

UNITED STATES PATENT OFFICE.

GEO. T. LEWIS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN THE PREPARATION OF WHITE OXIDE OF ZINC FOR USE IN PAINTS.

Specification forming part of Letters Patent No. 36,414, dated September 9, 1862.

To all whom it may concern:

Be it known that I, GEORGE T. LEWIS, of the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in the Preparation of White Oxide of Zinc for the Manufacture of Paint; and I do hereby declare that the following is a full, clear, and exact description of the same.

Zinc-white paint is ordinarily manufactured by grinding the white oxide of zinc in oil without any previous preparation beyond levigation, and its want of what is termed by painters "body" has been much complained of.

The object of my invention is to enable the white oxide of zinc to be manufactured into paint having a desirable degree of body; and to this end my invention consists in subjecting it in its dry state to the combined actions of friction and pressure, by which means its bulk is greatly reduced and it is enabled to be ground with a much smaller quantity of oil.

The machinery which I have used for the purpose of subjecting the oxide to friction and pressure to effect its compression or condensation has consisted of revolving chasers or edgerunners, such as are commonly used for tempering flaxseed for the manufacture of linseed-oil. With a pair of chasers of fifty-one inches diameter and fourteen inches wide, making fourteen revolutions per minute, I have operated successfully upon two hundred pounds

at once, continuing the operation for thirty minutes, in which time I have reduced it nearly to one-half its original bulk, a barrel which held one hundred and seventy-five pounds in the original uncondensed state holding three hundred and forty-five pounds of that which had been condensed. The oxide in its original uncondensed state required for grinding two and one-half gallons of oil for every one hundred pounds; but when condensed it only required for grinding one and three-fourths gallon. By subjecting the oxide to the operation of the chasers for a greater length of time it may be more highly condensed and ground with a less quantity of oil, and increased body will be thus given to the paint.

I do not claim broadly the application of pressure as shown in Titterton's English patent of November 4, 1856; but

What I claim as my invention, and desire to secure by Letter Patents, is—

The preparation of white oxide of zinc for the manufacture of paint by subjecting it to the combined actions of friction and pressure, substantially as herein described, whereby its density is increased and the paint caused to have greater body.

GEORGE T. LEWIS.

Witnesses:

JAS. MILLIGAN, Jr.,
JOHN T. LEWIS.