

COMMISSIONER'S DECISION

UNOBVIOUS (SECTION 45(4)): No Teaching by Prior Art.

Contrary to the construction on which the Final Action is based; the expression in the single citation "at least a portion of said threads being prepared from ribbon yarn of a polymer of a 1-olefin" applies to the portion of the threads distinguished by the polymer material; not their ribbon shape. There is no teaching of the prerequisite of the invention under rejection that a portion of the threads (weft) must be "round", or even non-ribbon, in cross-section.

FINAL ACTION: Reversed.

This decision deals with a request for review by the Commissioner of Patents of a refusal of claims C13 to C18 inclusive of patent application 005,341. The refusal was made under Section 42 of the Patent Act, by an Office letter dated Feb. 7, 1973 issued as the result of re-examination of the claims under Section 45(4) during conflict proceedings.

The application was filed on November 17, 1967, in the name of Henry D. Dawbarn, and refers to "Tufted Pile Fabric Backing." Mr. W. Mace represented the applicant at the Hearing conducted by the Patent Appeal Board on June 26, 1974.

The application relates to backings for carpets. To form the backing, ribbon-shaped warp yarns are interwoven at right angles with round-shaped weft yarns. Such a construction is purported to improve the stability of the backing.

The prosecution terminated with the Office letter refused claims C13 to C18 for lack of inventive subject matter over the following reference:

Belgian Patent

653,594

March 25, 1965

This patent describes backings in which ribbon-shaped polyolefin fibres are used.

The Office letter stated (in part):

Applicant's arguments have been carefully considered but it is still maintained that claims C13 to C18 inclusive are unpatentable in view of the above reference and are refused. Applicant points out that claim C13 specifically claims that one of the yarns is substantially uniform ribbon shaped and the other is substantially round in cross section. The Belgian patent discloses a carpet backing of the same or similar materials wherein a number of the warp and or weft threads are made from yarns having a rectangular cross section. This implies that some of the threads are not rectangular in cross section and if not what shape might they be? The most obvious shape for a thread of yarn is round and therefore it is deemed that the other shape implied would be one having a cross section substantially round. It is also again reiterated that the expression, "closely spaced together", is so vague as to include the embodiment in the cited patent. After all said expression does not distinctly specify that the yarns are so close as to be touching, said expression could include a distance of 1/8", 1/4" etc.

The applicant in his response to the Office letter dated May 4, 1973 stated (in part):

.... It is Applicant's intention that by spacing the yarns apart from each other and also by utilizing round mono-filament or multi-filament yarns whereby if such round yarn is pierced they do not break as the multi-filament will separate and allow the needle to pass through and the mono-filament will move aside. The piercing of the tufting needle will occur only, or substantially only, in the warp or flat yarns which can withstand the force much more readily than the fill yarns.

It is further pointed out that Claim C-13 (Applicant's Claim 1) specifically calls for "a plurality of continuous substantially uniform warp yarns comprised of a polyolefin --- a plurality of substantially uniform fill yarns also comprised of a polyolefin". In addition it is specifically stated that "one of said plurality of substantially uniform yarns is relatively ribbon shaped and is closely spaced together and the other of said pluralities of substantially uniform yarns is relatively round in cross section". It is respectfully pointed out that not only is the warp and fill yarns of different shape, ribbon shaped and round in cross section but furthermore that both yarns are comprised of the

polyolefin. In contrast thereto, Belgian Patent 653,594 although using a ribbon shaped yarn is completely silent with respect to the shape of the other yarn which is employed in the backing. In addition, only the ribbon shaped yarn is composed of a polymer of a one-olefin. Presumably, in accordance with the teachings of the Belgian Patent, both the warp and weft yarns may be ribbon shaped and in those circumstances both are of a polymer of a one-olefin. In the event that only the warp yarn is ribbon shaped and of a polymer of a one-olefin there is no teaching whatsoever that the weft yarn would be relatively round in cross section nor that the weft yarn is a polyolefin yarn of relatively round cross section. As previously pointed out if a non-ribbon form of yarn is employed it would in all likelihood be of the prior art jute material as there is certainly no teaching whatsoever in the Belgian Patent that the non-ribbon yarn would be also a polyolefin.

It is respectfully submitted that the broadest teaching that could be drawn from Belgian Patent 653,594 is that either the warp and weft yarns of the backing are of a ribbon form of yarn obtained from a polymer of a one-olefin or the warp yarn is a ribbon form of yarn obtained from a polymer of a one-olefin and the weft yarn is left to conjecture only. It is thus submitted that in accordance with such teachings only the ribbon form of yarn is of a one-olefin polymer. To attempt to apply such teachings as a basis for rejecting Claim C-13 is in Applicant's opinion interpreting the Belgian Patent far beyond the scope of the concept disclosed therein and can be arrived at only by applying Applicant's own teachings contained in the instant application against Claim C-13.

The Belgian patent 653,594 relates to polyolefin ribbon yarn for carpet backing and to tufted fabrics and, more particularly, to improved backings for such fabrics. Claim 1 reads:

A backing for a rug containing transverse and longitudinal threads, at least a portion of said threads being prepared from ribbon yarn of a polymer of a 1-olefin.

The question we must decide is whether the subject matter of the application lacks patentable subject matter over the reference cited.

Claim C13 reads:

Woven fabric adapted for use as primary backing in tufted pile fabrics comprising a plurality of continuous substantially uniform warp yarns comprised

of a polyolefin, interwoven at substantially right angles with a plurality of substantially uniform fill yarns also comprised of a polyolefin; wherein one of the said plurality of substantially uniform yarns is relatively ribbon shaped and is closely spaced together and the other of said pluralities of substantially uniform yarns is relatively round in cross section.

On considering the difference between the prior art cited and the subject matter covered by the claims, it is observed that claim C13 requires a woven fabric comprising a plurality of substantially uniform warp yarns interwoven at right angles with a plurality of substantially uniform fill yarns, wherein one plurality of yarns is relatively ribbon shaped and the other plurality is relatively round in cross-section. This structure, in our view, is neither disclosed nor suggested in the patent cited.

First, although drawings are only illustrative of an invention, Figures 1 and 2 of the patent indicate that the warp and weft yarns are of the "same dimensions," and are "ribbon shaped." This teaches away from warp and weft yarns of "different cross-sectional shapes," particularly ribbon warp yarn and round weft yarn.

The disclosure of the patent makes no reference to round yarn, but states on page 6, line 6, that: "The ribbon yarn employed in this invention is prepared by slitting or otherwise dividing into narrow strips, a film of polymer, and drawing the strips to sizes preferably having a width...."

It is observed that claim 1 of the patent refers to "at least a portion of said threads being prepared from ribbon yarn of a polymer of a 1-olefin." On this point the examiner states: "The Belgian patent discloses a carpet backing of the same or similar materials wherein a number of the warp and or weft threads are made of yarns having a rectangular cross section. This implies that some of the threads are not rectangular in cross section and if not

what shape might they be?" Construing the specification as a whole, in our view, the reference distinguishes the threads by means of "material" rather than "shape." The patentee intended that where his invention utilizes only some of the yarns comprising "polyolefin strips," the remaining threads or yarns could be any "other material" known in the prior art as jute or the like. The different cross-sectional shape of the yarns are irrelevant to his subject matter and its object in the art.

Moreover, the disclosure of the patent, page 5, refers to the warp and weft threads "as being 'loosely' interwoven in any known manner," as opposed to claim C13 which specifically requires that the warp and the weft be "closely spaced together."

Also in the reference, last para. page 3, there are statements to the effect that synthetic fibrous yarns have been applied in the backing materials but have been found to be easily broken by the needles, and that fibrous yarn backing does not provide a flat surface. It is thus seen that there is no teaching in the reference of the use of warp and weft yarn of different cross-sectional forms of which one must be "round," or even non-ribbon.


There are no reasons apparent why we should disagree with the applicant's argument that several important and unobvious advantages flow from the concept of employing a relatively "flat cross section" yarn for the warp, and a relatively "round cross section" multifilament yarn in the weft. For example, the applicant maintains that his backing has a lower weight per unit area, a lower cost, a better balance of strength and the fact that the piercing of the

tufting needle will occur only, or substantially only, in the warp or flat yarns which can withstand the force much more readily than the round weft yarns.

Accordingly, the Board is satisfied that the patent cited does not teach nor suggest the combination explicitly circumscribed by claim C13. Consequently the rejection of Claims C14 to C18, which depend directly or indirectly on claim C13, is also traversed.


The Board therefore recommends that the Office letter refusing claims C13 to C18 be withdrawn.

The clarifying amendment to claim C13 suggested by the applicant need not be entered at this time, and may be deferred until conclusion of conflict proceedings.


J.F. Hughes,
Assistant Chairman,
Patent Appeal Board.

I concur with the findings of the Patent Appeal Board and withdraw the Office letter of February 7, 1973. The application is returned to the examiner for resumption of prosecution.

Decision accordingly,


A.M. Laidlaw,
Commissioner of Patents.

Dated at Hull, Quebec
this 17th. day of
July, 1974.

Agent for Applicant

Gowling, MacTavish, Osborne
& Henderson