

*THIS OPINION WAS NOT WRITTEN FOR PUBLICATION*

*The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.*

Paper No. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* EDWARD R. FREDERICK

---

Appeal No. 96-0298  
Application 07/920,230<sup>1</sup>

---

ON BRIEF

---

Before WEIFFENBACH, PAK and WARREN, *Administrative Patent Judges*.

WEIFFENBACH, *Administrative Patent Judge*.

### **DECISION ON APPEAL**

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-32, which are all of the claims in the application. We reverse.

#### **The Claimed Subject Matter**

The claims on appeal are directed to a method of modifying the triboelectric properties of

---

<sup>1</sup> Application for patent filed July 23, 1992.



### **The Rejections**

Claims 1-32 stand rejected under 35 U.S.C. § 103 as being unpatentable over any one of EPA, Frederick (A), Frederick (B) in view of Young.

Claims 9-18 stand rejected under 35 U.S.C. § 103 as being patentable over any one of EPA, Frederick (A), Frederick (B) in view of Young, and further in view of Hawley.

### **Opinion**

We have carefully considered the respective positions advanced by appellant and the examiner. For the reasons set forth below, we reverse both of the examiner's rejections.

The examiner has failed to establish that the subject matter encompassed by appealed claims 1-32 is *prima facie* obvious over the prior art applied in each of the aforementioned rejections. It is well settled that the examiner has the initial burden of establishing a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). This burden can be satisfied when the examiner provides objective evidence that some teaching or suggestion in the applied prior art, or knowledge generally available, would have led one of ordinary skill in the art to combine the teachings of the

references and to produce the claimed subject matter. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The teaching or suggestion must flow from the prior art, and not from applicants\* disclosure. *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988).

In their broadest scope, the claims on appeal are directed to a method of modifying the triboelectric properties of fiber in a filter medium by selecting a fiber and (i) treating the fiber by chemical reaction with a preselected reagent, or (ii) ionic bonding of a preselected agent to the fiber, or (iii) absorption of a preselected reagent into the fiber such that the fiber has a predictable and consistent triboelectric value.

According to the examiner, the EPA, Frederick (A) and Frederick (B) references each “disclose that the triboelectric value of a fibrous material, such as a filter medium, may be modified by surface modification or either chemical reaction, ionic binding, or absorption of a reagent with the fibers of the material” (answer: p. 4). The examiner points to specific pages of each of these references to support his finding, but it is not clear to us, and the examiner has not explained, how he arrived at his finding based on the disclosures on these pages. As for Young, the examiner made a finding that Young teaches “the use of permanent alteration of triboelectric properties of a fabric and treatment with a dye reagent for the purpose of ensuring maximum control of the electrostatic properties of the fabric” (answer: p. 4). While the examiner points us to col. 1, line 23 to col. 2, line 64 in Young for relevant disclosure, we are unable to find in this or any other disclosure in Young any discussion related to triboelectric properties of polystyrene, polystyrene in the form of a fabric,

or the use of a dye reagent to treat polystyrene for the purpose stated above by the examiner. Young is specifically directed to suppressing the accumulation of electrostatic charges on polystyrene by incorporating a copolymer of styrene and maleic anhydride. The examiner has not explained how the suppression of electrostatic charges is related to triboelectric properties and how polystyrene is related to fibers used in filter media.

From these findings, the examiner concluded that “it would have been readily obvious to one of ordinary skill in the art to employ both permanent alteration of the filter fabric’s triboelectric value and the use of a dye as a reagent in any one of the EPA, Frederick (A) and Frederick (B) fabric triboelectric value modification processes in order to facilitate accurate control of the fabric’s electrostatic properties as taught by Young et al.” (answer: pp. 4-5). We are unable to agree with the examiner’s conclusion of obviousness.

We find that the examiner’s rejection of claims 1-32 over the combined teachings of EPA, Frederick (A), Frederick (B) and Young lacks evidence and scientific reasoning as to why one of ordinary skill in the art would have been motivated to combine Young with the other references and arrive at the claimed subject matter when, *inter alia*, Young is not directed to altering triboelectric values of polystyrene or directed to a fiber specifically useful for use in a filter medium or to any of the fiber materials disclosed in EPA, Frederick (A) and Frederick (B). The EPA, Frederick (A) and Frederick (B) references disclose many types of fibers which may be employed as a filter medium, but none of the fabrics disclosed contain polystyrene.

Thus, we find that the examiner has not established a *prima facie* case of obviousness

because, on this record, there is a lack of motivation to combine the references. *In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998). For the foregoing reasons, the examiner's rejection of claims 1-32 under 35 U.S.C. § 103 over the combined teachings of EPA, Frederick (A), Frederick (B) and Young is reversed. We also reverse the rejection of claims 9-18 under 35 U.S.C. § 103 over the combined teaches of EPA, Frederick (A), Frederick (B), Young and Hawley because Hawley does not make up for the deficiencies of the other references.

**Conclusion**

We conclude that the examiner has not established a *prima facie* case of obviousness for either rejection and selected the references with the assistance of hindsight. Accordingly, the rejection of claims 1-32 under 35 U.S.C. § 103 over EPA, Frederick (A), Frederick (B) and Young and the rejection of claims 9-18 over are EPA, Frederick (A), Frederick (B), Young and Hawley are reversed.

**REVERSED**

CAMERON WEIFFENBACH )  
Administrative Patent Judge )  
)  
)  
) BOARD OF PATENT  
CHUNG K. PAK )  
Administrative Patent Judge ) APPEALS AND  
)  
) INTERFERENCES  
)

Appeal No. 96-0298  
Application 07/920,230

CHARLES F. WARREN )  
Administrative Patent Judge )

Appeal No. 96-0298  
Application 07/920,230

Edward R. Frederick  
Filter Media Specification  
299 Sunset Road  
Pittsburgh, PA 15237