COMMISSIONER'S DECISION

ANTICIPATION: Lack Of Subject Matter Over the Prior Art

The process, and the product defined by that process, held to be substantially identical to what was disclosed in one of the citations. The percent by weight solids in the extract and the added step of drying were also shown to be known, thus the series of known steps had not combined to produce any result beyond what would be expected from the prior art.

FINAL ACTION: Affirmed.

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This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated July 5, 1972 on application 070,884. This application was filed on December 24, 1969 in the name of Richard G. Reimus et al and refers to "Concentration Process". The Patent Appeal Board conducted a Hearing on May 16, 1973, Mr. H. O'Gorman represented the applicant.

In the prosecution terminated by the Final Action the examiner refused the application as lacking patentable subject matter in view of the following cited references:

References Applied:

Canadian Patents			
699,247	Dec. 1, 1964	Cl. 99-85	H. Svanoe
759,397	May 23, 1967	Cl. 99-22	J.W. Pike
832,391	Jan. 20, 1970	Cl. 99-22	J.G. Muller
United States Patent			
2,967,778	Jan. 10, 1961	Cl. 99-205	P.S. Cole et al

The examiner also refused claim 1 as being vague and indefinite, also the divisional status of the application was refused.

In this action the examiner stated in part:

> The Cole patent is an indication that it was common general knowledge at least as early as January 10, 1961, to wash ice to "recover" coffee, although this was not what Cole claimed as his invention. According to applicant's disclosure, coffee can be "recovered" if ice is washed and the object of the application is "to provide a process in which commestible liquid or liquid extract is subjected to freeze-concentration and the ice produced is washed". (Page 2, paragraph one.)

> Similarly, when referring to Svanoe and the recovery of coffee from the washing, applicant states that "although Svanoe discloses washing of the separated ice, he does not disclose 'recovering coffee from the washing' as claimed in claim 1". Applicant is, perhaps, suggesting that his "recovering" is different from Svanoe's "re-processing" because it includes "drying". If this is what applicant is suggesting, then such an interpretation is not supported by the disclosure. Neither Svanoe nor applicant include such "drying". (Besides application 071,551 is concerned with that.) Svanoe's "reprocessing" is equivalent to applicant's "recovering". Svanoe is further evidence that ice-washing is a matter of common general knowledge.
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> The examiner is of the view that in an application reciting a large number of old steps, the steps themselves cannot be regarded as "subject matter" simply because no one of these steps can be regarded the subject of the application. The procedure of choosing different steps to make up new processes long after the original application was filed is an unacceptable procedure. Such processes do not constitute "subject matter" of the application; they constitute new subject matter that was not filed at the time of the original application. Whereas a process claimed in an application as originally filed has the date of that application even when the steps of the process are themselves old because the "subject matter" was filed with the filing of the application, a different process, claimed years later, made up of steps only individually disclosed in the original, cannot be given the same date of the original. This different process does not consist of "subject matter" of the original application. Applicant's entitlement to the date of the original viz his entitlement to divisional status does not include a right to make up processes entirely different from the one for which the application was filed, from steps disclosed individually to be old in the application.

The applicant, in his response of October 3, 1972, stated in part:

> It is the applicant's position that of the cited prior art, only U.S. 2,967,778 Cole et al is properly citable against the subject application, and that this reference does not provide an adequate basis for rejection of the applicant's claims as unpatentable.
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> The Cole et al reference has already been discussed, and it is believed distinguished over, in the response filed on December 15th, 1971. As has already been pointed out Cole et al does not disclose a process involving the preparation of an aqueous coffee extract in the claimed range of concentration of "about 10 - 30% by weight of dissolved solids". Nor does Cole et al disclose concentration by partial freezing "by indirect heat exchange in a scraped surface tubular crystallizer". In view of the foregoing, it is believed that the present claims are patentably distinguished over this reference.
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> What is described in the parent application is an overall process for producing concentrated coffee extract by a freeze concentration. The disclosed process includes a number of steps some of which are old, some new. However in the present application the applicant is not making up new processes by choosing different steps from the complete

process disclosed in the parent application. Rather the applicant is in the present application claiming basically the same process as is claimed in the parent application (i.e. a process for the preparation of a coffee extract involving freeze concentration) but emphasizing different aspects of the overall process as constituting a separate invention to the process claimed in the parent application. It is submitted that this is entirely legitimate and gives rise to no statutory objection under either Section 36 or Section 38 of the Patent Act.

This application refers to a concentration process and more specifically a process for the preparation of concentrated liquid extracts and particularly soluble coffee. Claims 1 to 4 read:

1. A process for the preparation of a concentrated coffee beverage product, comprising

(a) preparing an aqueous coffee extract containing about 10 to 30% by weight of dissolved solids;

(b) subjecting said extract to concentration by partial freezing by indirect heat exchange in a scraped surface tubular crystallizer to form ice, and a more concentrated extract;

(c) separating said more concentrated extract from said ice by centrifugation; in a basket type centrifuge;

(d) washing the separated ice with water or dilute coffee extract in a centrifuge; and

(e) recovering coffee from the washings.

2. The process according to claim 1 in which the extract is dried after separation of ice.

3. The process of claim 4 in which the extract is dried under vacuum.

4. The product produced by the process of claim 1.

The cited reference to Cole discloses a process for producing freeze-concentrated fruit juices "and other beverage liquids such as milk, coffee etc." The washing of ice separated in a centrifuge from concentrated extract is described on page 5 line 4 to page 6 line 24 of the Cole reference which teaches the use of water to wash the ice cake in a rotating centrifuge basket and the washings are then recycled to the freeze-concentration apparatus. Therefore, it is clear that the freeze-concentration step in combination with the ice washing step is known in the art.

The Svanoe, Pike and Muller citations are all assigned to the same applicant as the instant application, and show that the combination of the steps of freeze-concentration, ice washing and recovery of mother liquor from the washings are already protected by patents.

The applicant has advanced the argument that: "...nor does Cole et al disclose concentration by partial freezing by indirect heat exchange in a scraped surface tubular crystallizer." However, the disclosure on page 4 lines 24 to 27 of the reference to Cole reads: "The superfreezers may take various forms, but a type of apparatus known as the "Votator" and exemplified by the Girdler (sic) patent number 1,783,864 and others is satisfactory." The term "Votator" has particular significance in this quotation in view of the statement made on page 7 lines 31 to 33 of the Cole disclosure that: "The final product from blend tanks 43 and 44 is delivered through a conduit 54 and pump 55 to a scraped surface cooler or votator...." Further, patent 1,783,864, referred to above, also teaches the use of an indirect heat exchange type of tubular crystalizer with agitating means.

Accordingly, it is clear that the use of a scraped surface tubular crystallizer of the indirect heat exchange type for partial freezing is in fact taught by the cited reference to Cole, and cannot stand as a distinguishing feature of the alleged invention of this application.

While the limit regarding the percentage of solids by weight in the initial aqueous extract included in the instant claims is not specifically recited in the reference to Cole, however the percentage of 10 to 30% specified is nevertheless within the range to be expected by a competent person whenever a concentrate is prepared by any concentration process.

It is held that the basic idea of the invention disclosed in this application of a process for the preparation of concentrated liquid extracts comprising the steps of: partial freezing, centrifuging, ice washing, recovery of the solids and the drying of the extract, is taught by the cited references and clearly lacks a patentable advance in the art over the references to Cole. The reference to Cole teaches: partial freezing of juices (or coffee), centrifuging, ice washing and recovering the dissolved solids from the washings; which steps are substantially identical to those claimed by the applicant in claim 1. Claims 2 and 3 make reference to a drying step. The reference to Cole, however, refers to U.S. Patent 2,588,337 which in turn refers to "concentration by evaporation" on page 1 line 60 of the Cole reference.

The process includes a series of known steps which contribute their known individual end results and the applicant has not shown that the particular choice of the order of the steps or that the added step has combined to produce any new result beyond that naturally to be expected from the teachings of the prior art. Furthermore, it is held that any variation, such as the 10 to 30% of solids by weight, is of a nature that could easily have been ascertained by non-inventive selection and trial by competent persons in the art.

Accordingly, the Board is satisfied that claims 1 to 3 do not define patentable subject matter over the prior art, it follows that product claim 4 dependent on the process does not define patentable subject matter. Moreover, since there is no further subject matter in the application, it follows that the application as a whole lacks patentable subject matter.

The ground of rejection that "claim 1 is indefinite" and the ground of rejection with respect to "divisional status" need not be considered in view of the fact that the application is refused for want of patentable subject matter. The Board therefore recommends that the decision of the examiner, to refuse the application as lacking patentable subject matter, be affirmed.

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

I concur with the findings of the Patent Appeal Board and refuse the grant of a patent with respect to the subject matter of this application. The applicant has six months within which to appeal this decision in accordance with Section 44 of the Patent Act.

Decision accordingly,

A.M. Laidlaw,
Commissioner of Patents.

Dated in Ottawa, Ontario
this 3rd day of July, 1973.

Agent for Applicant

Smart & Biggar, Ottawa.