

**SIXTY YEARS A BRICKMAKER: A PRACTICAL
TREATISE ON BRICKMAKING AND BURNING
AND THE MANAGEMENT AND USE OF
DIFFERENT KINDS OF CLAYS AND KILNS FOR
BURNING BRICK, WITH A SUPPLEMENT FOR
NEW BEGINNERS IN BRICKMAKING, AND
HINTS TO BRICKLAYERS AND BUILDERS**

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Sixty Years a Brickmaker: A Practical Treatise on Brickmaking and Burning and the Management and Use of Different Kinds of Clays and Kilns for Burning Brick, with a Supplement for New Beginners in Brickmaking, and Hints to Bricklayers and Builders by J. W. Crary

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J. W. CRARY

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BY J. W. CRARY, SR.

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**BIOGRAPHICAL SKETCH OF THE AUTHOR OF THIS
BOOK.**

Mr. Crary is a native of Hamilton County, Ohio; he was born in Springfield Township, a few miles north of Cincinnati, in the then sparsely settled village of Mount Pleasant, in the year 1814, on the 12th of November. Mr. Crary's grandfathers were from Vermont, and were soldiers in our war for Independence. They both came West in 1806. Mr. Crary's grandfather Crary settled near Cincinnati; his grandfather Ballard, settled in Jennings County, Indiana. Both of these men were pioneers, and lived each to the advanced age of ninety-six years. Mr. Crary's own mother died in her eighty-seventh year. Mr. Crary's father established a brickyard in Cincinnati in 1829. Mr. Crary worked with his father until the late autumn of 1834, when he went South, and was, up to the close of our war of the States, a constant jobber, contractor, manufacturer, and superintendent as brickmaker, and part of the time as brick layer, just the same as his father had been from Mr. Crary's earliest boyhood. Mr. Crary patented a brick kiln and a brick machine, in 1858. Several features in these patents are now in general use. He also took out a patent for heating houses, by use of clay materials entirely, in the construction of his heater.

Mr. Crary operated his heater in the North successfully, until his health required his return to Florida. Mr. Crary also patented several important improvements. He is also the real inventor of the plan for cladding ships with iron, and has now in his possession, published evidence of the fact, that he suggested the cladding of the old U. S. War ship "Merrimac," which distinguished herself in the late war, in dispersing the U. S. fleet at "Hampton Roads," at the same time he was preparing to clad a small vessel, which was to carry a single gun, and make a breach in the walls of Fort Pickens. He had invented a peculiar shot, or arrow. It was a sharp pointed bomb with a light, hollow tail, so as to give it the projectile precision of an arrow. The main body of the shot contained a given charge of powder in a chamber. A priming tube, or nipple, connecting with the powder, was capped with a common percussion cap; a "striker" was set just behind in the hollow tail, the shot was then put in the cannon on a "sabbat," which covered the powder in the cannon. When this was discharged the shot went point foremost, and simultaneous with its penetration of a wall, it exploded and, of course, a breach in the wall was the result. Mr. Crary's versatility is remarkable; he is by no means a novice in political economy, and writes for public journals with acknowledged force and ability.

As Mr. Crary's writings show, some of his prominent work was making the brick by contract for the U. S. Arsenal at Little Rock, Arkansas, in 1840 and 1841; making and laying the brick for the State University of

Mississippi, in 1845, and 1846; superintending the making of all the No. 1 brick for the U. S. Custom House, in New Orleans, in 1852, '53 and '54; also, in superintending the making of the brick for U. S. Fort Jefferson, on Dry Tortugas Island, on coast of Florida, 1857, '58 and '59. He made all the brick for Iron Works at Red Mountain, in 1863 and '64, near Birmingham, Alabama. Mr. Crary is the projector of the village of Bluff Springs, Florida, and its main proprietor. As a citizen, a thinker and writer, Mr. Crary occupies a high and honorable position in the community, and has held some important offices, at the earnest request of his fellow citizens, without regard to party. He has always refused office, only when he believed it to be an imperative duty to accept.

PREFACE.

There are thousands of compilers, but few real authors of books. A compiler may select and arrange matter for a book and make it readable, but of no practicable value.

To prepare the matter based upon the practical experience, and in many particulars, the new and original thought of the author, is entirely a different thing. Whatever there is in this humble contribution of the author to the art of brickmaking, that may interest and profit the reader, it is the result of long study and patient effort of brain and hand.

In 1867, I determined to publish a short treatise on brickmaking, and went to New York City to select material to aid me in the work, but, to my astonishment, the largest and best libraries and book stores contained no book on brickmaking, and the little that I was able to glean, with the aid of expert clerks, from books of general information, was of such a perfunctory character, that I abandoned the effort to compile anything from the writing of others, and proceeded to publish a short treatise on the art of brickmaking, in pamphlet form, from my own experience.

Since that date the increase of cyclopedic literature has furnished much on the subject of brickmaking, from

which it would be comparatively easy to compile a book, but when done, it would be of no practical value to the craft.

The progress that has been made in the manufacture of brick and all kinds of clay goods in the past twenty-five years, renders much of what has been written by theorists, obsolete.

It has been the unfailing purpose of the author in the preparation of matter for this work, to deal with the practical questions that may arise in the art of brick-making. There are two classes of persons that make the chief improvements in the work and life of mankind. One is analytical, the other practical and philosophical. I belong to the latter class myself, if I may be allowed to classify myself. Much that I have learned has been the result of studying closely the action of matter and the laws relating thereto in my everyday experience, covering a period of fifty-eight years in brickmaking, in eleven states.

I venture to express the hope that this work will be helpful to those engaged in the art of brickmaking. Believing that in the management of clays, the drying, setting, and burning of brick, and in the construction of kilns, there will be much to interest even the most practical in the art.

In the supplement I have given directions to new beginners in the art of brickmaking, and hints to bricklayers and builders, which I hope will benefit and encourage amateurs in all lines of business pertaining to brick, so that they may achieve a victory over the forces

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