

25 Broadway

New York

OFFICE OF
THE VICE PRESIDENT

September 25, 1940.

Mr. F. O. Case, Manager of Midwest District,
International Smelting and Refining Company,
20 North Wacker Drive,
Chicago, Illinois.

Re: Johnson et al Application
Serial No. 178,352, For: METHOD
OF PRODUCING WHITE LEAD

Dear Frank:

I am sending you herewith copy of letter dated September 24th from Pennie, Davis, Harvin and Edmonds, relative to the above noted patent application, which is self-explanatory.

Yours very truly,

G
Enc.

CC - Mr. G. E. Johnson

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September 24, 1940

Mr. Frederick Laist, Vice-President
International Smelting and Refining Co.
25 Broadway (Room 1720)
New York, N. Y.

Dear Sir: Re: Johnson et al. Application, Ser.
No. 178,352, For: Method of
Producing White Lead

In accordance with your letter of September 9, 1940,
and the enclosed copies of letters from Messrs. Case and
Johnson, I have gone over the above-mentioned application with
a view to outlining an affidavit for Mr. Johnson which we
might use in persuading the Examiner that the claims are
patentable.

In rejecting the claims the Examiner relies
principally on Examples 2 and 4 (page 1, lines 39 to 42, and
page 1, lines 47 to 50) of the Johnson patent No. 1,845,713.
These examples in the Johnson patent disclose the idea of
controlling the bicarbonate ion concentration of the white
lead electrolyte by deficient carbonation of the catholyte
and treatment of the anolyte with a reagent to raise the
bicarbonate ion concentration to a desired value. This
procedure differs from the procedure covered by this applica-
tion in that the process of the application involves excess

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carbonation of the catholyte and treatment of the anolyte with a reagent to reduce the concentration of bicarbonate relative to carbonate.

The two cited examples of the Johnson patent and the procedure of the present application may be summarized as follows:

A. Example 2 of Johnson patent. The catholyte is subjected to deficient carbonation, and the bicarbonate ion concentration is adjusted by adding acetic acid in the indicated amount to the anolyte at a point outside the cell.

B. Example 4 of Johnson patent. The catholyte is subjected to deficient carbonation and the bicarbonate ion concentration is adjusted by adding sodium bicarbonate to the anolyte at a point outside the cell.

C. Process of this application. The catholyte is subjected to excess carbonation and the bicarbonate concentration is adjusted by adding sodium hydroxide to the anolyte at a point outside the cell.

The Examiner contends that in view of the known fact that bicarbonate may be converted to carbonate by means of a caustic, no invention is involved in adjusting the bicarbonate ion concentration by adding an alkali to a solution containing an excess of bicarbonate, as in this case, rather than by adding an acid or sodium bicarbonate as such to a solution containing a deficiency of bicarbonate relative to carbonate as in the

cited Johnson patent. My feeling is that this rejection is not particularly well founded, but if we can show to the Examiner that the procedures of the cited Johnson patent are less economical and otherwise less satisfactory than the claimed process, the chances of securing allowance of the application will be materially enhanced.

In order to prepare such an affidavit, I would appreciate information on the following points: Have either of the procedures outlined in Examples 2 and 4 of the cited Johnson patent ever been employed at East Chicago? If they have, I would appreciate having a fairly detailed summary of how this method of control compares with the method of control described and claimed in the present application. If not, I would like to have a fairly detailed statement of the reasons why these methods of control were not employed. Are they less economical, do they lead to the production of an inferior product? Are they ineffective in securing adequately precise control of bicarbonate ion concentration, or are there any other objections to their use?

The procedure of Example 2 of the Johnson patent would appear to result in the continual addition of sodium acetate to the electrolyte. I wonder if too much sodium acetate would be added by following this procedure? Both cited examples of the Johnson patent would appear to result in continual addition of sodium ions to the electrolyte, but presumably this would not be any more serious than in the case of the process of the present invention. The fundamental distinction between the process of the present invention and the process of the

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cited Johnson patent is that in the former the catholyte is subjected to excess carbonation, whereas in the latter it is subjected to deficient carbonation. I will appreciate your advice as to whether or not deficient carbonation is more difficult to employ in practice than excess carbonation.

Any information that you can give me in connection with the foregoing will be very much appreciated. I will value particularly any definite quantitative data which tends to show that the process of the invention is superior to the procedures of the Johnson patent, either on account of producing a superior and more uniform product, or for reasons of economy. Such information, particularly if quantitative, will be especially useful in preparing a suitable affidavit for submission to the Examiner.

Very truly yours,

Sam W. Laist

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