

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

---

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

---

*Ex parte JACK L. ARBISER*

---

Appeal 2007-0281  
Application 10/444,073  
Technology Center 1600

---

HEARD February 6, 2007

---

Before SCHEINER, GRIMES, and LINCK, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 involving claims to a fibrous blood separation medium. The examiner has rejected the claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

**BACKGROUND**

The specification discloses a “fibrous non-woven medi[um] that separates erythrocytes (commonly known as ‘red blood cells’) from other blood constituents (e.g., serum and/or plasma) in whole blood.”

(Specification 1.) The medium is “comprised of a non-woven web of fibrillated and non-fibrillated synthetic staple fibers.” (*Id.* at 2.)

Fibrillated fibers are “unprocessed staple fibers that have been externally acted upon to form numerous fibrils.” (*Id.* at 5.) Fibrils are “tiny, minute threadlike elements associated with a processed staple fiber which impart substantially greater surface area thereto as compared to an unprocessed synthetic staple fiber.” (*Id.* at 4.<sup>1</sup>) A staple fiber is “a fiber which has been cut to definite, relatively short, segments of predetermined individual lengths.” (*Id.*)

The specification states that virtually any synthetic staple fibers can be used as the fibrillated and nonfibrillated fibers in the disclosed medium. (*Id.* at 6.) “One particularly preferred form of fibrillated staple acrylic fibers is Grade CFF available commercially from Sterling Fibers, Inc.” (*Id.*)

## DISCUSSION

### 1. CLAIMS

Claims 1, 3-5, 7-14, and 29 are pending and on appeal. Claim 1 is representative and reads as follows:

1. A blood separation medium comprising a non-woven web comprised of fibrillated and non-fibrillated synthetic polymeric staple fibers, wherein the fibrillated staple fibers are present in the non-woven web in an amount between about 20 to about 90 wt.% sufficient to separate erythrocytes from whole blood in contact with the blood separation medium; wherein the fibrillated synthetic staple fibers have a Canadian Standard Freeness (CSF) of less than about 300 mL, and wherein the non-fibrillated synthetic staple fibers have a CSF of greater than about 700 mL.

---

<sup>1</sup> Since fibrils are defined as being found on processed staple fibers, the specification’s definition of fibrillated fibers as “unprocessed” appears to be a typographical error.

Thus, claim 1 is directed to a fibrous, non-woven medium comprising fibrillated and non-fibrillated staple fibers, where the fibrillated fibers make up about 20-90 wt% of the non-woven web. The claim specifies that the fibrillated fibers have a CSF of less than about 300 mL and the non-fibrillated fibers have a CSF of more than about 700 mL. CSF is a measure of the rate at which a dilute suspension of staple fiber can be drained. (Specification 4, ll. 17-21.) “[T]he CSF value of a fiber is a measure of its degree of fibrillation.” (Reply Br. 2.)

Claim 1 uses “comprising” language and therefore does not exclude the presence of other components in the claimed medium. The specification states that “[o]ther additive fibers conventionally employed in blood separation media” may be incorporated. (Specification 7.) “For example, glass and/or cellulosic fibers may be incorporated.” (*Id.*)

The preamble of claim 1 states that the claimed composition is a “blood separation medium.” This recitation, however, does not limit the structure of the composition defined by the body of the claim, and therefore is not a claim limitation. *See Pitney Bowes Inc. v. Hewlett Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999) (If “the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention’s limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation.”).

## 2. OBVIOUSNESS

Claims 1, 3-5, 7-14, and 29 stand rejected under 35 U.S.C. § 103 as obvious in view of Heagle,<sup>2</sup> Baumgardner,<sup>3</sup> an “Internet article,”<sup>4</sup> and “admissions of the Instant Specification on pages 4-7.” (Answer 5.) The examiner relies on Heagle for disclosing “a web of acrylic and/or acrylonitrile fibers or fibrils and non-fibrillated, sheath and matrix fibers of any low-melting synthetic polymer . . . in the form of a non-woven web that is mixed also with glass fibers and cellulose fibers.” (*Id.*)

The Examiner relies on Baumgardner for teaching “a filter comprising specific proportions and diameters of cellulose fiber, glass fiber and synthetic staple fibers and synthetic binder fibers . . . tailored to effectively remove erythrocytes from whole blood.” (*Id.* at 6.) The Examiner also characterizes both Heagle and Baumgardner as suggesting adjusting various properties of their filters to remove larger or smaller components from blood. (*Id.* at 6-7.)

The Examiner concludes that it “would have been obvious to have altered the proportion of the different types of fibers of Heagle and fiber diameters, as suggested by Baumgardner et al[.], so as to adapt the filter to removing erythrocytes . . . since erythrocytes (red blood cells) interfere with diagnosis.” (Answer 8.) The Examiner relies on the cited Internet article and

---

<sup>2</sup> Heagle et al., U.S. Patent 5,454,946, issued Oct. 3, 1995.

<sup>3</sup> Baumgardner et al., U.S. Patent 5,186,843, issued Feb. 16, 1993.

<sup>4</sup> The Examiner cites the Internet article as follows: “Internet article: ‘CFF FIBRILLATED FIBERS-SPECIALTY PAPERS d3;[’] Engineered Fibers Technology, Brochure from Efibers Tec of Shelton, CT, undated, downloaded 12-2005.” (Answer 4.) The article bears the Internet address “www.efibers.com/d3.htm.”

the alleged admissions in the specification as evidence that the resulting medium would inherently have the CSF values recited in claim 1. (*Id.*)

Appellant “disputes that Heagle et al[.] suggests employing a combination of fibrillated and non-fibrillated fibers to form a blood separating medium comprised of the particular *amount* of fibrillated fibers as claimed having the particular *degree of fibrillation* as claimed so as to separate *erythrocytes* from whole blood.” (Br. 10, emphasis in original.) Appellant also argues that “the true artisan would recognize that Heagle et al[.] and Baumgardner are not combinable in the first instance and, even if combined, the presently claimed invention would not result since there is absolutely no guidance provided by either to achieve the function of red blood cell separation by the components claimed.” (Reply Br. 7-8.) Finally, Appellant argues that “[t]here is no teaching at all of any fibrillated fibers and/or their possible functional significance in separating erythrocytes.” (*Id.* at 9.)

We will reverse the rejection. The Examiner argues that it would have been obvious to combine the components of the filters taught by Heagle and Baumgardner, and to adjust the proportion of the different fibers to produce a product meeting the limitations of claim 1. We disagree. In our view, even if the components of Heagle’s and Baumgardner’s filters were combined, they would not be expected to produce a product having the CSF values recited in claim 1.

The Examiner relies on the specification and the Internet article for evidence that Heagle’s fibrillated fibers would inherently have CSF values of less than 300. (Answer 8.) The Internet article describes CFF<sup>®</sup> fibers as

fibrillated acrylic fibers (first page) and describes some CFF® fibers as having a CSF value of less than 300 (second page). The specification states that “as used [t]herein and in the accompanying claims,” (page 4), fibrillated fibers are defined as those having a CSF of less than about 300 mL (page 5).

Appellant argues that neither the undated Internet article nor the specification’s definition can properly be relied on. (Br. 8.) We agree with Appellant that the specification’s definition of fibrillated fibers cannot, without more, be relied on as evidence that all fibrillated fibers will have a CSF value of less than 300. But the more fundamental problem with the Examiner’s reasoning is that the evidence relied on relates to fibrillated fibers, while Heagle’s disclosure relates to fibrillated particles. Heagle expressly states that the fibrillated particles used in its medium are not fibers:

[T]hose fibrillated particles are three-dimensional particles, and the depth is approximately equal to the width. These particles are not fibers and cannot be spun into a yarn, i.e are not textile fibers, e.g. of staple length.

(Col. 12, ll. 57-61.) The Examiner has provided inadequate evidence on which to conclude that the fibrillated particles of Heagle would inherently possess the CSF values described in the specification and in the Internet article for fibrillated fibers.

In addition, claim 1 requires “fibrillated . . . synthetic polymeric staple fibers.” Neither Heagle nor Baumgardner teaches fibrillated fibers. The specification states that CFF® fibers, which are discussed in the Internet article, were commercially available at the time of filing (page 6), but the Examiner has provided no basis on which to conclude that those skilled in

Appeal No. 2007-0281  
Application No. 10/444,073

the art would have found it obvious to combine CFF® fibers with the product disclosed by Heagle or Baumgardner.

## SUMMARY

The Examiner has not adequately shown that the cited prior art references would have suggested the claimed medium to those of ordinary skill in the art. We therefore reverse the rejection under 35 U.S.C. § 103.

## REVERSED

Toni R. Scheiner	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
Eric B. Grimes	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
Nancy J. Linck	)	
Administrative Patent Judge	)	

EBG/jlb

Appeal No. 2007-0281  
Application No. 10/444,073

Nixon & Vanderhye, PC  
901 North Glebe Road, 11<sup>th</sup> Floor  
Arlington, VA 22203