

COMMISSIONER'S DECISION

Non-Statutory Subject Matter - Seeds coated with Herbicides

Claims to a new herbicide were accepted by the examiner, but he refused claims to seeds coated with the herbicides as being directed to non-statutory subject matter. The inventive factor in the rejected claims is the herbicide, although the seeds per se as living matter, are unpatentable per se. The claims to the seeds coated with the herbicides were held to be directed to statutory subject matter.

Final Action: Reversed.

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated February 3, 1977, on application 139,060 (Class 71-7.2). The application was filed on April 6, 1972, in the name of Ferenc M. Pallos et al, and is entitled "Thiolcarbamate Herbicides Containing Nitrogen Containing Antidote." The Patent Appeal Board conducted a Hearing on June 14, 1978, at which Mr. W. Mace represented the applicant.

The application is directed to novel Thiolcarmabate Herbicides, an antidote for the herbicides, and to seed coated with that substance. The antidote serves to protect crop plants from herbicidal injury without altering the activity of the herbicides on weed plants. The composition may be applied directly to the soil or they may be used to treat seeds prior to planting.

In the Final Action the examiner rejected claims 45 and 46 "for being directed to unstatutory subject matter...." These claims are directed to crop seed treated with an active herbicide and an antidote therefor. The examiner went on to say (in part):

...

It is the examiners contention that no matter how or with what the seed is treated, the claim remains directed to a seed, and a seed is deemed to [be] living matter. The mere coating of a seed, regardless of the fact that the coating process per se or the coating composition per se might be inventive, fails to confer patentability on the coated seed per se.

...

In response to the Final Action the applicant said:

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In considering Section 2 of the Patent Act and particularly the definition of the term "invention", such specifies as follows:

" 'invention' means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter".

Restrictions on what may be patented are set forth in Sections 28(3), 29(2) and 41 of the Patent Act. In addition, the Commissioner is empowered to refuse to grant a patent under the provisions of Sections 42 and 43 of the Act. Applicant has made a very careful review of each of these Sections and can find nothing that either suggests or indicates that the new and useful composition as defined by claims 45 and 46, presently on file, would be unpatentable. It is submitted that such claims do not have an illicit object in view nor are they for any mere scientific principle or abstract theorem, applicant believes that the novelty requirements have been met and furthermore the provisions of Section 41 as well as Section 43 would not apply. Section 42, in applicant's opinion, does not apply as applicant does not believe that by law he should not be entitled to be granted a patent on this subject matter.

Turning to Section 2 of the Patent Act, it is submitted that claims 45 and 46 are directed to a new and useful composition of matter; thus within the strict wording of Section 2 and the definition of "invention", claims 45 and 46 fully comply. It would be apparent that the Examiner is thus relying on his interpretation of this Section of the Patent Act and applicant respectfully submits that the Examiner has erred in his interpretation of Section 2 of the Act.

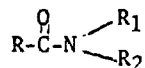
In attempting to arrive at the Examiner's interpretation, it is presumed that he is following current Canadian Patent Office policy on the subject, which is as expressed in Chapter 12 of the Manual of Patent Office Practice. On careful review of the prerequisites of a patentable invention as outlined in Section 12.03 of the Manual, no specific direction can be found which would assist the Examiner in his interpretation on which to base his rejection. As outlined previously by applicant, claims 45 and 46 meet all of the prerequisites specified in Chapter 12 in that the subject matter of such claims relate to a useful art, the subject matter is operable, controllable and reproducible and furthermore the subject matter has practical application in commerce. As previously submitted, such claims do not have an illicit object in view, nor are such claims directed to a mere scientific principle or abstract theorem. It is further submitted that claims of the nature of claims 45 and 46 would be found to have a beneficial effect for the public. It is thus submitted that the Manual of Patent Office Practice will not provide any substantiation for the Examiner's interpretation of Section 2 of the Patent Act.

...

Applicant respectfully submits that the Examiner has provided no substantiation for his basis of rejection other than a misinterpretation, in applicant's opinion, of the scope of Section 2 of the Patent Act with respect to the definition of the term "invention". Applicant respectfully submits that claims 45 and 46 comply fully with all requirements of the Patent Act, as well as the Rules under the Patent Act, which would include Section 2 of such Act. In addition, there is no pertinent jurisprudence which would provide a different interpretation with respect to the scope of claim 2, and in view that "living matter" has apparently been found acceptable to the Patent Office as outlined in the numerous recently issued Canadian Patents, applicant believes that he should be entitled to claims of the nature of claims 45 and 46, and the Examiner's rejection should be withdrawn.

The question before the Board is whether or not claims 45 and 46 are directed to "unstatutory subject matter." Claim 45 reads:

Crop seed treated with an effective amount of a compound having the formula:



wherein R is haloalkyl and R₁ and R₂ are alkenyl; said effective amount being substantially non-phytotoxic and sufficient to improve the resistance of the crop to an active herbicide compound selected from the group consisting of thiolcarbamates, herbicidally active acetanilides, thiolcarbamates in combination with herbicides selected from the group consisting of triazines, 2,4-D and 2(4 chloro-6-ethyl-amino-5-triazine-2yl-amin^o)-2-methyl propionitrile.

Mr. Mace argued strongly at the Hearing that claims 45 and 46 do indeed define patentable subject matter. He maintains that there is nothing in the Patent Act or Rules that "teach or suggest" that claims 45 and 46 are directed to unpatentable subject matter. He also stated that he failed to find any jurisprudence holding that the subject matter defined by these claims would not be patentable. He went on to say that "he should be entitled to protect his concept in a manner which would prevent potential infringers ready access to the invention."

To begin with, we are satisfied that fruit, seeds and other growing crops per se, are not the result of a process which is a manner of manufacture, even though the hand of man may have been involved in planting and cultivating them (see National Research Development Corporation's Application, 1961 RPC 147).

On the other hand, we have come to the conclusion that a process of coating a seed may properly be viewed as a manner of manufacture. Where the coating is novel, the result of the process - "the coated seed" - is, by virtue of the novel coating, a novel article or composition of matter. What we would then have is a new result produced by the hand of man.

The specific concern of the examiner was of course to what extent living matter may be involved in patentable inventions. In considering that point we refer first to J.R. Short Milling Co. (Canada) Limited v George Weston Bread and Cakes Ltd. et al (1941) Ex. C.R. at 69, and (1942) Supreme Court Reports at 187. In it methods devised for the extraction of a bleaching substance and for the preservation of its activity, making it applicable effectively in the manufacture of bread, were held patentable, as was the product bleaching agent produced by that process. The use of the enzyme in the process is a manifestation of man's control over the use of that enzyme.

In American Cyanamid v. Frosst (1965) 2 Ex. C.R. 355, the claims in dispute were for a process involving the use of living matter, and although numerous defences were raised by the alleged infringer, the patentability of the antibiotic produced by that process was not in contest. The decision of Mr. Justice Noel describes at length the production of antibiotics made by processes including living matter, but whether such is proper subject matter for a patent was not questioned.

In Parke Davis v. Laboratoire Pentagone, S.C.C. (1968) 37 Fox Pat. C. 12, the Supreme Court of Canada also considered an appeal dealing with the infringement of a patent for an antibiotic which was produced by a living micro-organism known as Streptomyces venezuela. Again, there was no question as to the patentability of such subject matter.

In the famous Banting patent for insulin the use of a hormone was protected by a patent.

There is also British case law confirming that microbiological processes are patentable subject matter. See, for example, Commercial Solvents Corp. v Synthetic Products Co. Limited (1926) 43 RPC 185, where the patent related to the production of acetone and alcohols by fermentation processes using a particular bacteria to produce large yields of acetone and butyl alcohol. See also Virginia-Carolina Chemical Corporation's application, (1958) RPC 351, where Mr. Justice Lloyd-Jacob said: "... at one time it seems to have been thought that any operation which involved living organism was excluded from the definition of invention. That this was unjustified is apparent from the judgement in Commercial Solvents Corp. v Synthetic Products Co. Limited [supra] and from the considerable number of patents granted in respect to the preparation of antibiotics. The increasing use of naturally occurring organisms for inhibiting or controlling or modifying manufacturing operations has fully outmoded as a rule of thumb guide a restriction of patentability to inanimate matter."

In the case of Standard Oil Development Company's application (1951) 68 RPC at 114, a test was given which is useful, namely, to look at the end product of the alleged invention. If in this case the invention involved the production of seeds, which in turn involved the operation of natural laws, the applicant could not have claimed to have invented it, nor the means of producing it. We believe, however, that the invention defined in claims 45 and 46

had nothing to do with the "natural laws," because it is not the seed itself which is being claimed. The seed was produced before the advance in the art took place, and is distinctly separate therefrom.

We think this case differs from A.D. Goldhaft's application (1957) RPC at 276 where a method of treating an egg to affect the sex of chicks to be hatched was found not to be a manner of manufacture. The reason being that in that case "the fertilisation of the ovum, the production of the egg, its incubation and the hatching of the chick are steps in a process of nature, in a natural phenomenon." The claims in question here are neither concerned with a method per se nor are they directed to the product of a natural process per se.

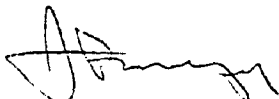
In the Human Liver Cell Line case (In Re Kostadin, Patent Office Record January 4, 1977) we raised a question as to whether "living matter" is patentable. We believe this case distinguished from the prior one, however, in that here the point of invention is not the living matter, the seed, but the coating upon the seed. Seeds being a staple product of commerce, and there being no invention in the seeds per se, we believe it is proper to allow claims directed to the treated seed where the invention resides in the coating given to them. In this case the treatment does not alter the life process of the seed and there is no new living matter.

Claim 45 is directed to crop seeds, unpatentable themselves, when treated with a composition found patentable in other claims of this application. We are satisfied that it should not be refused as being directed to "unstatutory subject matter." That conclusion applied equally to claim 46. We therefore recommend that the decision in the Final Action to refuse claims 45 and 46 on the ground that they are directed to unstatutory matter be withdrawn.



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

I have studied the prosecution of this application and have carefully reviewed the recommendation of the Patent Appeal Board. In the circumstances I endorse the Board's recommendation and withdraw the Final Action. The application is returned to the examiner for resumption of prosecution.



J.H.A. Gariepy
Commissioner of Patents

Dated at Hull, Quebec

this 16th. day of October, 1978

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