

UNITED STATES PATENT OFFICE.

LEVI S. FALES, OF CINCINNATI, AND PETER NEFF, OF GAMBIER, OHIO.

IMPROVEMENT IN THE MANUFACTURE OF LAMP-BLACK.

Specification forming part of Letters Patent No. **160,759**, dated March 16, 1875; application filed November 19, 1874.

To all whom it may concern:

Be it known that we, LEVI S. FALES, of Cincinnati, Hamilton county, and PETER NEFF, of Gambier, Knox county, Ohio, have made a new and useful invention by using the residuum oily matter produced in the refining of petroleum for the manufacture of Lamp-Black or Carbon-Black, of which the following is a specification:

This invention consists in taking the carbonaceous heavy oil residuum, being the resulting oil-waste from refining petroleum, (it is called acid-waste, tar, or spent acid, and is more or less mixed with sulphuric acid; it is a carbonaceous waste, held in combination with sulphuric acid,) and producing from it lamp-black. The process consists of treating this heavy oil residuum with steam heat or any other heat to about 125° Fahrenheit; then add about twenty-five per cent. of water; submit this to an agitator by air, steam, or paddle for about fifteen minutes, till all are incorporated together; then allow it to rest for about six hours, till the acid settles and the oil rises and floats on the acidulated water. The acid is separated by being drawn off at bottom of vessel, and may be treated by evaporation to reduce it to a stage of commercial value. The oil is then treated with a solution of alkali, as potash, sal-soda, or soda-ash, in sufficient quantity to neutralize the remaining acid in

the oil. If this residuum waste has been treated for its sulphuric acid, then it should be re-treated with alkali, as above, to remove its remaining acid. The alkali will sink to bottom of vessel and the oil float. The alkali being drawn off, the oil is allowed to stand and settle for a few days. This oil is then burned by using a wick, or by causing it to drip from a pipe over a pot, skillet, or vessel placed in a tight room, and the smoke allowed to pass through a series of rooms, and, after the soot has settled by its gravity in different rooms, the heat be allowed to escape through a smoke-stack. The result is a superior quantity and quality of lamp-black.

What we claim as our invention, and desire to secure by Letters Patent, is—

The within-described process for making lamp-black from acid oil or the carbonaceous oily residuum combined with sulphuric acid, resulting from the refining of petroleum, consisting in first treating the mass to remove the acid, then burning it in an apartment at a low temperature.

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Witnesses:

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