

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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*Ex parte* DEAN L. RHOADES

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Appeal 2007-4382  
Application 10/349,156  
Technology Center 1600

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Decided: March 25, 2008

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Before, TONI R. SCHEINER, DEMETRA J. MILLS, and ERIC GRIMES,  
*Administrative Patent Judges.*

MILLS, *Administrative Patent Judge.*

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134. The Examiner has rejected the claims for obviousness. We have jurisdiction under 35 U.S.C. § 6(b). We reverse the obviousness rejection of claim 12 and affirm all other obviousness rejections.

The following claims are representative.

1. An apparatus comprising:

a head portion;

a handle portion coupled to the head portion and suitable for gripping by a human hand, the handle portion comprising a first member extending from the head portion, and a second member coupled to the first member at an angle; and

an applicator comprising a porous mass coupled to the head portion, the porous mass having an average pore size in the range of about 40 microns to about 200 microns and having dimensions suitable for contacting localized areas of human skin.

6. The apparatus of Claim 5, wherein the intermediate portion of the second member has at least one groove formed therein, each groove to accommodate at least one human finger.

9. The apparatus of Claim 7, wherein the heating unit is capable of heating the applicator to a temperature between approximately 100 degrees Fahrenheit and approximately 120 degrees Fahrenheit.

12. The apparatus of Claim 1, further comprising:

a sonic wave generator to propagate sonic waves through the applicator.

*Cited References*

Burkardt	2,985,166	May 23, 1961
Muchisky	4,102,334	Jul. 25, 1978
Meledandri	6,006,761	Dec. 28, 1999
Sereg	6,010,268	Jan. 04, 2000

Bock

WO 97/22325 Jun. 26, 1997

*Grounds of Rejection*

1. Claims 1-4, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over Muchisky in view of Meledandri.

2. Claims 1-4, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over Sereg in view of Meledandri.

3. Claims 1-5, 7-11, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over Burkardt in view of Meledandri.

4. Claim 6 stands rejected under 35 U.S.C. § 103(a) as obvious over Burkardt in view of Meledandri and Sereg.

5. Claim 12 stands rejected under 35 U.S.C. § 103(a) as obvious over Muchisky or Sereg or Burkardt in view of Meledandri and Bock.

DISCUSSION

*Background*

The invention relates to an apparatus for skin treatment, such as microdermabrasion. (Spec. 1.)

1. Claims 1-4, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over Muchisky in view of Meledandri. We select claim 1 as representative of the rejection before us since Appellant has not separately argued the claims. 37 C.F.R. 41.37(c)(1)(vii).

The Examiner contends Muchisky teaches a massage unit having

a head portion 225 and a handle portion 36. The handle portion compris[es] a first member 217 extending from the head portion and a second member 196 coupled to the first member at an angle. The applicator pad 225 comprises a porous mass of soft material such as foam rubber or like material, column 5, lines 47-58. ...The foam rubber is an example of a soft material. Any conventional soft material can be used. The applicator pad 225 can be used to improve blood circulation in body parts such as the legs, column 6, lines 46-47. The pad is moved over the skin to massage the body.

(Ans. 3.)

Meledandri is relied on by the Examiner for also teaching

a pad that is moved over the skin. Layer 10 is one side of the pad that contacts the skin. Meledandri teaches that it can be made of many different materials one of which is foam rubber, column 4, line 19. It also can be made out of "Rubycell foams, with pore sizes in the range of from 50 to 500 pores per inch". ... Meledandri teaches that foam rubber and Rubycell foams are obvious equivalent alternative materials for pads contacting the skin. ....

(Ans. 3-4.)

The Examiner concludes that

[i]t would have been obvious to one of ordinary skill in the art to modify Muchisky to use other conventional soft plastic foam materials other than foam rubber, as suggested by Muchisky, and use Rubycell foam material as taught by Meledandri as an obvious equivalent alternative material for rubbing over the skin of the user. Rubycell foam as taught by Meledandri inherently includes the claimed pore size range ....

(Ans. 4.)

Appellant contends that, “Meledandri teaches a pore density (from 50 to 500 pores per inch) not the size of the pore. Accordingly, the Examiner has not show[n], ... where within Meledandri an average pore size in the range of about 40 microns to about 200 microns is taught or suggested.”

(Br. 19.)

In response, the Examiner finds regarding pore size that

Meledandri teaches the pore sizes begin [at] about 50 pores per inch. Assuming the pores lay contiguously along an inch line there would be 50 pores per inch. This would result in each pore having the size of  $1/50^{\text{th}}$  of an inch. In actuality there may be plastic in between each pore such that the pore size would actually be smaller. But starting with this  $1/50^{\text{th}}$  of an inch is equivalent to 508 microns. On the other end of the pore size range disclosed by Meledandri is 500 pores per inch. With the same assumption these pores would start at 50.8 microns. Therefore the range of pore sizes in microns would be from about 50.8 to 508 microns. Even tak[ing] into consideration that the pore sizes may actuality be smaller this range of pore sizes would appear to comprehend the claimed 40 to 200 microns.

(Ans. 4.)

In essence, then, Appellant argues that Meledandri’s “pores per inch” should be interpreted as pores per *square* inch (i.e., a measure of pore density), while the Examiner argues that it should be interpreted as pores per *linear* inch (i.e., a measure of pore size).

We conclude that the Examiner’s interpretation is consistent with the understanding of those skilled in the art. Meladandri specifically refers to “a pore size,” not density, in the range of 50 to 500 pores per inch (Meladandri,

col. 2, ll. 57-58). Meladandri's reference to pore size supports the Examiner's interpretation.

"Pores per inch" or "PPI" appears to be an accepted measure of pore size in the industry. "In the foam industry, pore size can have more than one definition; it can represent the size of either the diameter of the cell or a side or face of a cell. [I]t is important to understand that density and pore size are independent. . . . For example, a 10 ppi (pores per inch) foam can be made at 2 #/ft<sup>3</sup> or 4 #/ft<sup>3</sup>."<sup>1</sup> "Foam pore size defines how finely the raw material of a foam is divided. The bubble and strut structural shape is always constant, but a 5 pore per inch (PPI) will visually appear more open and course than a 40 or 100 PPI foam. Accordingly, the foam pore size directly affects nominal ligament length and cross section size, and *pore diameter*."<sup>2</sup> [Emphasis added.]

While Appellant argues that Meledandri teaches pore density and not pore size, this runs counter to the understanding that pore size is actually mentioned in Meledandri and represents the size of the diameter of a pore or cell and is measured in the art by pores per inch. Appellant has not rebutted the calculations and argument of the Examiner concerning Meledandri's teaching of pore size in terms of pores per inch and that the pending claims read on the prior art pore size.

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<sup>1</sup> [www.foamex.com/ftpWs/pdf/Polyurethane Foam The Cinderella Story.pdf](http://www.foamex.com/ftpWs/pdf/Polyurethane%20Foam%20The%20Cinderella%20Story.pdf), p. 6.

<sup>2</sup> [www.ergaerospace.com/foamproperties/introduction.htm](http://www.ergaerospace.com/foamproperties/introduction.htm), p. 2.

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The rejection is affirmed. Since Appellant has not had a fair opportunity to address all of the evidence we have relied on, we designate the affirmance a new ground of rejection under 37 C.F.R. § 41.50(b).

2. Claims 1-4, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over Sereg in view of Meledandri. We select claim 1 as representative of the rejection before us since Appellant has not separately argued the claims. 37 C.F.R. 41.37(c)(1)(vii).

According to the Examiner Sereg teaches a sponge applicator device with

a head portion 14 and a handle portion 12 with the handle portion including a first member 22 and a second member 20 coupled to the first member at an angle. Sereg also teaches using foam plastic material, col. 3, ll 39-57. The specific type of foam used is dependent on practical considerations of intended use. Any conventional foam plastic material would have been an obvious equivalent alternative material dependent on intended use.

(Ans. 4-5.) “One of the features of Sereg's apparatus is that the foam pad is replaceable with different pads having different physical characteristics dependent on the desired intended use.” (Ans. 5.)

Meledandri teaches a pad for cosmetic purposes as discussed herein. Pad 10 of Meledandri is for contacting localized areas of human skin and can be made of a polyester foam material just as the pad of Sereg. (Ans. 5.) “Another example of foam pad material Meledandri teaches is the Rubycell foam material as noted above.” (Ans. 5.)

The Examiner concludes

[i]t would have been obvious to one of ordinary skill in the art to modify Sereg to use a specific type of foam plastic such as Rubycell foam as taught by Meledandri so the device can be used for cosmetic purposes.

(Ans. 5.)

Appellant again argues that Meledandri teaches pore density and not the size of the pore. (Br. 19.) Appellant further argues the Examiner has failed to provide a sufficient motivation for combination of the cited references. (Br. 19.) Appellant particularly argues that Sereg teaches a sponge applicator suitable for applying paint treatments to cars or dressing tires (Br. 20) and that one of ordinary skill in the art viewing the teachings of Sereg would not be motivated to combine the device of Sereg with the cosmetic pad of Meledandri. (Br. 20.)

With respect to pore size Appellant has not rebutted the calculations and argument of the examiner concerning Meledandri's teaching of pore size in terms of pores per inch. Nor are we persuaded by Appellant's argument as to lack of motivation to combine the cited references. Sereg clearly states that its sponge applicator is "well suited for a wide variety of applications." (Sereg, col. 1, ll. 10-11.)

"In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. . . . [A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741-42 (2007).

“[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 127 S.Ct. at 1740 (quoting *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, (1976). “[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious,” the relevant question is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* In view of the above we find that Sereg discloses a sponge applicator for a wide variety of applications and further agree with the examiner that any conventional foam, including the Rubycell foam for cosmetic application described in Meledandri would have been an obvious equivalent alternative to the foam of Sereg.

The substitution of one foam pad for another yields no more than one would expect from such an arrangement, with the foam pad performing the function it had been known to perform.

We do not find Appellant has put forth sufficient argument or evidence to rebut the examiner’s prima facie case of obviousness and the rejection is affirmed. Again, however, we designate the affirmance a new ground of rejection to give Appellant a fair opportunity to address the evidence we rely on regarding pore sizes measured in pores per inch.

3. Claims 1-5, 7-11, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over Burkardt in view of Meledandri. We select claims 1 and 9 as representative of the rejection before us since Appellant has not separately argued other claims separately. 37 C.F.R. 41.37(c)(1)(vii).

According to the Examiner Burkardt teaches a massaging device having

a head portion 69-73, a handle portion having a first member 13 extending from the head and a second member 11 coupled to the first member 13 at an angle. Burkardt also teaches an absorbent pad 73. While Burkardt appears silent with regard to the exact pore size of the pad such would have been obvious to use any conventional foam plastic pad dependent on specific intended use.

(Ans. 5.)

As noted above, the Examiner again relies on Meledandri for teaching an absorbent foam pad that comprehends the claimed pore sizes. (Ans. 5-6.) The Examiner concludes, “[i]t would have been obvious to one of ordinary skill in the art to modify Burkardt to use a specific pad material as taught by Meledandri as an obvious equivalent alternative material to complete the details of Burkardt.” (Ans. 6.)

Appellant puts forth similar argument with the respect to the teachings of Meledandri and pore size as made with respect to the previous rejections. We are not persuaded by Appellant’s argument for the reasons previously discussed. The rejection of claims 1-5, 7-8, 10-11, 13 and 14 is affirmed, but designated a new ground of rejection for the reasons discussed above.

With respect to separately argued claim 9, Burkhardt teaches a massaging device having a heater in which temperatures employed may be above body temperature to 180°F (Burkhardt, col. 3, ll. 38-40; Ans. 6.)

Appellant argues that his optimal temperature is 100°F to 120°F, and this is at least 60 degrees below the preferred temperature of around 180°F taught by Burkardt. (Br. 22.)

We are not persuaded by Appellant's argument. Burkardt clearly describes a heating range between body temperature (98.6°F) and 180°F, (Burkardt, column 3, lines 38-40; Ans. 6). A heater capable of heating to 180°F is also "capable of heating the applicator to a temperature between approximately 100 degrees Fahrenheit and approximately 120 degrees Fahrenheit," as recited in claim 9. The rejection of claim 9 is affirmed, but is also designated a new ground of rejection.

4. Claim 6 stands rejected under 35 U.S.C. § 103(a) as obvious over Burkardt in view of Meledandri and Sereg.

Sereg teaches a sponge applicator device having a handle portion which is grooved 18 to accommodate at least one human finger. (Ans. 6.) The Examiner finds it would have been obvious to one of ordinary skill in the art to further modify Burkardt to include grooves as taught by Sereg to better grip the device during use. (Ans. 6.)

Appellant puts forth similar argument with the respect to the teachings of Meledandri and pore size as made with respect to the previous rejections. We are not persuaded by Appellant's argument for the reasons previously discussed. The rejection of claim 6 is affirmed, but again is designated a new ground of rejection.

5. Claim 12 stands rejected under 35 U.S.C. § 103(a) as obvious over Muchisky or Sereg or Burkardt in view of Meledandri and Bock.

Burkardt discloses a vibratory massage instrument for cleansing and conditioning the skin by promoting exudation of liquids from the pores

(Burkardt, col. 1, ll. 15-20), but appears silent with regard to what the frequency of the vibrations are produced by the massaging device. (Ans. 6.) Bock teaches a device using sonic and ultrasonic frequencies applied to the skin to apply therapeutic agents to the skin. (Ans. 6; Bock 1: 5-24.) The Examiner concludes that it would have been obvious to one of ordinary skill in the art to further modify the massaging device of Burkardt to use frequencies in the sonic and ultrasonic range as taught in the cosmetic device of Bock in order to achieve the desired results for a particular user. (Ans. 6.)

Appellants argue that one of ordinary skill in the art viewing the cited references would not have been motivated to modify Muchisky, Sereg, Burkardt and Meledandri, which disclose extracting impurities from skin, loosening bronchial secretions and paint treatments for cars, to incorporate sonic frequencies as taught by Bock which act to drive agents into the underlying tissue layer of skin. (Br. 26.)

In making an obviousness determination over a combination of prior art references, it is important to identify a reason why persons of ordinary skill in the art would have attempted to make the claimed subject matter. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). When making such a determination, the scope of the prior art and level of ordinary skill must be considered. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

The Examiner argues that Bock is cited to teach the conventional use of sonic and ultrasonic frequencies for cosmetic applications. (Ans. 10.) We agree with Appellant and do not find the Examiner has provided a sufficient reason, suggestion or motivation that it would have been obvious to modify a massaging device such as those of Burkardt and Muchisky, or

the sponge applicator device of Sereg, to provide ultrasonic frequencies, or to modify the cosmetic applicator pad of Meledandri to provide ultrasonic frequencies in view of the cosmetic applicator for delivering therapeutic agents to the skin disclosed in Bock. We do not find the Examiner's rationale of conventional use of sonic and ultrasonic frequencies for cosmetic applications to be convincing, especially in view of Burkardt's use of vibration to remove exudates from the skin in view of Bock's contrary use, to apply therapeutic agents to the skin.

The rejection of claim 12 is reversed.

#### SUMMARY

The rejections of the claims 1-11, 13 and 14 for obviousness are affirmed but designated new grounds of rejection. The rejection of claim 12 for obviousness is reversed.

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

#### TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

REVERSED-IN-PART, 37 C.F.R. § 41.50(b)

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