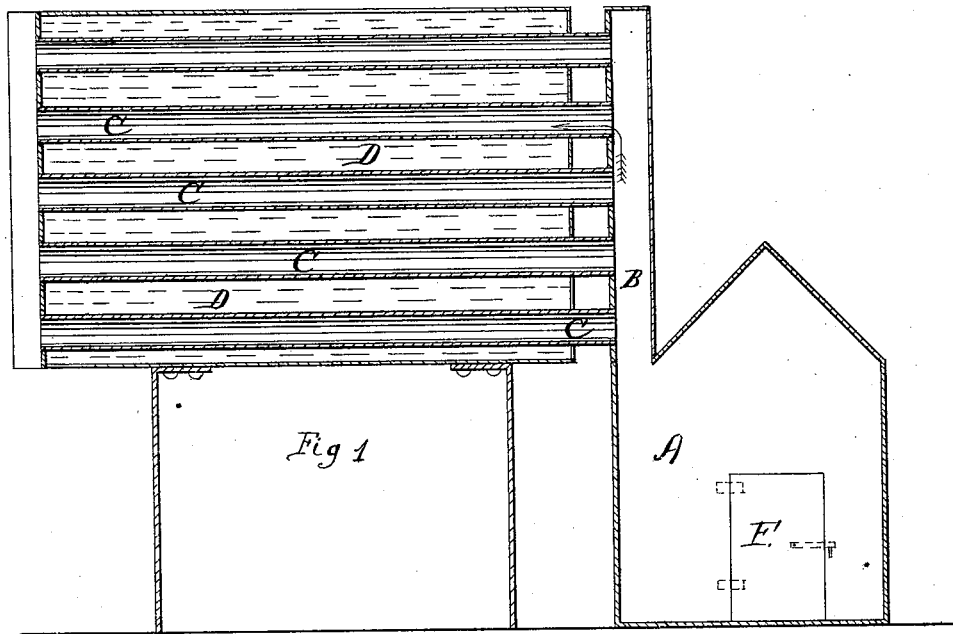


P. NEFF.

Apparatus for Manufacture of Lamp-Black.

No. 162,492.

Patented April 27, 1875.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER NEFF, OF GAMBIER, OHIO.

IMPROVEMENT IN APPARATUS FOR MANUFACTURE OF LAMP-BLACK.

Specification forming part of Letters Patent No. **162,492**, dated April 27, 1875; application filed March 6, 1875.

To all whom it may concern:

Be it known that I, PETER NEFF, of Gambier, in the county of Knox and State of Ohio, have invented certain new and useful Improvements in Machinery for the Manufacture of Lamp-Black; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in apparatus for manufacture of lamp-black from carbureted oils and gases; and consists in burning the said oil or gas in an apartment conveying the products of combustion through pipes or flues that pass through a tank containing water.

In the drawings, Fig. 1 is a sectional view of an apparatus embodying my invention. A is an apartment for burning oil, gas, or matter from which lamp-black is to be made.

The process of burning the said oil or gas, the burners by which they are burned, the particular construction of the burning-chamber, and the arrangement of its interior, form no part of this invention.

B is a flue leading from the burning-chamber A, whereby the products of combustion are led into pipes or flues C. D is a tank or apartment containing water, and through which the said tubes or flues C pass.

The lamp-black is partially deposited in the burning-chamber A and flue B; but it is designed that the flues C shall, in the most part, collect the said lamp-black. The apartment A and the flue B may be slightly removed from the tank or chamber D, so as to avoid any danger from fire. The apartment A and flues B and C are all so constructed that they may be readily scraped or brushed on all those surfaces where lamp-black may collect. For this purpose a cap or door, E, may be provided, by opening which the flues C may be readily cleaned, and a suitable door or doors, F, admit of ready communication with the

burning-chamber A, whereby access can be had to the burners and other apparatus contained in the chamber. The water contained in the tank D will soon become heated by the products of combustion passing through the flues C. To avoid this the water may be supplied to the tank D from a higher reservoir, whereby it may be continually fed in and permitted to escape, thus maintaining the water in a cool state.

The carbonaceous matter is burned in a suitable chamber, and in order that the products may be rapidly cooled, and not permitted to escape in large quantities at the distant end of the flues, it is necessary to divide up the volumes of the products of combustion so that it may pass through a number of flues, and thus be rapidly cooled. If the said products were made to pass through a single flue, the flue would have to be so large as not properly to effect the cooling of the products, while, if it were made small, the draft would be so great that the cooling could not be properly effected. It is, therefore, important that there should be several of the said flues, so that the products being divided up and passed through these several flues will become rapidly cooled, so that the lamp-black will be nearly, if not all, deposited in the said flues, and not be wasted in a great degree by being carried out at the other end of the flues.

What I claim as new is—

The apparatus for manufacture of lamp-black, consisting of the combination, with a suitable burning-chamber, A, of a water-tank having two or more flues, C, communicating with said burning-chamber, whereby the products of combustion may be divided up, substantially as and for the purpose described.

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

PETER NEFF.

Witnesses:

J. R. MURDOCH,
FRANK J. JONES.