COMMISSIONER'S DECISION

OBVIOUSNESS: Production of Kaolinitic Clay

In an carlier Commissioner's decision on this application a conflict claim was refused and removed. This rejection relates to other claims subsequently rejected as obvious in view of cited art.

FINAL ACTION: Affirmed

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action of October 15, 1975, on patent application 901145. The application was filed in the names of William Windle and Reginald T. Bailey, and deals with "A Method of Producing a White-Firing Kaolinitic Clay."

Previously the application had been involved in conflict proceedings with two other applications, during the course of which one of the claims, C5, was refused as covering subject matter obvious in view of certain cited art. The applicant requested a review of that rejection, and the Commissioner supported the refusal on May 8, 1973. An appeal was taken to the Federal Court of Canada, but subsequently withdrawn, and claim C5 removed. The examiner then proceeded to examine the remaining claims, present claims 1-5. During the earlier prosecution the examiner had indicated that these claims were not patentably different from C5, were not patentable over the prior art, and would be rejected at the termination of the conflict (assuming, of course, that the rejection of C5 was proper). He then proceeded to reject claims 1-5 as being directed to subject matter which was obvious, and therefore unpatentable. It is that rejection which is now before the Patent Appeal Board for consideration. The application relates to a process for purifying white-firing clay suitable for use in the manufacture of ceramic articles using electromatic means to remove impurities. In the prosecution terminated by the second Final Action, the examiner refused claims 1 to 5 as being obvious in view of the following references.

> United States Patent 90,565 May 25, 1869 Lynd "Wet Magnetic Separator For Feebly Magnetic Minerals," part I by G.H. Jones and part II by W.J.D. Stone, a paper delivered at the International Mineral Processing Congress, London, 1960, and published June, 1962 in the Bulletin of the Canadian Department of Mines and Technical Surveys, Group VI, Paper No. 34.

In his action the examiner stated (in part):

The patent to Lynd is cited only to establish the fact that it is old in the art to use magnets to remove iron and other discoloring matters from a clay slurry. It is recognized, as applicant argues, that Lynd uses permanent magnets to remove relatively large particles.

However, when it is known to use a magnet to remove magnetic discoloring impurities from clay, and then a more powerful magnet is invented, it is not invention to use the new magnet in the same manner for the same purpose as taught by Lynd.

This statement is particularly true of the Jones magnet described in the cited publication, which is capable of producing a field strength of at least 10,000 gauss. In this publication the author states (page 717) "the author aimed therefore to develop a machine suitable for the wet separation of feebly magnetic minerals including even the least magnetic of these, such as muscovity mica and tourmaline".

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Applicant has argued novelty in the removal of muscovite, and the fine size of his separated particles. These arguments are refuted by the preceding quotations. Applicant has not developed or added anything inventive to the process of the cited publication but argues that his particle size is finer. The quoted statement from page 733 of Stone covers the size range of applicant, and the particle size is therefore not inventive.

Claims 1, 2 and 3 are rejected as being unpatentable over the references.

Claim 4 is rejected as being unpatentable in view of common general knowledge in the separating art. It is standard operating procedure in the mineral separation art to recirculate material through any separating means until the desired degree of separation is achieved. Claim 5 is also rejected as being unpatentable over the references. Applicant discloses a magnetic field strength of at least 10,000 gauss, preferably 15,000 gauss. The reference Jones magnet produces a field strength of at least 10,000 gauss. There is no unexpected result achieved by increasing the field strength to 15,000 gauss. It is a matter of degree only, the expected result.

The applicant in the response to the Final Action, dated January 15,

1975 stated (in part):

Applicants regret that they are confused by the manner in which the present final action is expressed. It appears to be the basis of the final action that the claims now before the Office are unpatentable as being not patentably different from the rejected conflict claim C5. It is assumed that Rule 69 is the basis for the present rejection and the text of Rule 69 is set forth below:

- 69. (1) An applicant may not reassert any claim that has been amended or cancelled to avoid a conflict or assert any claim to subject matter not patentably different from that defined in a claim so amended or cancelled.
 - (2) Where an applicant fails to contest priority with respect to conflicting subject matter claimed in another application or where priority is awarded to an opposing party, the applicant may not retain in his application or introduce into it claims for subject matter not patentably different from such conflicting subject matter.

In view of the above Rule, applicants may not reassert or retain claims for subject matter not patentably different from subject matter defined in a conflict claim that has been amended or cancelled to avoid conflict. As pointed out in the previous response claim C5 was not cancelled or amended to avoid conflict; it was cancelled instead as a result of the final rejection of that claim.

The application is for a method of processing Kaolinitic clay for the production of ceramic articles. Kaolin (china clay) is extracted from the ground and contains iron-containing impurities which causes specking or poor colour when the clay is fired. The applicant forms a slurry of the Kaolinitic clay and subjects the slurry to the action of a non-homogeneous magnetic field to separate paramagnetic particles therefrom. The patent to Lynd establishes that it is known in the art to use artificial or natural magnets to remove iron and other discoloringmatters from solutions of argillaceous substances which are to be used for the manufacture of white wares.

The publication "Wet Magnetic Separator For Feebly Magnetic Minerals" (Jones and Stone) states at page 717:

... the author aimed therefore to develop a machine suitable for the wet separation of feebly magnetic minerals including even the least magnetic of these, such as muscovite mica and tourmaline

And at page 733:

Although Magnetic separation has long been a useful tool of the mineral dressing engineer, available equipment until recently has been of limited effectiveness on separations involving materials ranging in particle size from 100 mesh down to a few microns. This was particularly the case with weakly magnetic minerals.

With the acquisition in the spring of 1959 of a Jones wet magnetic mineral separator the Mines Branch put into operation the only pilot unit of this machine in existence. This high intensity wet magnetic separator differs in design from existing machines and has been developed to be particularly effective in the fine particle size range, especially on weakly magnetic minerals.

Also at page 743 a list of conclusions are given:

- (3) The Jones unit makes effective separations on fine materials containing minerals considered weakly magnetic, or not suitable for magnetic separation at all.
- (5) The indicated susceptibility of some muscovites in the Jones separator suggests a possible application in the clay industry.
- (6) The Jones machine may be used to separate minerals of different magnetic susceptibilities in very fine sizes.

In the applicant's response he states that he is "confused by the manner in which the present final action is expressed," and assumes that Rule 69 is the basis for the rejection. It is noted however, that on page 1 of the Final Action the second paragraph states "The rejection of these claims, and of this application, is made in view of the following references," and on page 2 the last four paragraphs outline in detail the rejection in view of the prior art. Consequently we are in no doubt that the rejection was made on the ground that the invention is obvious in view of that art, and see no need to consider Rule 69. We agree with the applicant that under the present circumstances Rule 69 is not involved.

The applicant requests a "review of the reason for rejection of the claims now before the Office for reasons already set forth at length in the prosecution of this application." One of the arguments previously advanced was that the Jones and Stone reference is not a proper citation as the earliest publication date established for it is June 1962, whereas this application was filed on April 24, 1964, less than two years after publication.

While it is correct that the examiner's report does refer to a publication date in 1962, the proceedings of the meeting were also published in 1960, and the applications arguments based upon any inadequacy in the age of the citation must fail. Publication at any time during 1960 would, of course, predate the filing of this application by more than two years.

The question to be decided is whether the applicant has made a patentable advance in the art. Claim 1 reads:

A method of producing a white-firing, kaolinitic clay, which comprises forming a slurry of kaolinitic clay and subjecting the slurry to the action of a non-homogeneous magnetic field having an average strength of at least 10,000 gauss to separate paramagnetic particles therefrom.

Lynd teaches the use of natural or artificial magnets to remove discolouring matter from solutions of argillaceous substances, which substances are to be used for the manufacture of white wares. The limitations of claim 1 over the Lynd patent is that the clay is defined as a "kaolinitic clay" and that the intensity of the magnetic field having an average strength of at least "10,000 gauss." The publication reference teaches the use of the Jones "High Intensity Wet Magnetic Separator" and specifically refers to its application to the clay industry. This publication specifically states that the "Jones machine may be used to separate minerals of different magnetic susceptibilities in very fine sizes". In addition, however, magnetic separators using high intensity magnets are also well known as noted on page 2 of the instant disclosure, line 14, which reads: "... a separator capable of producing a field strength of at least 10,000 gauss, and a preferred separator is described in British patent Specification No. 768,451."

Another argument previously advanced by the applicant was that page 743 of the reference to Stone would deter one skilled in the art from attempting the difficult separation referred to. The Board cannot agree with this argument as this paragraph states: "The very fine feed used in experiments 11, 12 and 13, involving the removal of very feebly magnetic chlorite from talc, was not considered amendable to magnetic separation. However, very good results were obtained." If very good results were obtained in spite of the reluctance of the material to magnetic separations, then certainly this would encourage rather than discourage the trial or use of the magnetic process in other circumstances.

The limitations placed in claim 1, such as the restriction to "kaolinitic" material and the reference to the intensity of the magnetic field. are minor alterations. It would be obvious to modify the Lynd process by using stronger magnets when they became available, and to use it with different types of clay.

The Board is therefore satisfied that Claim 1 does not teach an advance in the art over the cited references, or even over the Lynd patent itself when we add to it the admissions made in the disclosure about British Patent No. 768,451. Claims 2 to 5, which depend directly or indirectly on claim 1, add features such as a magnetic separator, field strength, and particle size. In the circumstances these do not add anything of patentable significance to rejected claim 1. We are also satisfied that there is no further subject matter in the disclosure which would be patentable.

The Board recommends that the decision in the Final Action to refuse the application for failure to disclose patentable subject matter be affirmed.

llughes Assistant Chairman, Patent Appeal Board.

I concur with the recommendations of the Patent Appeal Board and I refuse to grant a patent of this application. The applicant has six months within which to appeal this decision under the provisions of Section 44 of the Patent Act.

HBrown Brown, J.A. Brown, Acting Commissioner

of Patents.

Dated at Hull, Quebec this 3rd. day of October, 1975.

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