

DECISION OF THE COMMISSIONER

IN THE MATTER OF a request for a review by the  
Commissioner of Patents of the Examiner's Final  
Action under Section 47 of the Patent Rules  
(Prior to the Amendment by Order-in-Council P.C.  
1970-728 effective June 1, 1970).

AND

IN THE MATTER OF a patent application serial  
number 001,820 filed October 5, 1967 for an  
invention entitled:

POLYMERIZATION OF NON CONJUGATED DIENES  
WITH  $\alpha$ - MONOOLEFINS

Patent Agent for Applicant: Messrs. Alex E. MacRae & Co.,  
Ottawa, Ontario.

This decision deals with a request for a review by the  
Commissioner of Patents of the Examiner's Final Action  
rejecting application no. 001,820.

The Patent Appeal Board conducted a Hearing on November 12,  
1970. Mr. H. Marshall of Alex E. MacRae & Co. represented the  
Applicant.

Reissue application No. 001,820 was filed on October 5,  
1967 in the name of Natta, et al. The petition reads as  
follows:

- (1) That Your Petitioner is the patentee of Patent No.  
680,494 granted on the 18th day of February, 1964  
for an invention entitled Polymerization of Non  
Conjugated Dienes with  $\alpha$ - Monoolefins.
- (2) That the said Patent is deemed defective or  
inoperative by reason of insufficient description  
or specification and by reason of the patentee having  
claimed more (in some respects) and less (in other  
respects) than it had a right to claim as new.
- (3) That the respects in which the patent is deemed  
defective or inoperative are as follows:
  - (a) The process claimed in claim 12 of the patent and  
described in the first paragraph on page 9 of the

patent better defines the invention than does claim 8, which may be too broad in view of Gresham et al U.S. patent 2,933,480 which in column 2, first paragraph, includes the possible use of catalysts based on vanadium alkoxides and aluminum alkylhalides (but does not disclose the specific catalysts or temperatures of claim 12 or the copolymerizates of claim 1). Accordingly, in the amended specification submitted herewith, a new main process claim 6 is submitted having the limitations of claim 12 of the patent (with only minor variations) and, in conformity, those portions of the disclosure, including Examples 6 and 17, relating to processes not claimed have been deleted and the Gresham et al patent has been specifically acknowledged on page 2. Original claims 9 and 10 have been rewritten in independent form as claims 7 and 8, including the limitations of claim 6, and the dependencies of the other original process claims have been revised.

- (b) The patent fails to include a claim reciting the use of a diolefin having only one terminal double bond, as exemplified by the diolefins of examples 4, 7, 10, 11, 12, 15 and 16 of the patent. Accordingly a new claim 11, dependent on claim 6, has been inserted in the amended specification, and original claim 14 (now claim 12) has been made dependent on this claim 11.
- (c) Claim 1 of the patent ends with functional limitation "the copolymerizates being readily vulcanized to elastomers having excellent properties and low permanent deformation at break". This limitation helps to define the consequences of having "substantially all of the diolefin units in each molecule showing unsaturation in side groups", and makes it clear that substantially all of the diolefin units could not be said to show such unsaturation if there were a sufficient number of cyclized diolefin units to interfere with attaining these consequences. However the claim should include the recitation that substantially all the diolefin units are enchainned in non-cyclized form and with 1, 2 addition, as disclosed in the patent at page 2 lines 30-31, page 7 lines 5-8, and page 8, lines 10-12. Accordingly, to improve the definitions of the claim it has been amended to include this recitation, and the functional language has been deleted from the claim, but the significance of the functional language has been amplified at page 7 where the amount of non-cyclized enchainment achieved by following the disclosure has been set out.

(d) Claim 1 has also been amended

- (i) to refer to intrinsic viscosity rather than molecular weight. Intrinsic viscosity can be measured accurately, and one of the well known ways of ascertaining molecular weight is by measuring intrinsic viscosity (see page 13 of the patent, line 9), but since there are other ways of ascertaining molecular weight it is clearer to refer to intrinsic viscosity rather than to molecular weight. References to intrinsic viscosity measurements of the copolymerizates are found in the disclosure of the patent at, for example, page 14, lines 26-27 and page 16, line 13, and, since these references show that it is the intrinsic viscosity of the products (the copolymerizates) that is measured, reference has been made to the copolymerizates at page 13, line 7 where the relationship of molecular weight to intrinsic viscosity is given. Similarly claim 1 as amended refers to the amorphous nature of the copolymerizates and to the extractability of the copolymerizates with boiling n-heptane, since as the Examples show it is these products that are normally tested.
- (ii) to recite that the terminal unsaturation of the non-conjugated diolefins is a vinyl unsaturation to conform with the diolefins disclosed at page 6.
- (iii) to delete the reference to the copolymers "being essentially linear". This reference introduces unnecessarily the relative term "essentially" and the desired characteristic is established by the reference in the claim to heptane solubility.

- (e) Claim 2 has been restricted to copolymerizates of propylene or butene-1, other minor amendments have been made to the claims, and claims 6 and 7 of the patent, which are unimportant claims, have been deleted.
- (f) Minor amendments to the disclosure are desirable to clarify it and improve the translation from the original Italian, and such amendments have been effected in the amended specification submitted herewith.
- (4) That the error arose from inadvertence, accident or mistake, without any fraudulent or deceptive intention in the following manner:

The inventors were, prior to the filing of their application for patent in Italy on November 14, 1960,

aware of the Gresham et al United States patent 2,933,480 and drew the attention of their patent agents to this patent, but in their preparation and presentation of the application for the Canadian patent said agents imperfectly described the invention, having overlooked the suggestion in Gresham et al of the use of catalysts based on vanadium alkoxides and aluminum alkylhalides, and consequently did not in the specification sufficiently point out and adequately claim the invention disclosed to them, although they fully described and (subject to what is said below as to claim 11) claimed the subject matter to which the enclosed amended specification is confined.

The omission of a dependent claim having the limitations of claim 11 presented herewith was an inadvertent omission of the patent agents.

There was an error of draftsmanship, on the part of the patent agents, in the language in which claim 1 was expressed; the class of products covered by the claim is not easy to define with precision, but there was no intention to draft an indefinite specification or claim. The draftsman overlooked the possibility of including the more precise language employed in the amended claim 1. Similarly more precision has been introduced by the other amendments made to the disclosure and claims.

- (5) That knowledge of the new facts in the light of which the new claims have been framed and the disclosure amended was obtained by Your Petitioner in the period from February 24, 1967 to date in the following manner:

A member of Your Petitioner's staff came to Canada on February 24, 1967 to discuss with Canadian counsel objections to the patent made in an action brought by E.I. DuPont de Nemours and Company and DuPont of Canada Limited in the Exchequer Court of Canada for, inter alia, a declaration that Patent No. 680,494 is invalid and void. The specification was carefully reviewed, and the desired amendments were thereafter settled in consultation with those of the inventors who are still employed by Your Petitioner and who confirmed that the amendments are in conformity with the invention made by the inventors prior to the priority date of November 14, 1960 and that the amended specification submitted herewith includes nothing that they did not, prior to said date, conceive to be part of their invention or that they did not intend to protect by Patent No. 680,494.

In an official action dated April 22, 1969, the examiner refused the Petition for Reissue and expressed the view that the error in claiming too broadly cannot be considered to have arisen from inadvertence, accident or mistake within the meaning of Section 50 of the Patent Act since the existence of the Gresham patent was known by the inventors and drawn to the attention of the inventors' patent agents before the filing of the application. The examiner also expressed the view that improvements in definition and removal of functional language in claim 1 are not within the meaning of Section 50. The action raised several other objections relating to other amendments to the specification proposed in the Petition for Reissue but not transcribed above.

In a letter dated July 22, 1969 the petitioner argued that the claims of the patent had not been deliberately drawn to cover something known to be old and they had not been drawn with deliberate disregard of what was shown in the prior art, but that the patent agents overlooked one of the possibilities suggested by the Gresham patent by inadvertence, accident or mistake. The petitioner further stated that the inadvertence was in not apprehending the facts correctly and referred to Curl-Master Mf. Co. Ltd. v. Atlas Brush Ltd. (1967) S.C.R. 514 at 531 to support his contention that the patent agent's mistake is proper grounds for reissue.

The petitioner also argued that one of the principal reasons for Section 50 is to enable poor draftsmanship to be corrected. He contended that the agents failure to use appropriate terminology can be characterized as a mistake made without any fraudulent or deceptive intention and referred to Withrow v. Malcolm (1884) 60 R 12. The petitioner advanced further arguments against the other objections raised in the official action and submitted an affidavit by all but two of the inventors stating that the claims of the original patent do not accord with the original intention of the inventors.

On September 18, 1969 the examiner issued a Final Action under Rule 46 of the Patent Rules wherein the objections raised in the above mentioned official action were reiterated.

By a letter dated December 17, 1969 the petitioner amended the application thereby overcoming all of the objections put forward in the official action and the final Action except the two discussed above i.e. (1) that the error in claiming too broadly cannot be considered to have arisen from inadvertence, accident or mistake within the meaning of Section 50 of the Patent Act and (2) that improvements in definition and removal of functional language in claim 1 are not within the meaning of Section 50. With regard to these two objections the petitioner reiterated the arguments put forth in his letter of July 22, 1969 and pointed out that the patent agent, like any other person, is susceptible to inadvertence, accident

or mistake. He also contended that improvements in definition and removal of functional language are in accordance with Section 50.

On April 16, 1970 the examiner issued a second Final Action under Rule 47 of the Patent Rules in which the two remaining objections were reiterated. In this Action the Examiner pointed out that it is the responsibility of inventors and their patent agents to carefully study the prior art known to them and to frame their patent claims to avoid prior art and to clearly define the invention and that failure to do so is not considered to be an error which arose from inadvertence, accident or mistake within the meaning of Section 50 to the Patent Act.

The petitioner responded by letter dated July 15, 1970 requesting a review of the application by the Commissioner under Section 46(2) of the Patent Rules and briefly stating the petitioner's position which was unchanged from that set forth in the two previous letters. It was also argued that the existence of inadvertence, accident or mistake is not an issue of law, but one of fact.

The legislation upon which the reissue of patents is based is Section 50 of the Patent Act which reads, in part, as follows: (Section 50(1) quoted).

The patentee's agent has argued that the error of drafting the claims too broadly in view of the Gresham et al patent was an oversight on the part of the patent agent in view of the complex nature of that patent. Similarly it was argued that the failure to use clear and definite language in claim 1 was an error in draftsmanship by the patent agent.

The patentee's agent has made reference to Curl-Master Manufacturing Company Limited v. Atlas Brush Limited (1967) S.C.R. 514 at 531 where it was held that where failure by a patent attorney fully to comprehend and to describe the invention for which he had been instructed to seek a patent was a proper case for a reissue of a patent.

Upon review of the grounds for rejection set forth by the Examiner, as well as all the arguments both written and oral, I am not satisfied that the rejection is well founded.

At the hearing the Patent Agent, Mr. H. Marshall, reviewed the stand of the applicant and stressed the point that in his opinion the application for reissue was proper because the agent had made a mistake in failing to avoid the art while drafting the claims. The Patent Agent also requested the Patent Appeal Board to study two extra points stated as follows:

- (1) The refusal by the Examiner to allow the applicant to correct a functional limitation in claim 1.
- (2) The refusal by the Examiner to allow the applicant to delete claims 6 and 7.

At the hearing it was suggested to the Patent Agent that there was some concern that the petition was not definite in that some vague terms were used such as: a) ".... the claims may be too broad in view of Greshman ..." b) ".... the possible use of catalysts ....". The Court has held, Auer Incandescent v. William P. O'Brien (1897) 5 Ex. C.R. 243, 285, that "The use of the word 'deemed' imports that a discretion, a judgement is to be exercised. But by whom? In the first place perhaps by the applicant, but in the end and as a foundation for his jurisdiction by the Commissioner". The examiner has stated "The invention defined in claim 8 of the Canadian Patent 680,494 is broadly disclosed in United States Patent 2,933,480 ...". In view of this the patent can be deemed defective. Therefore, I find that the petition may be accepted.

Also at the hearing, it was suggested to the Patent Agent that there was no proof of intention to restrict the claims as they presently stand.

I find I cannot overlook the affidavits by the inventors, which substantiate the petition, in which they state "The claims of the original patent 680,494 are not in accord with our intentions when the application for that patent was prepared". Further "It was our intention that the claims should distinguish clearly from what is disclosed in United States Patent 2,933,480..... thus it was not our intention to claim a process using catalysts based on vanadium alkoxides and aluminum alkylhalides and to do so was a mistake and an oversight".

In the present situation claim 8 was drawn too broad in scope in view of the known patent to Gresham. In view of the evidence presented, that the error arose from inadvertence, accident or mistake, I find that the applicant should be allowed to restrict claim 8 to what he actually invented. In other words he ~~claimed~~ more than he had a right to claim as new. To so restrict this claim, to my mind, would be in the public interest.

With respect to the Patent Agent's request for the Board to comment on the refusal of the examiner to allow the applicant to correct a functional limitation in claim 1, the examiner states that "Several amendments have been made to claim 1 to overcome indefiniteness in the claim. However, improvements in definition and removal of functional language are not in accordance with Section 50".

In Withrow v. Malsolm (1884) 6 O.R. 12 the Ontario Judge quoted with approval statements from a U.S. Supreme Court decision on reissue as follows:

"The specification may be amended to make it more clear and distinct ...." (Proudfont J. Page 50).  
"The great object of the law of reissues seems to have been to enable a patentee to make the description of his invention more clear, plain and specific".

The Court has also held, Leonard v. Commissioner of Patents (1914) Ex. C.R. 14 at 358, that the words "by reason of insufficient description or specification" cover the claim in the patent as part of the specification. From this it is evident that a claim, on reissue, may be amended to make it more clear and distinct. In view of this I find no grounds for the refusal by the examiner to allow an amendment to claim 1.

On the second point raised by the Patent Agent, "the refusal by the examiner to allow the applicant to delete claim 6 and 7", I find no reason for this refusal. A reissue application may be in proper form without containing all the claims of the original patent. Therefore, I submit it is quite proper to disclaim on reissue.

I recommend that the rejections, discussed in this report, for refusing to allow the reissue application be withdrawn.

R.E. Thomas,  
Chairman,  
Patent Appeal Board.

I concur with the findings of the Patent Appeal Board and I am therefore setting aside the Final Action and returning the application to the examiner for resumption of prosecution.

Decision accordingly,

A.M. Laidlaw,  
Commissioner of Patents.

Dated at Ottawa, Ontario  
this 26th day of November, 1970.