the top of second-stage pendulum 121 and is formed into a flame-shaped outline. *Id.* at 9:34–39. Flame silhouette 125 moves with

kinetic movement  $D2_{\text{Kinetic}}$  of second-stage pendulum 121 and is illuminated by spotlight 107. *Id.* at 10:39–48. Although Figure 1 represents a two-stage embodiment, single-stage only embodiments are also described, such as depicted in Figure 7. *Id.* at 15:26–35, Fig. 7.

*B. Illustrative Claim*

Of the challenged claims, claims 1, 20, and 24 are independent claims.

Claim 1 is illustrative of the claims at issue and is reproduced below:

1. An apparatus for simulating a flickering flame effect, comprising:
  - a housing including an interior space;
  - a pendulum member pivotally mounted within the interior space, wherein the pendulum member includes first and second ends with a flame element extending from the second end such that at least a portion of the flame element extends outwardly from the housing and wherein the pendulum member is pivotally mounted within the interior space using a pendulum support member coupled to the housing;
  - a first light source transmitting light onto the pendulum member; and
  - a drive mechanism positioned at least partially in the housing and configured to generate chaotic motion of the pendulum member in at least two dimensions; and
  - a drive circuit coupled to the drive mechanism and providing a time-varying signal to the drive mechanism that at least in part defines the chaotic motion of the pendulum member.

*Id.* at 23:42–61.

*C. Related Proceedings*

Petitioner and Patent Owner identify a related litigation in the District of Minnesota involving the '569 patent and related patents titled, *Luminara Worldwide, LLC v. RAZ Imports, Inc. et al.*, No. 15-cv-03028 (D. Minn.), consolidated with *Luminara Worldwide, LLC v. Shenzhen Liown Elecs Co. Ltd.*, Case No. 14-cv-03103 (D. Minn.). Pet. 2; Paper 4, 1. Petitioner and

Patent Owner also identify a number of *inter partes* reviews challenging related patents, and IPR2016-01835, which also challenges claims of the '569 patent. Pet. 3; Paper 4, 1–2.

*D. Level of Skill in the Art*

Petitioner contends that “[a] person of ordinary skill in the art of the 569 Patent (‘POSITA’) would have a Bachelor’s degree in mechanical engineering and 1-3 years of mechanical design experience.” Pet. 10. Patent Owner does not appear to dispute this level of ordinary skill. *See* Prelim. Resp. 9. For purposes of this decision, we adopt Petitioner’s definition of the person of ordinary skill in the art.

*E. Claim Construction*

In an *inter partes* review, claim terms in an unexpired patent are construed according to their broadest reasonable interpretation in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under that standard, claim terms are generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art, in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes constructions for two terms: “chaotic motion” and “intermittently interrupted.” Pet. 10–14. Petitioner contends that the remaining claim terms should be afforded their plain and ordinary meaning. *Id.* at 14. Patent Owner argues that the challenged claims require “chaotic pivoting,” which Patent Owner contends should be construed as “aperiodic, unpredictable behavior arising in a system that is extremely sensitive to initial conditions.” Prelim. Resp. 2–3. Below we address whether the

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