

UNITED STATES PATENT OFFICE.

WILLIAM QUANN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF,
JOHN W. THACKARA, AND EDWARD L. SPAIN, OF SAME PLACE.

IMPROVEMENT IN FLUX FOR REDUCING ORES AND REFINING METALS.

Specification forming part of Letters Patent No. 120,099, dated October 17, 1871.

To all whom it may concern:

Be it known that I, WILLIAM QUANN, of Philadelphia, county of Philadelphia and State of Pennsylvania, have invented a Flux to be Used in the Reduction of Ores and Refining of Metals, of which the following is a specification:

My invention consists of a flux composed of broken glass, pulverized charcoal, and calcined shells, with which are also combined, in most instances, soda-ash or carbonate of soda and silicious sand, the several ingredients being combined, and the flux used with the ore or metal, in about the proportions hereafter described.

Ordinary broken glass may be used, but flint or other glass into which lead enters should be rejected, unless the ores of lead are to be treated with the flux. Ordinary pulverized charcoal may be employed, and the calcined shells are those of oysters, clams, or other shell-fish. I prefer in most instances to combine soda-ash or carbonate of soda and silicious sand with the other ingredients; but as the ores to be treated in many cases contain sand and mild alkalies these ingredients can often be entirely dispensed with.

The proportions of the several ingredients may be varied according to the nature of the ore to

be smelted or the metal which is to be refined; but I have frequently combined them in the following proportions with the best results: Broken glass thirty-five per cent., pulverized charcoal twenty-five per cent., calcined shells twenty-five per cent., soda-ash or carbonate of soda ten per cent., and sand five per cent.

In practice I have usually mixed about twenty pounds of the flux to one ton of ore, and about half this quantity to a ton of metal; but the quantity employed will depend upon the nature of the ore or metal, and the degree of heat to which it is subjected, &c.

Without confining myself to any specific proportions,

I claim—

A flux composed of the within-described ingredients, combined in about the proportions specified.

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

WILLIAM QUANN.

Witnesses:

WM. A. STEEL,
HARRY SMITH.

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