

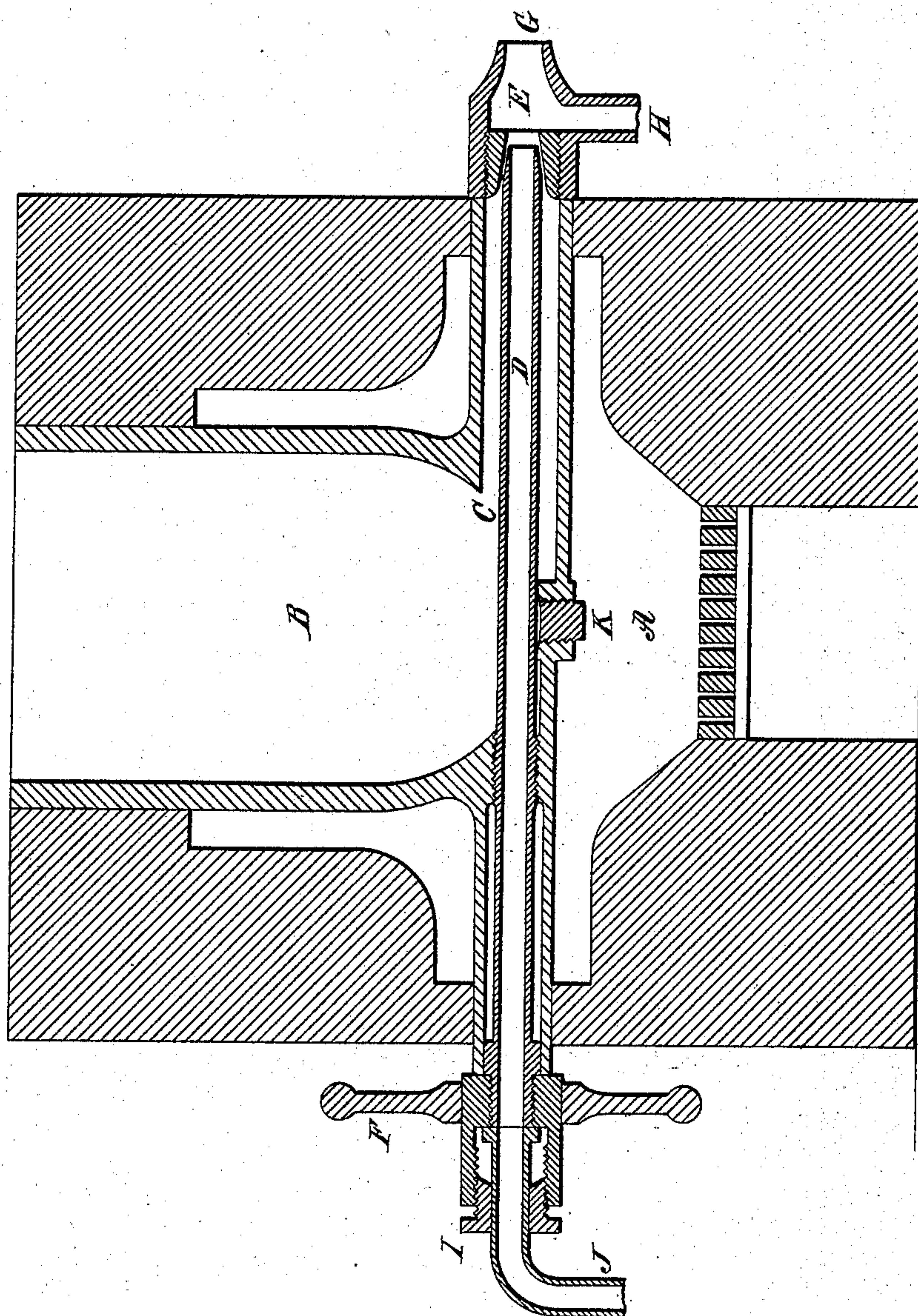
(No Model.)

W. V. WILSON.

APPARATUS FOR THE MANUFACTURE OF WHITE LEAD.

No. 322,235.

Patented July 14, 1885.



Witnesses:

C. C. Perkins
E. H. Spencer

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UNITED STATES PATENT OFFICE.

WILLIAM V. WILSON, OF LONDON, ENGLAND.

APPARATUS FOR THE MANUFACTURE OF WHITE LEAD.

SPECIFICATION forming part of Letters Patent No. 322,235, dated July 14, 1885.

Application filed November 17, 1884. (No model.) Patented in England September 8, 1882, No. 4,275.

To all whom it may concern:

Be it known that I, WILLIAM V. WILSON, of London, England, have invented a new and useful Improvement in Apparatus for Granulating Metallic Lead for Use in the Manufacture of White Lead; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to the preparation of metallic lead for oxidation in the manufacture of carbonate of lead or of white lead; and it consists in an improved apparatus, constructed as hereinafter described, wherein the molten lead is blown out from a convenient orifice in a vessel containing it by means of a blast of steam or hot air admitted to the lead before it reaches the outer air.

In the accompanying drawing, which is a vertical section of the apparatus which I employ in granulating the lead, A represents the furnace; B, the melting-pot fitted with a tap, K, in the bottom thereof; C, the discharge pipe or conduit, also connecting with the bottom of the pot B; D, a jet-pipe for steam or air, terminating in a nozzle, E, within the outer end of the discharge-pipe C, which is reduced to form a convenient opening surrounding the nozzle, and to constitute in combination therewith an air or steam ejector. The nozzle E and the mouth of the pipe D are made tapering, and the former is made adjustable longitudinally by means of a hand-wheel, F, on the jet-pipe D, so that it may serve as a valve for adjusting the size of the discharge-orifice. G is the mouth or outlet of the ejecting device; H, a cold-water-supply pipe connected with the outlet, and J a supply-pipe for steam or hot air.

In the practice of my invention I melt the pure metallic lead in the vessel B, and then blow out the molten lead from an orifice within the exit-nozzle or discharge-pipe C of the melting-pot by means of a strong current or blast of steam or hot air discharged from the

nozzle E of the jet-pipe D, so that the fused metal, coming into contact with the steam before the latter can be cooled by the atmospheric air, will be effectually granulated into thin flakes, which will offer an extended surface for chemical action, this result being assisted by the discharge of the granulated metal into a current of water or cold air admitted thereto through the pipe H.

The metallic flaky or granulated lead thus obtained may be very readily oxidized and converted into carbonate of lead or "white lead" by any of the customary processes—as, for instance, by the well-known method of alternately raining over the finely-divided metallic lead a solution of neutral acetate of lead, then exposing the metal to the action of atmospheric air at a somewhat elevated temperature.

I do not claim, broadly, the application of steam to a stream of molten lead for its granulation, as this is set forth in the United States Patent No. 148,832, of March 27, 1874. My improvement consists in the special application of the steam to the lead as or before it issues from the melting-pot in manner substantially as set forth.

I claim as my invention and desire to secure by Letters Patent—

In an apparatus for granulating metallic lead, the furnace A, melting-pot B, discharge pipe and nozzle or granulating-orifice E, and adjustable steam or air supply pipe D, projecting centrally within the nozzle E, to form a convenient discharge-opening for the molten lead and emit a blast of steam or hot air within the nozzle E, all combined and operating substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

W. V. WILSON.

Witnesses:

WM. THOS. MARSHALL,
JAS. G. COOHEAD.