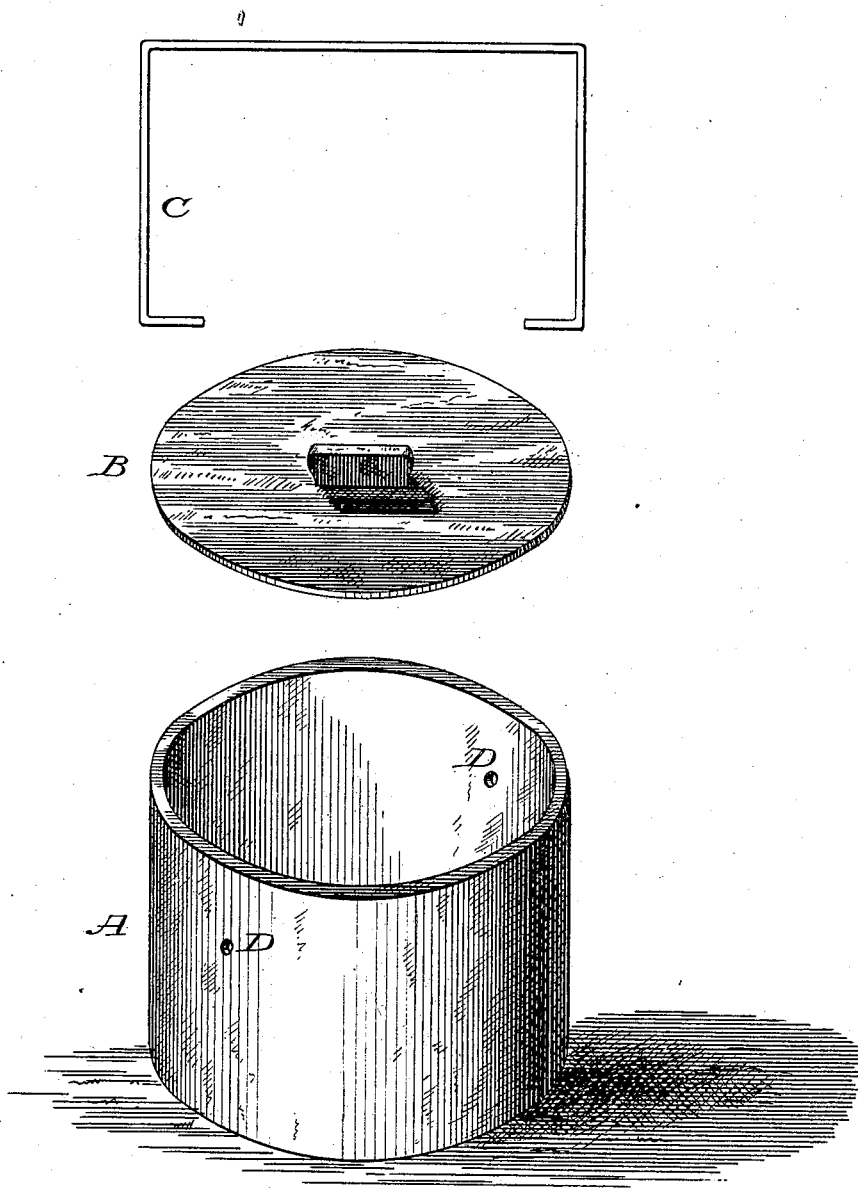


E. M. FORD.
Box and Cover for Firing Decorated Porcelain.

No. 215,815.

Patented May 27, 1879.



Witnesses:

M. Louis Ford
Edward St. John

Inventor:

Ellen Maria Ford

UNITED STATES PATENT OFFICE.

ELLEN MARIA FORD, OF PORT RICHMOND, NEW YORK.

IMPROVEMENT IN BOXES AND COVERS FOR FIRING DECORATED PORCELAIN.

Specification forming part of Letters Patent No. **215,815**, dated May 27, 1879; application filed February 20, 1879.

To all whom it may concern:

Be it known that I, ELLEN MARIA FORD, of Port Richmond, in the county of Richmond and State of New York, have invented a new and useful Box and Cover for Firing Decorated Porcelain, the object and use of which are fully set forth in the following specification and accompanying drawing.

The object of my invention is to furnish a convenient means by which persons engaged in the art of decorating porcelain or china with mineral paints, &c., may perform the operation of firing the articles themselves in a common furnace, range, or stove without the necessity of resorting to the inconvenience and delay attending the process when sent to large kilns or furnaces, which are principally located in large cities, not easily accessible by any but near residents, and which, from the nature of their construction and use, can only fire the articles in large lots and at stated times.

By using my fire-clay box such articles as cups, saucers, tiles, ovals, *plaques*, sleeve-buttons, candlesticks, &c., can be fired by the artist as soon as painted; and in cases where several successive paintings and firings are necessary, an amount of work can be completed in two or three days which would by any other means occupy, including carriage both ways, as many weeks or longer.

In the drawing, A represents the box, and B the cover, both of which are made of the best fire-clay. C represents the handle, made of stout wire, adjustable by inserting the ends in the holes D D in opposite sides of the box.

The box may be made in different sizes and shapes, according to the china to be fired and the furnace, stove, or range in which it is to be placed.

It may possibly be made of some other suitable material which will not, when at a red heat, be liable to injure the contents. The handle may be made of any suitable material, adjustable or permanently attached.

My invention is used substantially as follows: When the china is ready for firing, place it in the box, put on the cover, and place on the stove or range for half an hour, that the heating may take place gradually; then remove the lid of the range, and carefully set the box on the coal, the surface of which must be at a

glowing red heat; replace the lid, and there let the box remain from thirty to fifty minutes, or until it has been for some time red-hot on the bottom and part way up the sides; then remove it to the oven, and thence to the top of the range or elsewhere, that the cooling may be as gradual as was the heating, the whole process occupying about two hours ordinarily. After becoming cool the china may be taken out.

By this simple process at the home of the artist, and without more fuel than is likely to be always used for domestic purposes, the same results are obtained as from the large and expensive kilns, which require a special fire and intense heat, and in which all decorated china has heretofore been fired. It is, therefore, to the artist a great saving of time as well as expenses of the fee required at the kiln and carriage both ways, often several times.

Another important advantage which I claim for my invention is, that the progress and degree of heating can be tempered to the special requirements of the article fired, thereby largely reducing the risk of breakage, and insuring more satisfactory results with the colors, whereas in large kilns the process must be adapted to the majority of pieces inclosed, often to the serious detriment of others. For instance, such articles as a large vase and a sleeve-button, a thick heavy tile and a thin delicate saucer, are often included in the same firing, which frequently produces not only unsatisfactory results as to the colors and enamel of some, but also the cracking and total destruction of a valuable article on which great skill and labor have been expended, caused by too sudden heating or cooling, or several hours' exposure to red heat when much less is required, or vice versa, the process required varying materially with different articles, from a complication of causes, dependent on the quality of the ware, nature of the different paints and their various shades, number of firings to which the article is to be or has been subjected, &c. It may also be stated that as the proprietors of kilns seldom or never assume responsibility for breakage, the entire loss falls on the artist for both china and painting—an item often hard to be borne—a fact that enhances the value of any means of reducing such risk.

I am aware that small portable fire-clay furnaces are in use for various purposes; but they require a special fire when used, as well as stove-pipe or chimney and all other general appurtenances, and are expensive, and not adapted to use in a residence; also, that muffles and seggars are already made of material similar to my box, but without covers, and of a shape utterly impracticable for use in the manner and for the purpose described; and to the best of my knowledge there has never been an article made of any description suitable for use in an ordinary stove as an inclosure for

firing decorated porcelain, although in the interest of a large and growing industry such an article is greatly needed. Therefore,

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

A covered box of fire-clay or other suitable material in which decorated china can be fired in a common furnace, stove, or range, substantially as described.

ELLEN MARIA FORD.

Witnesses:

M. LOUISE FORD,
EDWARD ST. JOHN.