



JOHN FARRAR, OF PROVIDENCE, RHODE ISLAND, AND LEWIS F. WHITING, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 86,145, dated January 26, 1869.

IMPROVED LINING FOR MOULDS FOR CASTING METALS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN FARRAR, of the city and county of Providence, and State of Rhode Island, and LEWIS F. WHITING, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Lining for Moulds for Casting Metals; and we hereby declare the following to be a full and correct description of the same, sufficient to enable others skilled in the art to which our invention appertains, to fully understand and apply the same.

The nature of our invention consists in an improvement on a lining for moulds for casting metals, described in the patent granted to John Farrar and William Groves, July 30, 1867. This last-mentioned lining, as has been proven by experience, is not capable of withstanding the heat. It cracks up, and adheres to the casting, requiring repairs of the moulds.

Our improved lining is composed as follows:

Two parts plumbago; two parts fire-clay; one part ganister, or fire-sand; one part hard coke, pulverized, and passed through a No. 8 sieve; mixed to paste with water, pressed into the flask, and then baked.

The proportions of these ingredients vary according to the thickness of the castings to be made.

By making merely one lining, we are enabled to make it thicker, and consequently stronger; for the lining of Farrar and Groves, consisting of two comparatively thin layers, cracks easily, and is not durable, each lining being independent of the other, and the inner lining getting hot quicker than the outer.

Having thus described our invention,

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

The lining for moulds for casting metals, when composed of the ingredients and in the proportions, substantially as herein described.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

JOHN FARRAR.
LEWIS F. WHITING.

Witnesses:

CARROLL D. WRIGHT,
M. S. G. WILDE.