

CORNELL'S

IMPROVED PATENT LEAD PIPE, SHEET LEAD, &c.

SAMUEL G. CORNELL continues to manufacture, and offers for sale, his superior Lead Pipe, manufactured by an improved process, for which he received a patent in 1847.

From the accompanying Certificates, it will be perceived that this article excels any Patent Pipe ever manufactured, in its strength, solidity and uniformity of thickness, as well as in entire freedom from all flaws, seams, and imperfections to which Pipe manufactured on Hanson's or a bridged machine is liable.

CERTIFICATES.

NEW-YORK, March, 1847.

This is to certify, that on the 8th inst. I visited the Lead Works of Mr. Samuel G. Cornell, of Glenville, at his request, for the purpose of inspecting and testing his improved machinery for the manufacture of Lead Pipe, and having carefully examined it, both as to its construction and in its practical operation, I have no hesitation in pronouncing it decidedly superior to all other machines *now* or heretofore in use for that purpose.

The following may be given as some of the particulars upon which this opinion is founded, viz :

1st. In all of the machines the *die* or matrix through which the pipe is protruded, is placed at the head of the cylinder, opposite the piston or follower, and the charge of lead has consequently to be forced with great pressure through the cylinder as the pipe is worked off. In Mr. Cornell's machine, on the contrary, the die is placed on the head of the piston itself—the latter being made hollow for the passage of the pipe to the reel. The process is thus greatly simplified in many respects. The pipe being formed precisely at the point where the pressure first acts, the charge of lead remaining unmoved in the cylinder during the process, and the power expended in other machines for forcing it forward, and the consequent wear and tear to the machine itself, is therefore saved in this.

2d. The mandril or core by which the bore of the pipe is formed, being connected in Hanson's machine (patented in this country by Messrs. Tatham) by a bridge within the containing cylinder, the metal is necessarily parted into two, three or four streams at the moment of its passage through the die, producing so many longitudinal seams in the pipe in which the metal is imperfectly united by *pressure only*. All this is entirely and successfully obviated in Mr. Cornell's machine. The pipe issues from the die, without any previous division, a perfectly homogeneous tube, free from seams or mechanical joinings of any kind, and with great superiority in strength, *therefore*, over any pipe which can be formed on a bridged mandril.

It will be seen, in general, then, that the machine of Mr. Cornell secures in principle all the advantages of the other pa-

tented machines, without any of their defects ; and this was fully verified in its practical operation. A quantity of pipe of the most exact equality in bore and thickness, smooth, even, homogeneous in texture, and without seams or joints of any kind, was manufactured in my presence, and some of a very small calibre.

(Signed,)

D. B. DOUGLASS,

Civil Engineer,

Late Prof. Eng. U. S. Milit. Acad., West Point.

NEW-YORK, May 21, 1847.

MR. SAMUEL G. CORNELL :

Gentlemen—In regard to your note of this morning, inquiring how much pipe of your manufacture I have used since I dealt with you, and how I find it to answer, both as to *quality, evenness, and proper finish*, my answer to your first question is—I cannot, without a great deal of trouble and time, name the quantity, but it must be *several hundred tons*, and under all kinds of pressure and every variety of *situation*; and I feel much pleasure in giving my testimony as to its universal good quality. I find that if any pipes burst, on examination, it turns out to have been pipes bought at other manufactories.

So much have I been troubled with bad pipe, that for the last year I have bought but very little from any other establishment, I believe not over ten tons altogether. I think the pipe sent to me latterly is brighter, externally, than before.

With sentiments of esteem and respect,

Respectfully yours,

(Signed,)

J. R. WALTERS,

Plumber, 296 Broadway.

✂ S. G. C. offers the above Lead Pipe, also, Sheet Lead, Red Lead, and Litharge, of his own manufacture, for sale, at 175 FRONT STREET, NEW-YORK.