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EXAMINER	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte IOAN COSMESCU

Appeal 2018-004595
Application 11/379,406
Technology Center 3700

Before DONALD E. ADAMS, JEFFREY N. FREDMAN, ULRIKE W. JENKS, *Administrative Patent Judges.*

JENKS, *Administrative Patent Judge.*

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from Examiner's decision to reject claims 1–3, 6, 8, 10–13, 16–21, 24, and 25 as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

The Specification is directed to "[a]n automatic smoke evacuation and insufflation system for surgical procedures having a vacuum for removing

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as I.C. Medical, Inc. Appeal Br. 2.

gas, smoke, and debris from a surgical site and an insufflator for supplying gas to the body cavity of a patient." Spec., Abstract. The Specification provides that "when the smoke evacuator is activated, the insufflator will simultaneously deliver gas at the exact flow rate at which the smoke evacuator is removing gas, smoke, and debris in order to efficiently replace the gas removed by the smoke evacuator." Spec. ¶ 27.

The claims are directed to an automatic smoke evacuator and insufflation system for laparoscopic surgical systems. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. An automatic smoke evacuation and insufflation apparatus comprising:
>
> a vacuum pump for removing at least one of a gas, smoke and debris from a surgical site;
>
> an insufflator that includes a switch having a needle position for supplying a gas to a body cavity of a patient to achieve a desired pressure within the body cavity and a normal position for supplying the gas to maintain the desired pressure within the body cavity when gas is removed from the body cavity;
>
> means for automatically adjusting the insufflator to supply the gas at a same rate as the gas being removed by the vacuum pump;
>
> a first pressure sensor for sensing pressure in the patient's body cavity when the insufflator is in communication with the patient's body cavity and the insufflator switch is in the needle position;
>
> a second pressure sensor for sensing pressure in the patient's body cavity only when the insufflation switch is in the normal position and the vacuum pump and the insufflator are in communication with the patient's body cavity; and
>
> an alarm related to the second pressure sensor which is activated when a needle is used with the insufflator to supply

> gas to the patient's body cavity when the insufflator switch is in the normal mode.

Appeal Br. 16 (Claims Appendix). Independent claims 13 and 17 are similarly directed to an apparatus, also reciting the limitation "an alarm related to the second pressure sensor which is activated when a needle is used with the insufflator to supply gas to the patient's body cavity when the insufflator switch is in the normal mode." *Id.* at 17–18.

The prior art relied upon by Examiner is:

Name	Reference	Date
Kurt Semm et al., ("Semm")	US 4,676,774	June 30, 1987
James H. Goodson et al. ("Goodson")	US 4,735,603	Apr. 5, 1988
Ioan Cosmescu	US 5,199,944	Apr. 6, 1993
Gregory T. Absten	US 5,246,419	Sept. 21, 1993
Edek Milewicz	US 6,010,118	Jan. 4, 2000
Marlin O. Thurston et al., ("Thurston")	US 6,222,193 B1	Apr. 24, 2001
Theodore S. Wortrich et al. ("Wortrich")	US 6,592,543 B1	July 15, 2003
Masahide Yamaki et al. ("Yamaki")	US 2004/0030367 Al	Feb. 12, 2004
Gary Weller et al. ("Weller")	US 2006/0151568 Al	July 13, 2006

Appellant requests review of the following grounds of rejection made by Examiner:

I. Claims 1, 2, 11, 17, 18, and 24 under 35 U.S.C. § 103(a) as unpatentable over Cosmescu, Wortrich, Weller, Thurston, Semm, and Yamaki.

II. Claims 3, 10, 12, 13, 16, 19, and 25 under 35 U.S.C. § 103(a) as unpatentable over Cosmescu, Wortrich, Weller, Thurston, Semm, Yamaki, and Absten.

III. Claims 6 and 20 under 35 U.S.C. § 103(a) as unpatentable over Cosmescu, Wortrich, Weller, Thurston, Semm, Yamaki, and Milewicz.

IV. Claims 8 and 21 under 35 U.S.C. § 103(a) as unpatentable over Cosmescu, Wortrich, Weller, Thurston, Semm, Yamaki, and Goodson.

OBVIOUSNESS

Examiner has rejected all of the claims on appeal under 35 U.S.C. § 103(a) as obvious based on Cosmescu, Wortrich, Weller, Thurston, Semm, and Yamaki in combination alone, and additionally in combination with either Absten, Milewicz, and Goodson. Ans. 2–3. Appellant relies on the same arguments for all rejections, so we will consider them together. *See* Appeal Br. 13–14. Accordingly, we review the rejections by considering claim 1 alone; claims 2, 3, 6, 8, 10–13, 16–21, 24, and 25 rise or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

ISSUE

Does the preponderance of evidence support Examiner's conclusion that Appellant's claims are obvious?

FACTUAL FINDING (FF)

We agree with and adopt the findings concerning the scope and content of the prior art set forth in Examiner's Answer and the Final Office Action dated November 22, 2016 ("Final Act."). The findings of fact, reproduced below, are referenced to highlight certain pertinent evidence.

FF1 Cosmescu teaches a smoke evacuator system for laparoscopic surgery. Figure 2, reproduced below, shows a laser laparoscope and trocar.

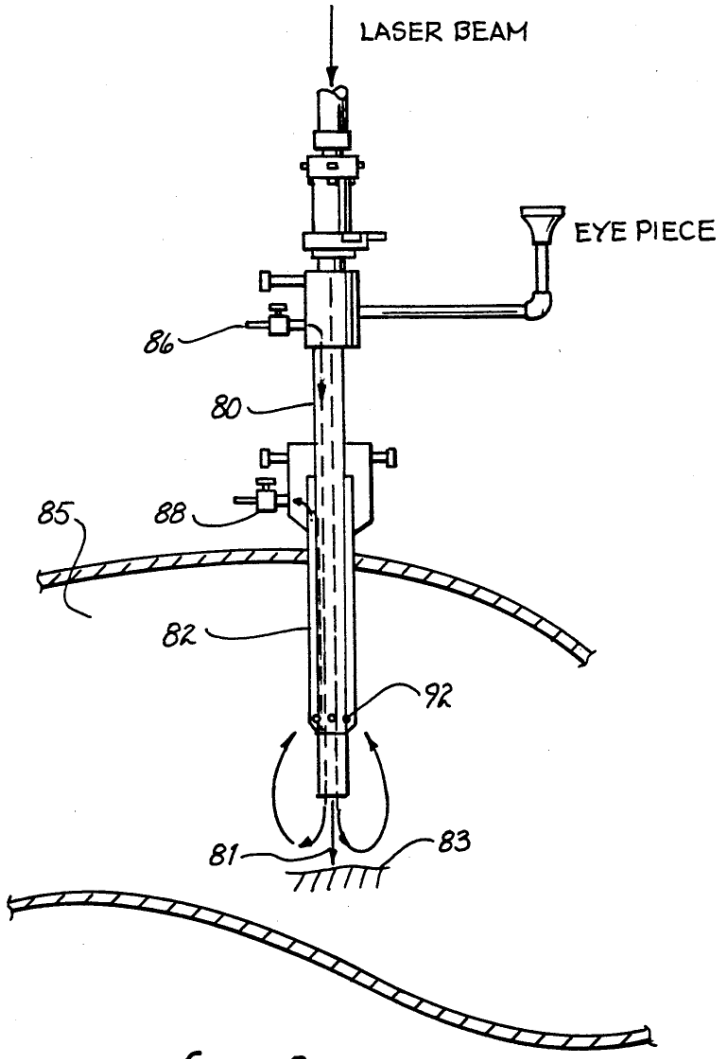

fig. 2

Figure 2 shows a laser laparoscope 80 equipped with the trocar 82. When the smoke evacuator system is activated, vacuum line presents a vacuum to stopcock 88, which draws smoke and CO_2 gas from the body cavity of the patient. This drop in pressure allows CO_2 to flow from the insufflator through stopcock 86. Cosmescu 4:44–58.

FF2 Cosmescu teaches pressure gauge 98 is positioned between valve 88 and the vacuum pump and "is used to monitor the pressure in the body cavity." Cosmescu 4:40–41, *see* Fig. 1.

FF3 Examiner finds that "a trocar distal end (described by Cosmescu) is merely a specific type of 'needle', particularly as it is used as a 'slender hollow instrument [f]or introducing material into or removing material from then body.'" Ans. 11–12.

FF4 Semm teaches an insufflation device for introducing gas into an intraabdominal cavity and measuring intraabdominal static pressure using a pressure gauge. *See* Semm 4:34–46.

FF5 Wortrich teaches using a fluid flow regulator for use in laparoscopic surgery. Wortrich, abstract. Wortrich teaches that by "simultaneously replenishing the surgical site with insufflation gas and continuously evacuating insufflation gas and/or surgical smoke" allows the pneumoperitoneum to remain at the same distended position. *Id.* at 4:17–19, *see also* 10:25–28 ("The step of replenishing 905 the surgical site with insufflation gas is performed by the insufflation device, which is preferably programmed to supply the gas at a constant rate.").

FF6 Yamaki teaches universal system controller for endoscopic surgical systems containing a plurality of devices. Yamaki ¶ 9. Yamaki teaches "display[ing] a warning message when the abdominal cavity pressure . . . departs from preset setting values." *Id.* ¶ 206.

FF7 Thurston teaches a mode selection switch for a laparoscopic probe. Thurston 8:43–48.

ANALYSIS

Examiner finds that Cosmescu teaches an insufflator containing two stopcocks that can be positioned to provide both a "needle position" and a "normal position." Final Act. 3; FF1. Examiner identifies pressure gauge 98 of Cosmescu as meeting the claimed second pressure sensor. Final Act. 3; FF2. The second pressure sensor can only sense "when stopcock (88) is in the open position and the vacuum pump and insufflator are in communication with the patient's body cavity." Final Act. 4; FF1 and FF2. Wortrich teaches that by '"simultaneously replenishing the surgical site with insufflation gas and continuously evacuating insufflation gas and/or surgical smoke' allows the pneumoperitoneum to remain at the same distended position." FF5; Final Act. 5. Examiner recognizes that Cosmescu does not teach a first pressure sensor, but finds that Semm teaches such sensor, that would "allow the system and user to confirm that the patient's body cavity pressure is in an acceptable range during operation of the insufflator." Final Act. 6; FF4. Examiner recognizes that Cosmescu does not provide an automated switch between the needle position and the normal position, but finds Thurston teaches "a well-know[n] suitable interface for selecting between modes of a surgical console." Final Act. 5; FF7.

Based on the teaching of Cosmescu in conjunction with Wortrich, Weller, Thurston, Semm, Yamaki, Examiner concludes that, at the time Appellant's invention was made, it would have been prima facie obvious

> to associate an alarm to the pressure sensor of Cosmescu, as disclosed by Yamaki, in order to display a warning message should the sensor measure a deviation from an accepted preset when the switch is in the normal position and a needle is used

> with the insufflator thereby providing communication between the pressure sensor and the patient's abdominal cavity.

Final Act. 7–8. Examiner reasons that "[s]uch an alarm would be understood to beneficially allow the user to maintain patient's safety without having to constantly manually confirm the output on the pressure sensor." *Id.* at 8. Thus, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Appellant contends that

> excessive pressure conditions within the patient's body cavity would not be detected during initial insufflation with the insufflator switch in the normal mode because the insufflator switch must be in the needle position for the first pressure sensor to detect pressure in the patient's body cavity when initial insufflation of the patient's abdomen is performed.

Appeal Br. 13.

We are not persuaded by Appellant's contention that in operation Cosmescu's normal mode could not detect excessive pressure conditions during insufflation of the patient's abdominal cavity. As Examiner explains, "while the two alarms (see Par. 46 and 55) of Appellant's disclosed invention may serve two completely different functions, Examiner submits that the distinction between these alarms is not adequately reflected by the claim language." Ans. 12; *see* Spec. ¶¶ 45–47, 55–56. "[T]here is no indication that the instant claim language was intended to read ONLY upon the alarm condition mentioned in Par. 54 and 55 as opposed to the alarm condition explicitly associated with the second pressure sensor (74) as recited in Par. 46." Ans. 13.

Claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *See In re Schreiber*, 128 F.3d 1473, 1477–78 (Fed. Cir. 1997). Where there is reason to conclude that a prior art structure is "capable of" performing a claimed function, the burden shifts to the Appellant to show that the claimed function patentably distinguishes the claimed structure from the prior art structure. *In re Hallman*, 655 F.2d 212, 215 (CCPA 1981). Examiner explains that "[t]he pressure gauge (98) [of Cosmescu] will operatively read the pressure ONLY when stopcock (88) is open, i.e. during the normal/maintenance mode and not the needle mode (as stopcock 88 is closed during the rapid distension of the needle mode, see Weller)." Ans. 8. Examiner explains that gauge 98 downstream of the stopcock 88 of Cosmescu "monitor[s] the pressure in the body cavity." *Id.*; FF2. Examiner explains that "the device of Cosmescu [is thereby capable of determining] that the abdominal pressure has deviated from a desired level [by looking at the gauge] thereby permitting a user to be warned of potential errors or unsafe scenarios which could cause to []either collapse of the abdominal cavity or a dangerous overpressurization scenario." Ans. 9.

Examiner recognizes that Cosmescu does not provide an alarm to signal overpressurization of the abdominal cavity but that limitation is taught by Yamaki. Ans. 9; FF6. "Examiner notes that the claim does not positively indicate the function of the alarm, only requiring that it be associated with the second pressure sensor and be provided for activation during a condition wherein the insufflator is in a normal mode/position and a needle is used to provide gas to the patient's body cavity." Ans. 10.

Appellant contends that the "claim language should be read in a narrowed manner so as to exclusively refer to the alarm configuration shown in paragraphs 54-55 as opposed to a more general manner." Reply Br. 5.

We are not persuaded, as Examiner explains that claim limitations are given their "broadest reasonable interpretation in a manner consistent with the specification." Ans. 13; *see In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000) ("[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification."). The broadest reasonable interpretation rule recognizes that before a patent is granted the claims are readily amended as a part of the examination process and that an applicant has the opportunity and responsibility to remove any ambiguity in claim meaning by making an amendment. *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004). "It is the *claims* that measure the invention. . . . [L]imitations from the specification are not to be read into the claims." *Sjolund v. Musland*, 847 F.2d 1573, 1582 (Fed. Cir. 1988). Here, Examiner has reasonably determined that the prior art pressure gauge 98 of Cosmescu shows a patient's peritoneal cavity pressure permitting a user to determine unsafe scenarios which could cause to either collapse of the abdominal cavity or a dangerous overpressurization scenario. *See* Ans. 9.

We are not persuaded by Appellant's contention that Thurston does not teach switches associated with an insufflation device. Appeal Br. 13. We agree with Examiner's position that one "cannot show nonobviousness by attacking references individually." Ans. 14 (citing *In re Keller*, 642 F.2d 413 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091 (Fed. Cir. 1986)).

We are also not persuaded by Appellant's contention that "Thurston (as well as all of the other references cited by the Examiner) fails to disclose the alarm element as claimed." Reply Br. 6. Here, Examiner relies on

Yamaki for teaching "display[ing] a warning message when the abdominal cavity pressure . . . departs from preset setting values." FF6; Ans. 9.

CONCLUSION

We conclude that the evidence cited by Examiner supports a prima facie case of obviousness with respect to claim 1, and Appellant has not provided sufficient rebuttal evidence that outweighs the evidence supporting Examiner's conclusion of obviousness. As Appellant does not argue the claims separately, claims 2, 3, 6, 8, 10–13, 16–21, 24, and 25 fall with claim 1. 37 C.F.R. § 41.37 (c)(1)(iv).

DECISION SUMMARY

In summary:

Claims Rejected	**35 U.S.C. §**	**Reference(s)/Basis**	**Affirmed**	**Reversed**
1, 2, 11, 17, 18, 24	103(a)	Cosmescu, Wortrich, Weller, Thurston, Semm, Yamaki	1, 2, 11, 17, 18, 24	
3, 10, 12, 13, 16, 19, 25	103(a)	Cosmescu, Wortrich, Weller, Thurston, Semm, Yamaki, Absten	3, 10, 12, 13, 16, 19, 25	
6, 20	103(a)	Cosmescu, Wortrich, Weller, Thurston, Semm, Yamaki, Milewicz.	6, 20	
8, 21	103(a)	Cosmescu, Wortrich, Weller, Thurston, Semm, Yamaki, Goodson	8, 21	
Overall Outcome			1–3, 6, 8, 10–13, 16–21, 24, 25	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED