

# UNITED STATES PATENT OFFICE.

GEORGE T. LEWIS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PROCESSES OF REFINING AND WHITENING THE PRODUCTS FROM SULPHURETS OF LEAD AND ZINC.

Specification forming part of Letters Patent No. **112,606**, dated March 14, 1871.

*To all whom it may concern:*

Be it known that I, GEORGE T. LEWIS, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Process of Refining and Whitening the Products of the Sulphurets of Lead and Sulphurets of Zinc, which invention is supplementary to the treatment of sulphurets of zinc and lead (either as single sulphurets or as mixed sulphurets) with fuel and a dust-blast, for the purpose of obtaining lead - white, zinc - white, or lead and zinc white, by collecting the products in a bag room, or otherwise; and I do hereby declare the following to be a full, clear, and exact description of my said invention, which will enable others skilled in the art to which it appertains to practice the same.

The nature of my said invention consists in passing the product which is obtained by burning a mixed charge of fuel and the sulphuret ores of zinc and lead, as above, through a metallic or other infusible tube heated to redness. I take a tube about twelve inches in diameter

and about six feet long and mounted on an axle in an inclined direction, so that it can be constantly revolved. The product of the combustion of the ores of zinc and lead above mentioned, after being caught in the bag room or other collecting - chamber, as is usually done, is conveyed to the upper end of the inclined revolving cylinder or tube and caused to slide through with such velocity as shall insure a thorough treatment by the heat and air in its passage. The revolving cylinder is kept heated to a low red heat by a furnace underneath.

Having thus described my invention, what I claim is—

The process of refining and whitening of the products obtained by reducing the sulphurets of lead and zinc with fuel by passing these products through a heated tube, substantially as described.

GEORGE T. LEWIS.

Witnesses:

WM. R. WRIGHT,  
CHAS. M. GREER.