F. F. TATRO.

Kiln for Calcining Limestone, Plaster, &c.

No. 216,066. Patented June 3, 1879.

Fig. 1.

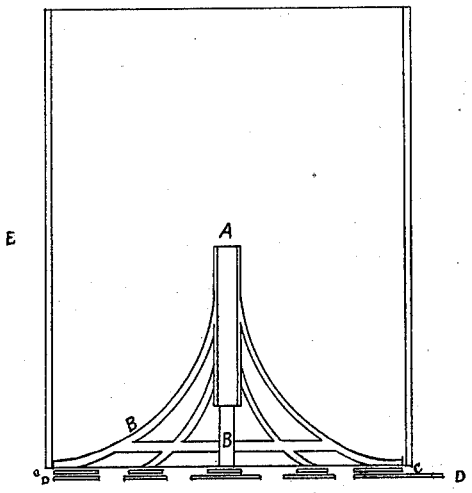
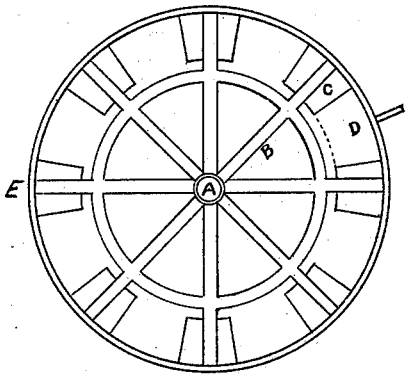


Fig. 2.



WITNESSES

F. W. Evans.

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FRANCIS F. TATRO, OF CLOUD COUNTY, KANSAS.

IMPROVEMENT IN KILNS FOR CALCINING LIMESTONE, PLASTER, &c.

Specification forming part of Letters Patent No. **216,066**, dated June 3, 1879; application filed April 10, 1879.

To all whom it may concern:

Be it known that I, FRANCIS F. TATRO, of the county of Cloud, State of Kansas, have invented a new and useful Improvement in Kilns for Calcining Limestone, Plaster, &c., which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to so regulate the drafts through the fuel used in calcining as to insure an even product.

The invention is illustrated more in detail in the perpendicular central-section view, Figure 1, and in the horizontal-section view, Fig. 2.

B B represent a grate having bars converging from a central hollow stem or pipe, A, the said bars being curved downward from the central hollow stem or pipe, A, and resting upon supports C C, and the central hollow stem or pipe, A, extending upward, so as to be above the level of the fuel.

A is a hollow stem or pipe through which air is conducted above the solid fuel for the purpose of combining with and consuming the liberated gaseous fuel. C C are supports with open spaces between them, upon which the bars of the grate rest. D D are slides, rotary or otherwise, used for decreasing or closing entirely the open spaces between the supports C C. E is the case or kiln, which rests, also, upon the supports C C, and, for the convenience of emptying the kiln, is composed of two or more perpendicular sections fastened together by hooks and staples.

It is evident that if coal or other fuel is placed upon the grate B, and the limestone or other stone intended to be calcined is placed above the fuel, and the fuel ignited, the air passing through the hollow stem or pipe A will supply oxygen for the combustion of the liberated gaseous fuel; that, by means of the grate-bars converging from the center, and having vacant spaces between the supports C C, the largest amount of draft is obtained at the point most needed, near the case E. It is also evident that the shape of the grate, curving downward from the hollow stem or pipe A, causes the fuel, as consumed, to settle down toward the vacancies between the supports C C, causing a movement between the stones intended to be calcined, and exposing other parts thereof to the direct action of the fire, while at the same time the ash or refuse matter is brought to a convenient point for removal; and it is also evident that the slides D D will enable the operator to regulate the intensity of the fire.

I claim as my invention—

1. The grate B B, with bars converging from the central hollow stem or pipe, A, resting upon supports C C, substantially as described.

2. The grate B B, with bars converging from the central hollow stem or pipe, A, resting upon supports C C, in connection with the slides D D, substantially as described.

FRANCIS F. TATRO.

Witnesses:

F. W. CRANS,

S. J. CRANS.