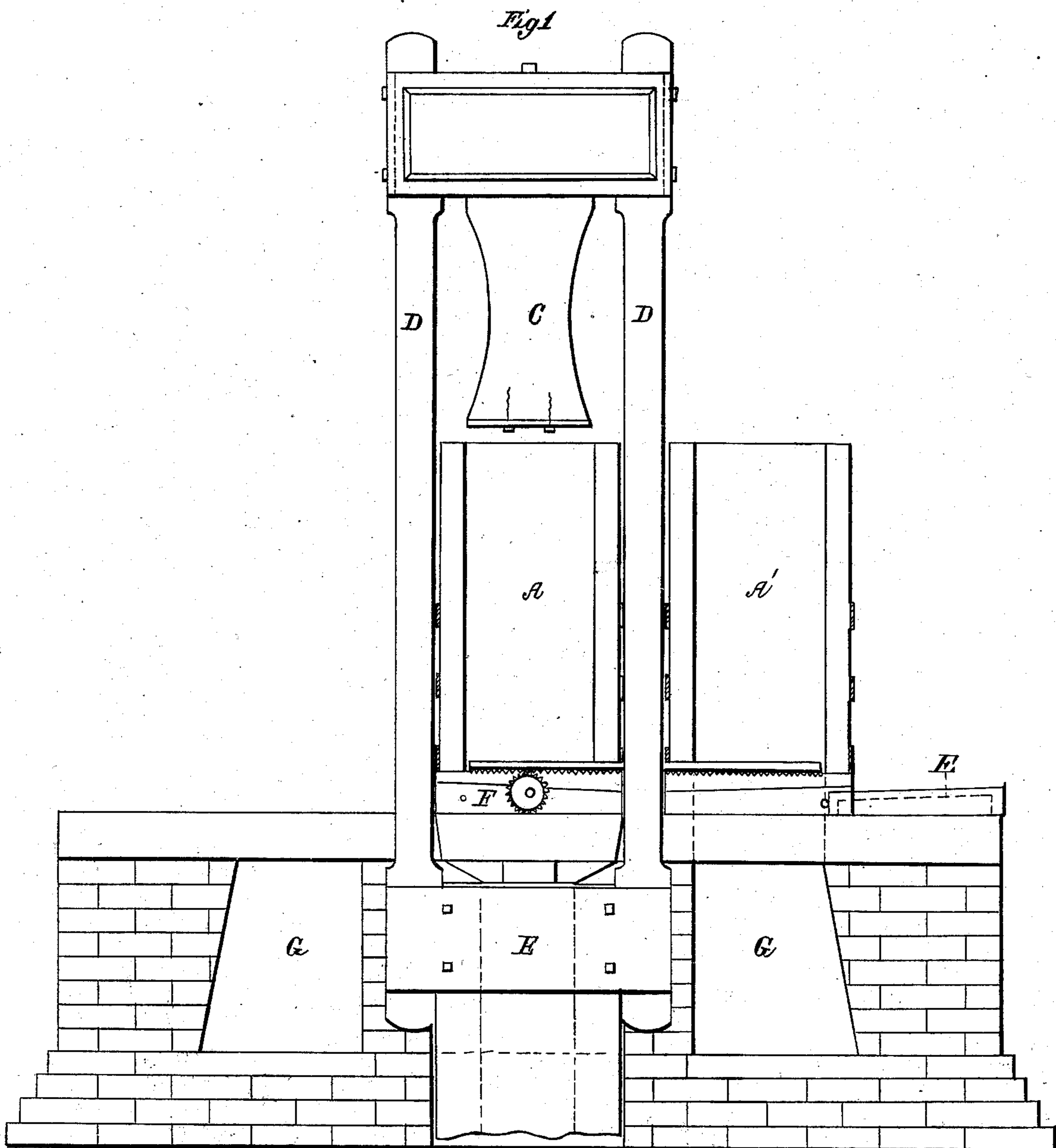


C. TITTERTON.  
Making White Zinc.

No. 32,320.

Patented May 14, 1861.



Witnesses.

*R. Hall*  
*J. Scamman*

Inventor.

*C. Titterton*

# UNITED STATES PATENT OFFICE.

CHARLES TITTERTON, OF ROHAMPTON, ENGLAND.

IMPROVEMENT IN THE PREPARATION OF OXIDE OF ZINC FOR A PAINT.

Specification forming part of Letters Patent No. 32,320, dated May 14, 1861.

*To all whom it may concern:*

Be it known that I, CHARLES TITTERTON, of Rohampton, in the county of Surrey, England, have made a new and useful Improvement in the Process of Manufacturing Zinc-White; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, and which represents a sectional view of the best form of apparatus which can be used to effect my purpose.

The nature of my discovery consists in the giving of greater body to zinc-white by submitting it to great pressure. I have found that by submitting it to great pressure—say from two hundred to eight hundred tons, according to the density required—the character of the product is materially changed, the particles are compressed and cohere together, forming a solid and compact mass. The zinc-white, when taken from the vessel in which it is compressed, is of the hardness of chalk, and after being ground in oil in the usual way still retains all the density imparted to it by the previous pressure; nor does it ever lose this density. Thus the great objection to the use of zinc-white as a paint (its little density) is removed. An apparatus which I consider most suitable for the purpose of giving this pressure is constructed as follows:

A A' are two strong cylinders or holders, made of any suitable material and of any desired form or size. These rest on a sliding rack, B B, or other device, by which they may be brought under the presser C.

C is a presser fixed firmly to the frame D D, and is made of a size and shape to fit the interior of the cylinder A.

E is a hydraulic ram, and E' the head of the ram. This ram is placed directly under the presser C. The cylinders A and A' are open at both ends, and the lower end, when under the press, rests just above the head ram. A wedge, F, is then slid beneath the cylinder, and forms the bottom of it.

G and G' are receivers for the discharge of the pressed zinc.

It should be remarked that the whole of this apparatus should be strongly secured in masonry or in other proper manner.

The mode of its operation is as follows: The cylinder A, being filled with zinc desired to be pressed, is moved under the presser C. Then by means of the hydraulic ram it is driven upward, the presser C, of course, entering the top of the cylinder and pressing the zinc. After pressing, the cylinder is again lowered to the rack B and removed from under the presser and drawn over the receiver G. By drawing out the wedge F the contents are transferred to the receiver G. The holder A', having been filled, is at the same time brought beneath the presser C, and its contents pressed and discharged into the receiver G'. Thus the holders A and A' are alternately brought beneath the presser. The holders A and A' should have their lower half slightly tapering, so as to permit the easy dislodgment of the zinc after it has been sufficiently pressed. Downward pressure might be used, but it would not be found so convenient; also a screw or other powerful press might be used instead of the hydraulic press; but the form of apparatus above described I consider the best.

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

The subjecting of oxide of zinc, when contained in a strong holder, to great pressure by hydraulic, screw, or other powerful presses, as described, whereby the density is greatly increased and its covering-powers brought to nearly equal white lead, overcoming a great objection hitherto existing to the use of white oxide zinc.

C. TITTERTON.

Witnesses:

P. PYAUL,  
F. SCARMAN.