

UNITED STATES PATENT OFFICE.

ELWYN WALLER AND CHARLES A. SNIFFIN, OF NEW YORK, N. Y., ASSIGNORS
TO THE AMORPHOUS WHITE LEAD COMPANY, OF NEW JERSEY.

PROCESS OF MAKING WHITE LEAD.

SPECIFICATION forming part of Letters Patent No. 525,826, dated September 11, 1894.

Application filed March 28, 1892. Serial No. 426,763. (No specimens.)

To all whom it may concern:

Be it known that we, ELWYN WALLER and CHARLES A. SNIFFIN, citizens of the United States, and residents of the city, county, and State of New York, have invented an Improved Process of Making White Lead, of which the following is a specification.

This invention relates to precipitation processes of making white lead for use as a pigment, and particularly to that method wherein a solution of basic lead acetate is treated with carbon dioxide which latter precipitates a portion of the lead in the form of hydrocarbonate, the "white lead" of commerce.

It is essential to the usefulness of white lead as a pigment that it shall be highly amorphous in character, and this quality has not, so far, been attained in a satisfactory degree by the passing of carbon dioxide, in a gaseous state, into a solution of the basic lead acetate.

We have discovered that when a solution of basic lead and a solution of carbon dioxide in water are mixed together preferably under pressure above the atmosphere, the carbon dioxide taken up by the water acts on the lead in the solution and precipitates it in the form of highly amorphous lead hydrocarbonate.

In carrying out our invention in the preferred way, we prepare a solution of basic lead acetate by any of the methods known in the arts, and a solution of carbon dioxide in water under pressure, and then force one of these solutions into the other, preferably the basic solution into the carbonated water contained in a precipitating vessel. The carbon dioxide held in solution in the water acts on the lead, (or some part thereof) in the solution of basic acetate, and precipitates it in the form of white lead which is removed and dried. The liquid remaining in the vessel contains neutral lead acetate in solution, and this solution may be employed in preparing a fresh charge

of the basic acetate in a way well understood in the arts.

We may employ the carbonated water under atmospheric pressure; that is, in an open vessel; but as the volume of carbon dioxide which is taken up and held in solution under the pressure of the atmosphere is only equal, approximately, to that of the water, the percentage of the precipitate proportional to the volume of water in the residual solution of neutral acetate, is very small, and where this solution is to be employed in preparing a new charge, the necessity of reducing the volume by evaporation renders the process less economical than where the carbonated water is under pressure and contains a much larger volume of carbon dioxide.

Having thus described our invention, we claim—

1. The herein described method of making white lead, which consists in preparing an aqueous solution of basic lead acetate and a solution of carbon dioxide in water under pressure, and then forcing one of said solutions into the other, whereby lead is precipitated from the lead solution in the form of amorphous hydrocarbonate, and then separating said precipitate from the residual liquid.

2. The herein described method of making white lead, which consists in forcing a solution of basic lead acetate into water charged with carbon dioxide, under pressure, whereby lead from said solution is precipitated in the form of white lead or lead hydrocarbonate.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

ELWYN WALLER.
CHAS. A. SNIFFIN.

Witnesses:

SELAH L. BENNETT,
SAM. S. CAMPBELL.