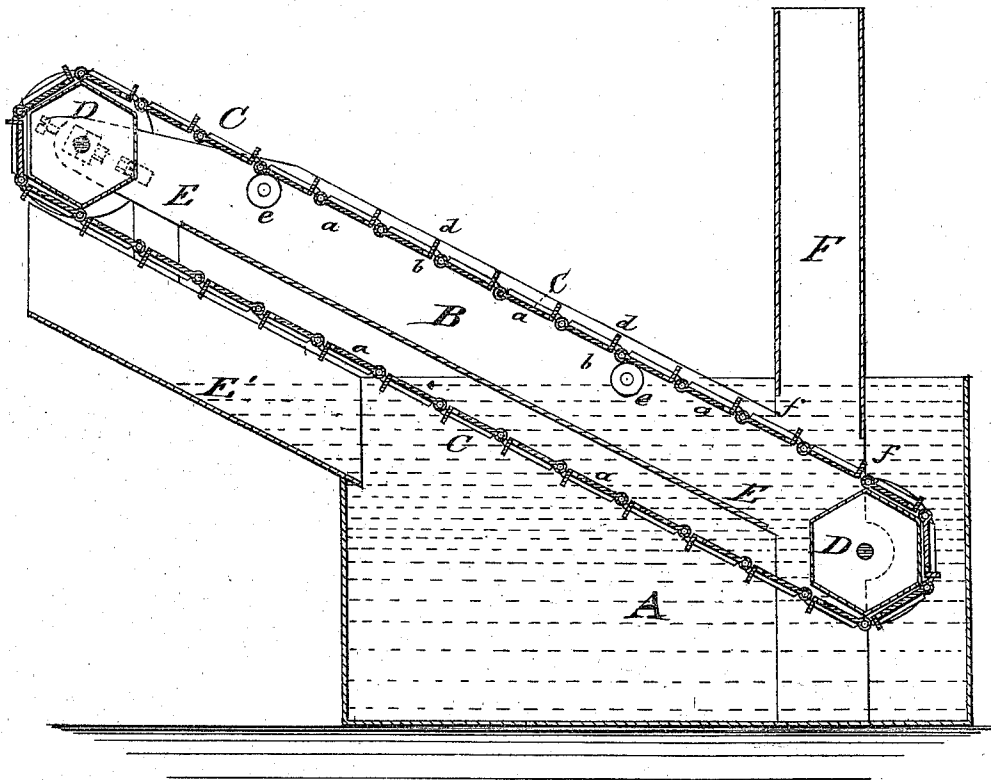


M. TOLLE.

Manufacture of White-Lead to Collect the Dust.

No. 142,419.

Patented September 2, 1873.



Witnesses:

*E. Wolff*  
*Scribner*

Inventor:

*M. Tolle*

Per

*Wm. H. ...*  
Attorneys.

# UNITED STATES PATENT OFFICE.

MICAH TOLLE, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN THE MANUFACTURE OF WHITE LEAD TO COLLECT THE DUST.

Specification forming part of Letters Patent No. 142,419, dated September 2, 1873; application filed July 12, 1873.

### *To all whom it may concern:*

Be it known that I, MICAH TOLLE, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and Improved Apparatus for Utilizing Lead-Dust in White-Lead Factories, of which the following is a specification:

The accompanying drawing represents a vertical longitudinal section of my improved apparatus for utilizing lead-dust in white-lead factories.

The object of my invention is to utilize the lead-dust which escapes at present in white-lead factories after having passed through the separator in which the corroded lead has been separated from the uncorroded lead, so that a considerable saving be accomplished, and the health of the workmen be protected against the deleterious influences of the lead-dust. My invention consists, principally, in the suitable combination of an elevator with a casing or spout, through which the uncorroded lead is conducted on the elevator, which is submerged in a tank of water, so that the lead-dust carried down from the separator is retained therein, and the uncorroded lead carried up by the elevator.

A in the drawing represents a tank or cistern filled with water, into which the lower end of an inclined elevator, B, is submerged. The elevator B may be constructed in any one of the usual forms, with belt or chain C; but may, by preference, be arranged with buckets *a*, having perforations *b*, and end ribs or projections *d*, so that the water may easily pass through, and the uncorroded lead be carried up in the buckets. Stationary or adjustable pulleys D, of which the upper is driven by suitable power, the lower connected to the sides of the tanks, set the buckets *a* in motion. Rollers *e* support the upper part of chain C, and turn in bearings of the sides of the upper

trough E, which conducts the water-drippings back into tank A. A similar trough, E', is also arranged below the returning portion of chain C for the same purpose. A casing or spout, F, is connected to the top of the submerged end of elevator B, being of the same width, and provided with side openings *f* toward the buckets *a*. Spout F is placed vertically, or with suitable inclination, on elevator B, and conveys the uncorroded lead down from the separator in which the corroded lead has been separated from the uncorroded or metallic lead. The metallic lead carries all the lead-dust down through the upright spout into tank A, and settles then on the chain or belt at the lower end of the elevator, from which it will be taken up out of the water by the buckets, and conveyed to any suitable place.

The lead-dust will be retained in the water, and prevented from flying about the factory, so that the same is more healthy and pleasant for workmen. A considerable saving of lead is produced by this absorption of the dust, and, also, the adhering corroded lead washed off from the uncorroded lead, so that the latter will afterward, when exposed to the acid for oxidation into white lead, offer less resistance to the same.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The apparatus for utilizing the lead-dust generated in white-lead factories by the separation of the corroded from the uncorroded lead, consisting of tank A, elevator B, with troughs E E', and spout F, constructed and arranged substantially as and for the purpose described.

Witnesses: MICAH TOLLE.

GEO. HENSING.

JAMES H. ROBINSON.