

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

REDLINE DETECTION, LLC
Petitioner,

v.

STAR ENVIROTECH, INC.
Patent Owner.

Case IPR2013-00106
Patent 6,526,808 B1

Before JENNIFER S. BISK, JAMES B. ARPIN, and BRIAN P. MURPHY,
Administrative Patent Judges.

ARPIN, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. BACKGROUND

A. *Introduction*

Redline Detection, LLC (“Petitioner”) filed a corrected petition to institute an *inter partes* review of claims 9 and 10 of Patent No. US 6,526,808 B1 (Ex. 1001; “the ’808 patent”) pursuant to 35 U.S.C. §§ 311-319 (Paper 8; “Pet.”). Star Envirotech, Inc. (“Patent Owner”) timely filed a patent owner preliminary response (Paper 13; “Prelim. Resp.”), in which it argued that the petition should be denied, among other reasons, on the equitable grounds of assignor estoppel. On July 1, 2013, we instituted a trial for claims 9 and 10 of the ’808 patent, on two grounds of unpatentability. Paper 17 (“Dec.”).

On October 1, 2013, Patent Owner filed a patent owner response (Paper 41; “PO Resp.”), and, subsequently, Petitioner filed a reply to the patent owner response (Paper 54; “Pet. Reply”). Finally, Petitioner filed a motion to exclude evidence (Paper 56), to which Patent Owner filed an opposition (Paper 60; “PO Opp. Pet. Mot. Excl.”). Petitioner then filed a reply (Paper 61) to Patent Owner’s opposition to the motion to exclude evidence.

Pursuant to requests from both parties (Papers 55 and 58), an oral hearing was held on April 1, 2014. A transcript of that oral hearing is included in the record as Paper 65 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). We issue this final written decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. We determine that Petitioner fails to show by a preponderance of the evidence that claims 9 and 10 are unpatentable. Petitioner’s motion to exclude is *denied-in-part* and otherwise *dismissed* as moot.

B. The '808 Patent

The '808 patent relates to methods for generating smoke for use in a volatile, potentially explosive environment. Ex. 1001, col. 6, ll. 44-67. In particular, the '808 patent describes methods for generating smoke, in which a flammable fluid is vaporized into smoke in an inert environment created within a closed smoke producing chamber. *Id.* at col. 2, ll. 8-13; col. 6, ll. 54-57.

A system, suitable for use in performing such methods, is illustrated in Figure 1, reproduced below:

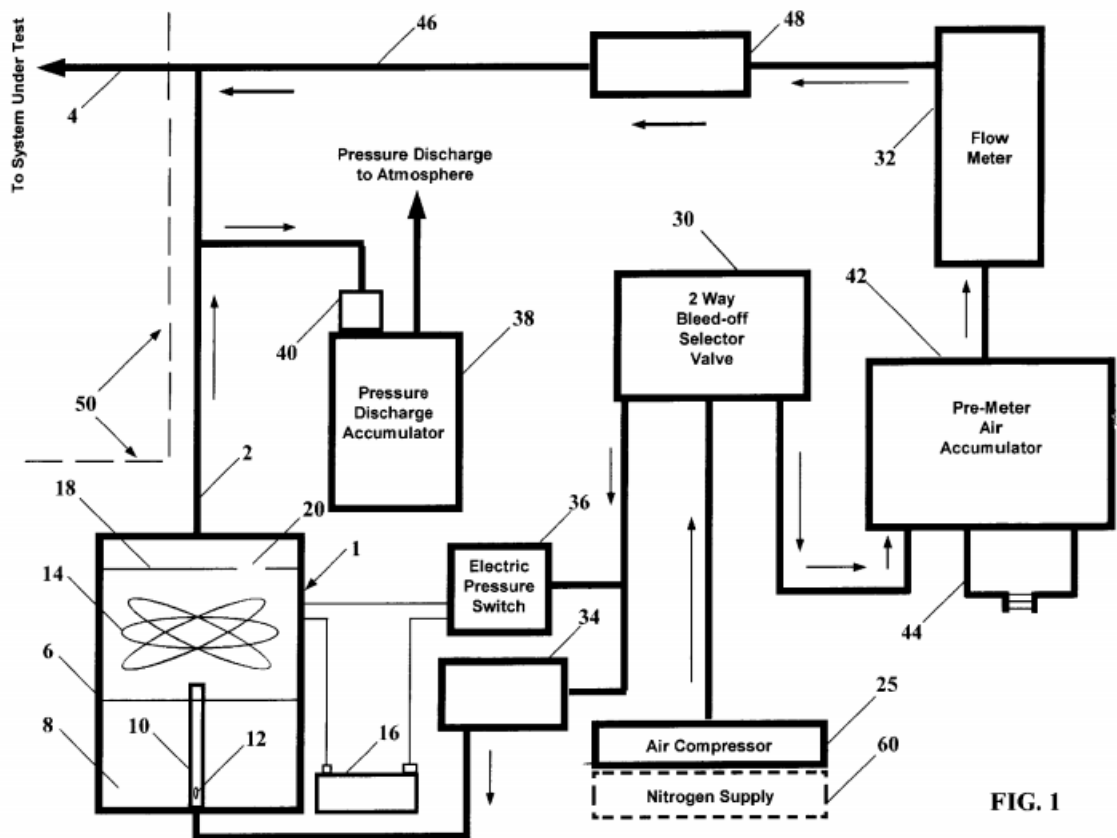


Figure 1 depicts a schematic of smoke and clean air generating apparatus 1 for verifying the presence and detecting the location of leaks in a fluid system under test. *Id.* at col. 2, ll. 62-65. Apparatus 1 comprises sealed chamber 6 containing a non-toxic oil supply 8. *Id.* at col. 3, ll. 25-27. Air inlet tube 10 projects upwardly from the bottom of chamber 6 and extends above the level of oil supply 8. *Id.* at col. 3, ll. 27-28. Chamber 6 further comprises resistor heating grid (e.g., coil) 14, as well as fluid baffle 18, having smoke outlet orifice 20. *Id.* at col. 3, ll. 32-33, 35-36. Both heating grid 14 and baffle 18 extend laterally across chamber 6, and baffle 18 is disposed above heating grid 14. *Id.* at col. 3, ll. 32-40.

In an embodiment, air from air compressor 25 may be delivered via air inlet tube 10 at a sufficient rate to cause some of the oil from oil supply 8 to be drawn through oil inlet orifice 12 into inlet tube 10. *Id.* at col. 3, ll. 41-46. The mixture of compressed air and oil then is blown upwardly and outwardly from inlet tube 10 towards and into contact with heated grid 14. *Id.* at col. 3, ll. 46-50. Upon contacting heated grid 14, the oil is vaporized instantaneously into smoke, and the rising smoke passes through orifice 20 in baffle 18 and is taken up by smoke outlet line 2. *Id.* at col. 3, ll. 50-52. Smoke from outlet line 2 may be conveyed via smoke supply line 4 to a system undergoing testing. *Id.* at col. 3, ll. 52-56.

In another embodiment,

gases *other than air* may be supplied to the air inlet tube **10** of apparatus **1** to cause a mixture of such gas and oil to be blown towards the heating grid **14**. . . . *As an alternative to pressurized air*, carbon dioxide or nitrogen gas from a pressure and flow regulated tank or bottle **60** can be used because of their non-flammable and *inert* characteristics. . . . Moreover, producing smoke with nitrogen gas rather than air would enable a variety of high pressure systems . . . *to*

be tested at high operating temperatures but without the inherent risks of explosion.

Id. at col. 6, ll. 46-67 (emphases added). Thus, the '808 patent describes at least two embodiments: one in which smoke is produced using pressurized air and another in which smoke is produced using *another* gas, such as carbon dioxide or nitrogen, *instead of air*.

C. *Prior Art Relied Upon*

Petitioner relies upon the following prior art references:

Gilliam	US 5,107,698	Apr. 28, 1992	(Ex. 1005)
Pauley ¹	GB 640,266	July 19, 1950	(Ex. 1010)
Stoyle ²	GB 1,240,867	July 28, 1971	(Ex. 1008)

APPLICATIONS FOR THE SMOKE GENERATOR (Jan. 28, 1999),
<http://www.smokemachines.com> (“the 1999 Website”) (Ex. 1013)

¹ Petitioner refers to this reference as “GB ‘266” in the petition (Pet. 4), and Patent Owner refers to this reference as “the Pauley Patent” in the patent owner preliminary response (Prelim. Resp. 15). In this decision, we refer to this reference as “Pauley” or Ex. 1010.

² Petitioner refers to this reference as “GB ‘867” in the petition (Pet. 4), and Patent Owner refers to this reference as “the Stoyle Patent” in the patent owner preliminary response (Prelim. Resp. 15). In this decision, we refer to this reference as “Stoyle” or Ex. 1008.

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