

UNITED STATES PATENT OFFICE.

ASA W. WILKINSON, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
EDWARD S. T. KENNEDY.

IMPROVEMENT IN TREATING GAS-LIME TO PRODUCE CAUSTIC LIME.

Specification forming part of Letters Patent No. **208,656**, dated October 1, 1878; application filed
April 17, 1878.

To all whom it may concern:

Be it known that I, ASA W. WILKINSON, of New York city, in the State of New York, have invented a new and useful Improvement in the Process of Treating Gas-Lime; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same.

This invention consists in the process of converting the lime that has been used in the purification of illuminating-gas into caustic lime, by first pressing it into forms similar to bricks, and by the same means that bricks are formed, then placing them in a convenient kiln and subjecting them to increasing heat, sufficient to drive off the moisture, ammonia, carbonic acid, sulphur, and other impurities which the lime has absorbed in purifying the gas.

The difficulty heretofore experienced in re-burning lime of this character has been from the powdery character of the lime, preventing the flames from permeating the mass, which it is necessary for them to do in order to drive off the impurities. By pressing it into bricks this difficulty is overcome.

In carrying out this invention, I make use of an ordinary brick-press. Either a hand or power press will answer. The lime is taken just as it is delivered from the purifying-boxes, and pressed into a convenient form, and sufficiently hard so as to enable the pressed blocks to be piled one upon another, as is customary in piling clay bricks in the kiln. Fire is now started in the fire-box, and the bricks are burned as clay-bricks are burned. The length

of time necessary to drive off the moisture, ammonia, carbonic acid, sulphur, and other impurities depends somewhat upon the size of the kiln and intensity of the heat.

The bricks will shrink in size as they lose carbonic acid, sulphur, and other impurities, and from such shrinkage it can be pretty well determined when the kiln is burned. From twenty to thirty-six hours should be sufficient time to accomplish the object.

By this process the lime may be used an indefinite number of times, since by burning it reverts to caustic lime, only requiring slacking to convert it into the hydrate, and fitting it for the purifying-boxes again. Of course, I do not limit myself solely to the conversion of gas-lime, since my process can be applied in purifying any kind of lime.

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

The process of converting the spent lime of gas-works into caustic lime, by first pressing it into lumps of any convenient size and shape, and then subjecting them to sufficient heat in a kiln to drive off the moisture, ammonia, carbonic acid, sulphur, and other impurities with which the lime is combined, reducing it to caustic lime, and rendering it fit for further use, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 11th day of April, 1878.

ASA W. WILKINSON. [L. S.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.