

cross section of the filament having at least two end sections and a middle section, each of said end portions [sic! "sections"?] being bent in a continuous curve so as to meet and contact said middle section thereby defining said cavities or hollow structures, and the cross-sectional area of said cavities of hollow structures being 20 to 60% of the cross-sectional area of the filament.

The KETEMA honeycomb brush bristles do have a plurality of cavities or hollow structures, with a cross-sectional area probably overlapping the 20 to 60% range as recited in Nakashima's claim 1. However, as we indicated earlier, the KETEMA honeycomb brush bristles do not have, in our opinion

... at least two end sections and a middle section where each of the end sections are bent in a continuous curve to contact the middle section,

as we understood that limitation. Our review of the file history of Nakashima fully supports this position.

In the single Official Action issued in the application which finally matured into the Nakashima patent, the examiner rejected original claim 1 as being unpatentable under 35 U.S.C. § 103 over the disclosure of Payne et al, U.S. Patent No. 4,279,053 (du Pont), the trioccular bristle patent. Nakashima argued in response to the Office Action that the Payne reference discloses a filament having a plurality of cavities or hollow structures therein and that the Payne filament represents prior art hollow fibers in which the wall forming the fiber is completely welded, i.e. in unitary form. It was further indicated that the outer wall in Payne is formed in one body without any line-to-line point contact as in Nakashima. On this basis, Nakashima contended that the hollow filament of Payne had the disadvantage that it could not revert to its original shape once it was broken by a bending moment and that paint which entered the hollow portion from an end thereof could not be easily removed.

Nakashima further argued that the Payne reference does not support the Examiner's rejection because the Nakashima claims define a filament in which the wall forming the filament is not a unitary, or welded, structure but instead has end portions, i.e. the ends of the "S" cross-sectional shape, which meet and contact a middle portion. This structure was argued as being resistant to breaking caused by a bending moment because the cross-section is easily altered by relative movement of the end portions with respect to the middle portion. The filament of Nakashima was

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described as losing its hollowness when subjected to a bending moment; and when the bending moment is removed, the filament easily reverts to its original shape.

Thus, it was argued as follows at page 3 of the sole response (May 17, 1985) in reply to the Examiner's rejection.

The filament of the present invention differs from conventional hollow filaments in which the wall is completely welded in that in the filament of the present invention a plurality of cavities, or hollow structures, are formed by a wall having end portions that are bent in a continuous curve so as to meet and contact the middle portion of the wall but are not welded thereto.

After this and similar further arguments, the rejection was withdrawn and the claims allowed.

From the above, it is clear that the term "to meet and contact said middle section" refers to the two free ends (width-wise) in the Nakashima filament which meet and contact the middle section but are not welded in a unitary form. Clearly, the KETEMA honeycomb brush bristle is unitary and welded and has no free ends width-wise as is established for the Nakashima bristle in the Nakashima file history, and therefore it is clear that the honeycomb bristle does not infringe the Nakashima patent, even if that patent were valid.

Our debit note for services is enclosed.

Sincerely,

Sheridan Neimark

SN/NJL:edg
Enclosures