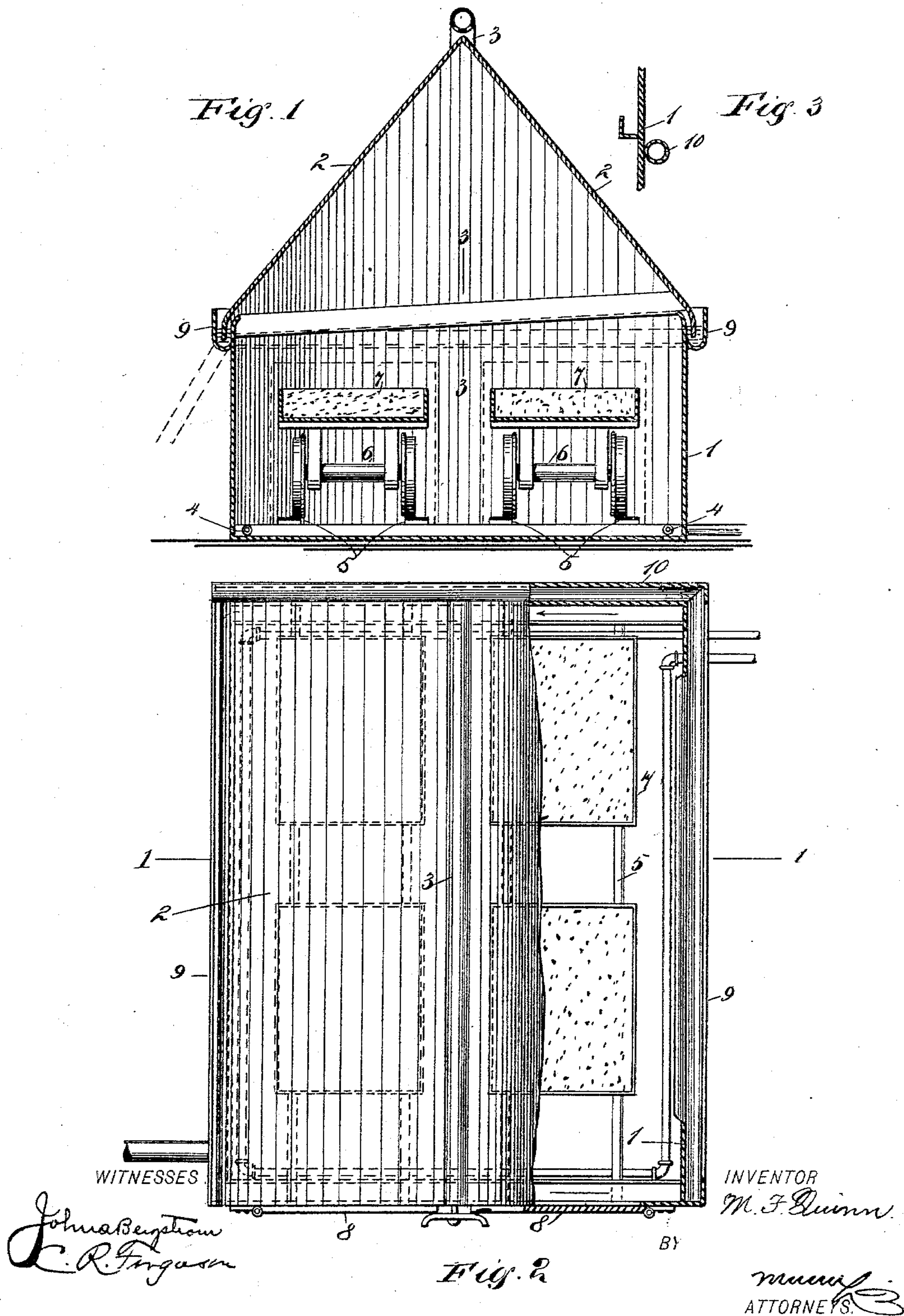


(No Model.)

M. F. QUINN.
KILN FOR ACETATE OF LIME.

No. 596,827.

Patented Jan. 4, 1898.



UNITED STATES PATENT OFFICE.

MARTIN F. QUINN, OF STRAIGHT, PENNSYLVANIA.

KILN FOR ACETATE OF LIME.

SPECIFICATION forming part of Letters Patent No. 596,827, dated January 4, 1898.

Application filed March 20, 1897. Serial No. 628,489. (No model.)

To all whom it may concern:

Be it known that I, MARTIN F. QUINN, of Straight, in the county of Elk and State of Pennsylvania, have invented a new and Improved Acetate-of-Lime Kiln, of which the following is a full, clear, and exact description.

This invention relates to kilns used for the purpose of drying acetate of lime and making the same ready for market.

I will describe a kiln embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional elevation on the line 1 1 of Fig. 2. Fig. 2 is a partial plan and partial section, and Fig. 3 is a detail section drawn on an enlarged scale through the line 3 3 of Fig. 1.

The vertical walls 1 of the kiln may be constructed of any suitable material—such as wood, brick, or metal—and it may be here stated that the kiln may be made of any desired size, depending upon the amount of work to be accomplished. The kiln is provided with a roof 2, arranged at a very sharp angle, and this roof 2 will consist of sheet-copper or of glass plate, as may be desired. A perforated pipe 3 extends along the apex of the roof and is designed for spraying the roof with cold water. Steam-pipes 4 are arranged around the bottom of the kiln, and above these steam-pipes are track-rails 5, upon which the cars 6 may be run. These cars 6 are designed to carry the lime-pans 7. The kiln of course will be provided with suitable doors 8, so that the cars may be moved in and out thereof. The upper end of the side walls of the kiln is provided with troughs 9, and into these troughs the edges of the roof-plates 2 extend. The troughs 9 at one end communicate with a pipe or trough 10, through which the water received by the troughs may discharge. This pipe or trough 10 of course extends across one end of the kiln, and all of the troughs, it will be seen, are inclined toward the discharge end.

In operation after the loaded cars shall have been placed in the kiln steam is forced through the pipe 4, and the heat thereof will evapo-

rate the moisture that may be contained in the acetate of lime. This moisture will rise in the form of vapor, and by striking against the inner sides of the roof-plates 2 will be condensed and run down said plates into the troughs 9. This condensation will gradually run off, but enough will remain in the troughs to immerse the edges of the plates. Therefore this water of condensation will form a trap to prevent the escape of heat through said troughs from the interior of the kiln.

If it be desired to more quickly condense the vapor, water may be discharged over the roof-plates from the pipe 3.

By this construction of the kiln it is obvious that the lime may be very quickly treated, and as the lime under treatment is placed upon cars it may be easily and quickly handled both in inserting and removing it, and when once in the kiln no further attention is required of an attendant.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An acetate-of-lime kiln, comprising side and end walls, a pitched roof supported on the kiln, troughs extended along the upper portions of the sides of the kiln and into which the edges of the roof-plates pass, track-rails in said kiln, and steam heating-pipes arranged around the bottom of said kiln, substantially as specified.

2. An acetate-of-lime kiln, comprising vertical side and end walls, troughs extended along the upper portions of the side walls, a trough or pipe for receiving the discharge from said side troughs, a water-spraying pipe extended along the apex of the roof, a steam heating-pipe in the lower portion of the kiln, and track-rails in the kiln, substantially as specified.

3. An acetate-of-lime kiln, comprising side and end walls, and troughs into which the edges of the roof extend, the said troughs being adapted to receive cooling-water from the outside of the roof and water of condensation from the inner side of the roof to form a water seal, substantially as specified.

MARTIN F. QUINN.

Witnesses:

E. O. ALDRICH,
F. S. O'DONNELL.