

Z. SHAW.
Brick Kiln.

No. 98,306.

Patented Dec. 28, 1869.

Fig. 1.

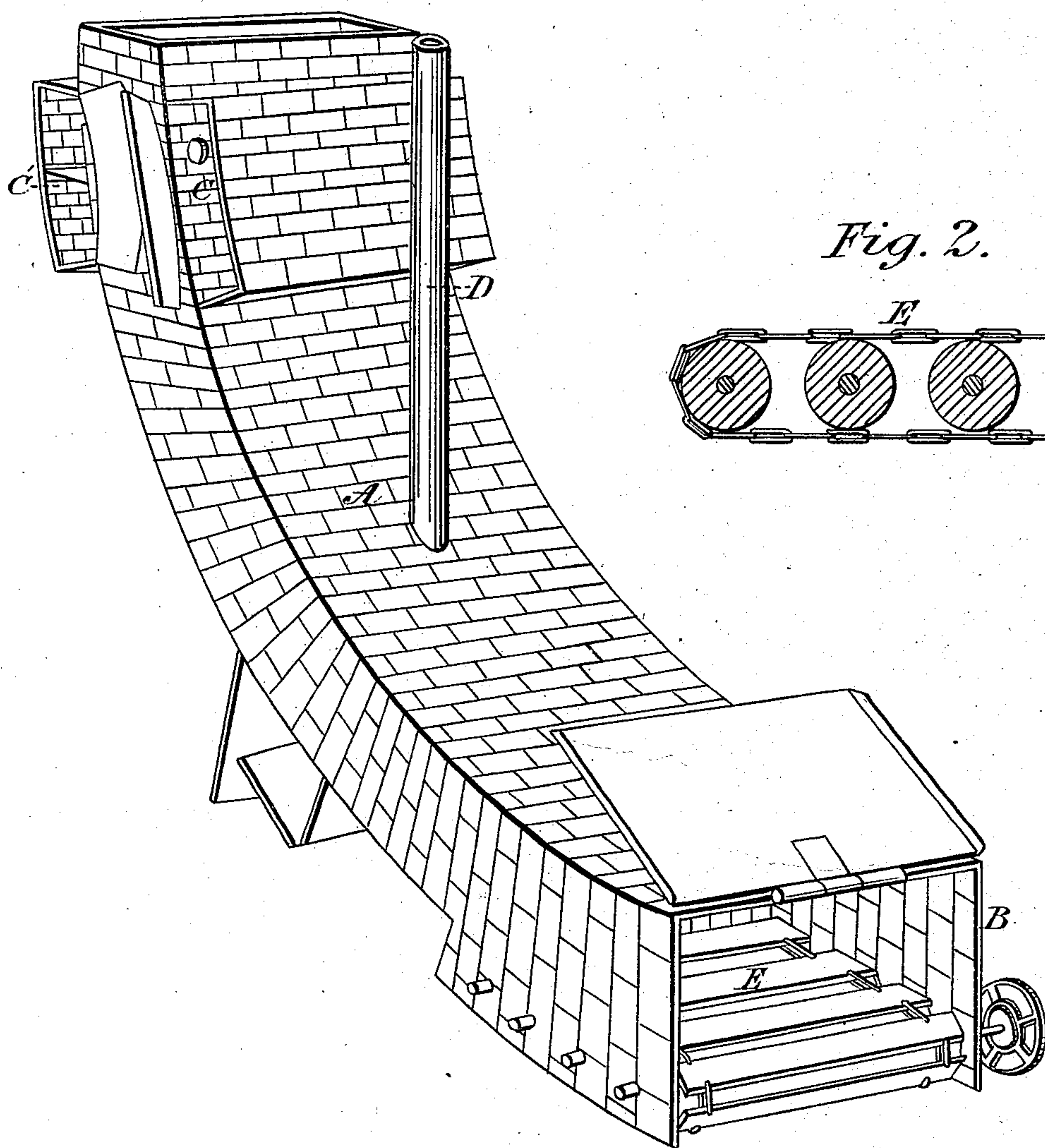
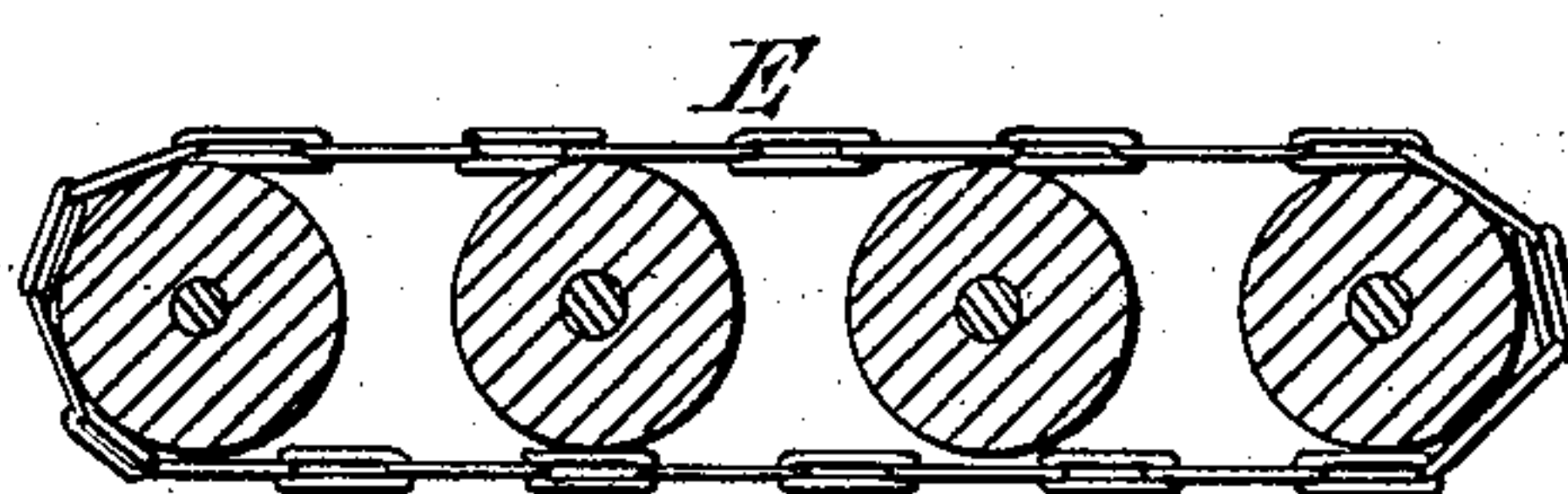


Fig. 2.



Witnesses:

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ZACHARIAH SHAW, OF YPSILANTI, MICHIGAN.

Letters Patent No. 98,306, dated December 28, 1869.

IMPROVEMENT IN PERPETUAL BRICK-BURNER.

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

To whom it may concern:

Be it known that I, ZACHARIAH SHAW, of Ypsilanti, in the county of Washtenaw, and State of Michigan, have invented a new and useful Improvement in Perpetual Brick-Burning Apparatus; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

Figure 1 is a perspective view of my apparatus.

Figure 2 is a section showing the endless belt.

Like letters indicate like parts in each figure.

The nature of this invention relates to the construction of an apparatus for burning bricks, whereby the bricks, as fast as burned, may be cooled down and removed, while at the same time a fresh supply of unburned bricks may be brought into connection with the fire.

The invention consists in a new combination and arrangement of all its parts, as more fully hereinafter described.

In the drawings—

A represents a curved chamber, whose mouth B is parallel with the surface of the ground, and thence curving upward, describing in said curve about one-quarter of the arc of a circle, and terminating in a vertical position at any required height.

C and C' are fire-chambers, so constructed upon each side of the curved chamber, that the smoke and heat pass into the interior of said chamber, through proper openings *a* in the walls thereof.

Any suitable boiler, in which to generate steam to drive the necessary machinery employed in the brick-yard, may be properly set above the fire-chambers, so that the same fire will make the steam and burn the brick.

D is a ventilating-pipe.

E is an endless belt or carriage, composed of drums or wheels, chains or links, and slats or planks, and rotated in the usual manner. Its upper face should be upon a line, or a little below the line of the bottom of said chamber.

The unburned brick are charged into the top, and they slide down the chamber of flue A, until they arrive and stop near its mouth.

This flue or chamber may be carried up to any desired height, and should be filled with unburned brick to the top.

Fires being made in the fire-chambers C and C', the brick in the immediate vicinity of the openings *a* are rapidly burned, while the ascending heat is driving off the water-smoke of those brick in the upper part of the chamber.

After a few hours the brick adjoining, and just above the fire-chamber, will be found to be well burned. Then, by giving a forward motion to the carrier E, the brick in the lower part of the chamber will be thrown out of the mouth thereof. This allows the entire mass of brick to slide down the chamber, bringing fresh brick into connection with the fire, and allowing those which have just been burned, and which are now below the fire, to cool off by the admission of a draught of air into the mouth of the chamber, carrying off the heat through the ventilating-pipe D.

This draught may be regulated by a door of suitable construction, fitting the mouth of the chamber.

A fresh supply of unburned brick should be added to the column in the chamber, as fast as burned and thrown out at the mouth.

By a burning-apparatus of this construction, a constant supply of unburned brick may be added to the top of the column, and as steady a supply of burned brick discharged at the mouth.

Any appropriate material may be used in the construction of the chamber or flue A and fire-chambers.

I am aware that perpetual kilns have been built for burning and delivering lime.

I hereby disclaim anything in those kilns, and wish to confine myself strictly to the employment of this apparatus in burning brick and tile.

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

The combination and arrangement of the curved chamber A, the carrier E, and the fire-chamber C and C', burning brick upon both sides at once, when constructed and operating as and for the purpose set forth.

ZACHARIAH SHAW.

Witnesses:

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H. F. EBERTS.