

United States Patent Office.

JOHN ALEXANDER, OF GREENPOINT, NEW YORK.

Letters Patent No. 95,064, dated September 21, 1869.

IMPROVEMENT IN COATING IRON FOR THE FRONTS OF BUILDINGS, AND FOR OTHER PURPOSES.

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

To all whom it may concern:

Be it known that I, JOHN ALEXANDER, iron-founder, of Greenpoint, in the county of Kings, in the State of New York, have invented certain new and useful Improvements in Coating or Preparing Iron, intended more particularly for the fronts of buildings; and I do hereby declare that the following is a full and exact description thereof.

I will first describe what I consider the best means of carrying out my invention, and will afterward designate the points which I believe to be new. I will describe my invention as applied to broad, thin plates of cast-iron, adapted to serve in imitation of the common large blocks of brown-stone ordinarily used in building. It will be understood, however, that the same mode of surfacing may be applied to ornamental castings adapted for window-caps, cornices, &c., as also to iron rolled into sheets and otherwise, prepared previous to the application of my surfacing.

I stir into good japan varnish about half its weight of the fine earth-colored powder known as Prince's metallic paint. This proportion of ingredients gives a slightly pasty or semi-fluid consistence to the mass.

A greater proportion of earthy material may be used with good effect, but it increases the difficulty of applying it.

I take the casting, previously formed to the right contour, and shaped at the edges by planing or otherwise, and provided with the lugs, flanges, or other appliances for securing them together, or to other parts, and apply the preparation by means of a painter's brush, or other suitable device, in a thin coating. I have not found it necessary to prepare the surface of the iron by biting it with acid or any analogous process. If the casting is made with ordinary skill, and is vigorously brushed with a wire brush, to remove the loose particles, it is ready to receive my coating.

Having thus coated the surface with the semi-fluid and adhesive mixture above described, I next dust upon it, with a common dredger, or other suitable appliance, a quantity of powdered brown-stone. The particles attach themselves firmly by partially embedding themselves in the adhesive coating. I apply as much as will stick, and in order to be certain that sufficient is applied, I prefer to cover the whole surface with a thick layer, which may be one quarter of

an inch or more in thickness, of the stony grains. I then bake the plate, with its covering, in a japan-oven, at a temperature of 300° Fahrenheit, keeping it in the oven about twenty-four hours, allowing the heat gradually to decline. On removing the plates I shake off the loose particles, and then brush the surface with a wire-brush, in order to better prepare the surface and also to economize the particles thus removed for a subsequent operation. The plate is now finished and ready to be used in a building.

The gritty particles thus applied may be made by pulverizing the chips or waste pieces of good brown-stone, the pulverizing being effected in a Chilian mill or other mechanical device. It is desirable that the particles be of a tolerably even size, and neither too fine nor too coarse. Common brown-stone breaks of itself under a pestle into particles of about the right size. Instead of taking the trouble to thus pulverize stone I can use any sand or mixtures of sand of a suitable color; but where the color is too light I can modify by employing Prince's metallic paint, or analogous earthy material, mingled with the sand in the proportions required. If the fine paint is used alone the color is too red.

Other very fine paint or oxide of iron may be used as the thickening-material in the japan varnish with some effect, but I esteem Prince's paint preferable to any which I have experimented with.

I have, by the use of several materials, applied as above described, succeeded in making what is considered in the trade as a very successful, strong, and probably durable imitation of rich brown-stone which fashion and good taste now call for in first-class residences.

I claim as my invention, and desire to secure by Letters Patent—

The within-described imitation brown-stone, having a foundation of iron and a coating of stony particles bedded in a layer of semi-fluid material, and permanently affixed to the iron by baking, all substantially as and for the purposes herein set forth.

In testimony whereof, I have hereunto set my name, in presence of two subscribing witnesses.

JOHN ALEXANDER.

Witnesses:

C. C. LIVINGS,
W. C. DEY.