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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KLAUS FISCHER

Appeal 2011-011008
Application 11/719,567
Technology Center 3700

Before DONALD E. ADAMS, MELANIE L. McCOLLUM, and
ERICA A. FRANKLIN, *Administrative Patent Judges*.

McCOLLUM, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to an endoscopic mucosa resection device. The Examiner has rejected the claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF THE CASE

Claims 11 and 13-22 are pending and on appeal (App. Br. 2). We will focus on independent claims 11 and 21, which read as follows:

11. A device for endoscopic mucosa resection, comprising:
a facility for endoscopic water-jet surgery comprising a nozzle for discharge of a fluid jet;

a control device for regulating the pressure with which the fluid jet is discharged from the nozzle to obtain a predetermined amount of energy;
an adjusting means for setting the pressure of the fluid jet to a first pressure value, at which the fluid jet penetrates the mucosa to lift the mucosa from underlying muscularis by formation of a fluid deposit, and to a second pressure value, different from the first pressure value, at which the fluid jet sectionally cuts through the mucosa; and
a first starting switch, wherein the adjusting means is configured to discharge a predetermined amount of fluid from the nozzle when the pressure is set to the first pressure value and the first starting switch is actuated.

21. A device for endoscopic mucosa resection, comprising:
a facility for endoscopic water-jet surgery comprising a nozzle for discharge of a fluid jet;
a control device for regulating the pressure with which the fluid jet is discharged from the nozzle to obtain a predetermined amount of energy; and
an adjusting means for setting the pressure of the fluid jet to a first pressure value, at which the fluid jet penetrates the mucosa to lift the mucosa from underlying muscularis by formation of a fluid deposit, and to a second pressure value, different from the first pressure value, at which the fluid jet sectionally cuts through the mucosa,
wherein the adjusting means has a ratio setting mechanism adapted to set a predetermined ratio of the first pressure value relative to the second pressure value.

Claims 11, 14, and 17-20 stand rejected under 35 U.S.C. § 103(a) as obvious over Yoder et al. (US 5,871,462, Feb. 16, 1999) in view of Hecker et al. (US 2001/0008961 A1, Jul. 19, 2001) (Ans. 4).

Claim 13 stands rejected under 35 U.S.C. § 103(a) as obvious over Yoder in view of Hecker and Gonon (US 6,423,027 B1, Jul. 23, 2002) (Ans. 5).

Claims 15, 16, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as obvious over Yoder in view of Hecker and Prowald (US 4,097,219, Jun. 27, 1978) (Ans. 5).

PRINCIPLES OF LAW

A claim “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The relevant question is “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.*

I

The Examiner relies on Yoder for disclosing a device comprising a facility for endoscopic water-jet surgery 40 comprising a nozzle . . . for discharge of a fluid jet, a control device for regulating the pressure 22, an adjustment means . . . for setting the pressure of the fluid jet to a first pressure value . . . and to a second pressure value, different from the first pressure value, to cut through tissue.

(Ans. 4.)

The Examiner relies on Hecker for teaching “a device having a starting switch . . . , wherein the adjusting means is configured to discharge a predetermined amount of fluid 48” (*id.*).

The Examiner concludes that it would have been obvious “to modify the device of Yoder et al. to include the switch of Hecker et al. in order to limit the quantity of fluid dispensed” (*id.*). In particular, the Examiner finds:

The limiting of fluid to a predetermined amount is a well-known means in the art to control fluid flow. The advantage of modifying the device, of Yoder, with the switch, of Hecker, is that the user will be able to control the amount of fluid delivered to the target tissue and such will result in the unnecessary waste of fluid.

(*Id.* at 7.)

The Examiner also finds that Yoder “discloses the device for surgical procedures to cut bone or tissue, or even simply wash away blood and debris” (*id.* at 4). The Examiner concludes, therefore, that it would have been obvious “to have the fluid jet at the first pressure value penetrating the mucosa to lift the mucosa from underlying muscularis and the second pressure value to sectionally cutting through the mucosa” (*id.*).

“Appellant submits that one skilled in the art would not be motivated to combine Hecker with Yoder in the manner asserted by the Examiner” (App. Br. 6). In particular, Appellant argues that “one would not be motivated to limit the quantity of fluid dispensed to a particular predetermined amount, in a device where this fluid is merely used to target the portion to be excised and has no other function” (*id.* at 7). In addition, Appellant argues that Yoder and Hecker do “not disclose, or render obvious, that ‘the fluid jet [at the first pressure value] penetrates the mucosa to lift the mucosa from underlying muscularis by formation of a fluid deposit’” (*id.* at 8).

Findings of Fact

1. Yoder discloses “a fluid jet cutting system” (Yoder, col. 1, l. 6).
2. Yoder also discloses:

The pressure and velocity of the fluid arc is selectively controllable allowing the user to pin-point a visually observable low pressure beam, having no significant cutting affect (from 10 to 1,000 p.s.i., and, preferably, about 200 p.s.i., depending on the material which is subject to cutting) on the cutting site before increasing the pressure of the fluid to within the cutting range (from 1,000 to 50,000 p.s.i. and, preferably, from 5,000 to 30,000 p.s.i., again depending on the material being cut).

(*Id.* at col. 3, ll. 10-18.)

3. In addition, Yoder discloses that “[s]elective variation of the jet stream pressure allows the surgeon to cut hard bone, soft bone, cartilage and tissue, to strip away tissue exposing underlying organs or vessels or, simply, to wash away blood and debris created by the surgical procedure” (*id.* at col. 3, ll. 47-51).

4. Hecker discloses that a “predetermined amount of the therapeutic medicament or fluid may be delivered in response to, for example, the manual operation of a switch . . . to drive a pump **48**, such as a syringe pump, which pumps into conduit **46** the desired amount of medicament or fluid” (Hecker 6, ¶ [0078]).

Analysis

Hecker discloses a switch that actuates the discharge of a predetermined amount of fluid (Finding of Fact (FF) 4). Yoder discloses “a fluid jet cutting system” and a wide range of usable pressures (FF 1-3). However, even if we assume that Yoder suggests a pressure that would penetrate the mucosa to lift the mucosa from underlying muscularis, we agree with Appellant that the Examiner has not adequately explained why one of ordinary skill in the art would have included a switch that actuates the discharge of a predetermined amount of fluid at such a pressure.

We conclude therefore that the Examiner has not set forth a prima facie case that Yoder and Hecker suggest the device of claim 11. As a result, we reverse the obviousness rejection of claim 11 and of claims 14 and 17-20, which depend from claim 11.

II

With regard to claim 13, which depends from claim 11, the Examiner relies on Yoder and Hecker as discussed above and additionally relies on Gonon (Ans. 5). However, this rejection does not rectify the deficiency in the rejection of claim 11 discussed above. We therefore also reverse the obviousness rejection of claim 13.

III

With regard to claims 15, 16, 21, and 22, the Examiner relies on Yoder and Hecker as discussed above and additionally relies on Prowald for teaching “an adjusting means for a first pressure value 9 and second pressure value 10 having a ratio setting mechanism 11” (Ans. 5-6). The Examiner concludes that it would have been obvious “to modify the device of Yoder et al. and Hecker et al. to include the ratio setting mechanism of Prowald in order to preset different first and second pressure values and provide automatic regulation of adjustable ratios” (*id.* at 6).

In addition to the arguments raised with regard to claim 11, Appellant additionally argues that Prowald does not disclose or suggest “a ‘ratio setting mechanism adapted to set a predetermined ratio of the first pressure value relative to the second pressure value” (App. Br. 9-10). In particular, Appellant argues that, “[w]hile the ratio setting mechanism of Prowald may indirectly result in control of the pressure of the two gases (as asserted by the Examiner, but which Appellant does not concede), the *predetermined ratio* is not of the *pressures* (as claimed), but the ratio of the *gases* in the mixture” (*id.* at 10).

Findings of Fact

5. Yoder discloses:

Selective variation of the jet pressure allows the surgeon to target precisely a visible low pressure stream on the portion of the bone or tissue to be excised and then to cut the bone or tissue with the already pin-pointed jet simply by increasing the jet to a higher, cutting pressure.

(Yoder, col. 4, ll. 1-5.)

6. Yoder also discloses that “[d]ials or buttons on the console allow the user to vary the parameters of the system” (*id.* at col. 4, ll. 19-20).

7. Prowald discloses “a device for the setting and automatic regulation of the mixture ratio of a gas/air mixture for industrial furnaces with two coaxially-arranged diaphragm pressure gauges, connected in opposition via a ratio setting mechanism, for the gas and the air” (Prowald, col. 1, ll. 5-10).

Analysis

Claims 15 and 16 depend from claim 11. In addition, the Examiner does not explain how Prowald rectifies the deficiency in the rejection of claim 11 discussed above. We therefore reverse the obviousness rejection of claims 15 and 16 for the same reason.

However, independent claim 21 does not require a starting switch that actuates the discharge of a predetermined amount of fluid and therefore stands on different footing. Claim 21 does, however, require:

an adjusting means for setting the pressure of the fluid jet to a first pressure value, at which the fluid jet penetrates the mucosa to lift the mucosa from underlying muscularis by formation of a fluid deposit, and to a second pressure value,

different from the first pressure value, at which the fluid jet sectionally cuts through the mucosa,

wherein the adjusting means has a ratio setting mechanism adapted to set a predetermined ratio of the first pressure value relative to the second pressure value.

Yoder discloses a device having an adjusting means for setting the pressure of the fluid jet to a first low pressure value that “allows the surgeon to target precisely a visible low pressure stream on the portion of the bone or tissue to be excised” and to a second higher pressure value “to cut the bone or tissue” (FF 5-6). However, as noted by Appellant, Yoder does not disclose that this first pressure should “effect any change to the tissue” (App. Br. 8). Thus, although Yoder may disclose pressures that would inherently penetrate the mucosa to lift the mucosa from underlying muscularis (FF 2-3), we do not agree that the Examiner has set forth a prima facie case that it would have been obvious to include a ratio setting mechanism adapted to set a predetermined ratio of a first pressure value, at which the fluid jet penetrates the mucosa to lift the mucosa from underlying muscularis, relative to a second pressure value different from the first pressure value, at which the fluid jet sectionally cuts through the mucosa.

We conclude therefore that the Examiner has not set forth a prima facie case that Yoder, Hecker, and Prowald suggest the device of claim 21. As a result, we reverse the obviousness rejection of claim 21 and of claim 22, which depends from claim 21.

SUMMARY

We reverse the rejection of claims 11, 14, and 17-20 as obvious over Yoder in view of Hecker, the rejection of claim 13 as obvious over Yoder in

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view of Hecker and Gonon, and the rejection of claims 15, 16, 21, and 22 as obvious over Yoder in view of Hecker and Prowald.

REVERSED

cdc